

Final Report & Recommendations

The Triple P Implementation Evaluation

Cabarrus and Mecklenburg Counties, NC

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Executive Summary

The purpose of the Triple P Implementation Evaluation project (TPIE), funded by The Duke Endowment, was to evaluate capacity and infrastructure for the *active* implementation of, and service delivery associated with, the Triple P system of interventions in two North Carolina counties to inform the planning process for impact and sustainability. Over a two-year period in Cabarrus and Mecklenburg counties, TPIE assessments targeted various levels of the Triple P delivery system, including county-level implementation capacity, agency implementation climate and infrastructure, practitioner adherence to intended Triple P session content, and the penetration of Triple P interventions within the county.

Longitudinal evaluation results suggest that each county had established a meaningful amount of county-level capacity to support the implementation and scale-up of Triple P, a diverse coalition of local agencies to deliver Triple P across multiple access points, a handful of strengths within agency infrastructure and best practices to support the growing number of practitioners to deliver Triple P, and in Cabarrus County, a promising reach of Triple P services into the county's population of children and families. Progress to date appears stronger on the organizational side of implementation (i.e., leadership and implementation teams at county and agency levels, county action planning and prevention system alignment, and organizational implementation drivers at county and agency levels) and in the development of infrastructure and best practices to support practitioner recruitment and selection and practitioner training in Triple P.

In addition to highlighting progress and achievements to date, TPIE evaluation results reveal gaps within county implementation capacity and agency implementation infrastructure that might be the target of future developmental efforts. For example, within each county, agency implementation infrastructure appeared to lag county implementation capacity. That is, just because a county had developed a county implementation team with the resources and abilities to work closely with local agencies did not ensure that agency implementation infrastructure and best practices were well in place across the county. This lag appeared greater in Mecklenburg County, where the county implementation team had historically lower capacity (particularly in terms of formally allocated time and effort), the county received substantially less state resources to support the scale-up of Triple P, and the county prevention system and population are much larger. The Mecklenburg County Triple P Coalition also evidenced higher rates of agency and practitioner attrition and lower rates of practitioners having yet delivered Triple P during the TPIE evaluation period, which also may have been associated with these factors.

Although agency implementation infrastructure and best practices showed slight signs of improvement over time across two cohorts of agencies in Mecklenburg County, overall, agency implementation infrastructure and practices did not show strong developmental gains across the evaluation period within either county. Though the reasons for this lack of development over time are unclear, agency leaders and implementation team members may benefit from more developmentally focused active implementation support from county implementation team members around building agency implementation infrastructure and best practices. Likewise, county implementation team members may need support from their purveyor – Triple P America – and other active implementation technical assistance providers to ensure they are well grounded in stage-based approaches to growing active implementation infrastructure and best practices to support Triple P.

TPIE evaluation results also suggest a need to increase agency implementation team capacity, both in terms of team membership numbers and in allocating formal time and effort to support

implementation. In fact, agency implementation capacity was positively associated with agencies' continuation of Triple P implementation across the two TPIE counties during the evaluation period. Increasing agency implementation team capacity may accelerate improvements related to the three organizational implementation drivers across agencies as well (decision-support data systems, facilitative administration, and systems intervention); agency leadership and implementation teams largely ensure best practices related to these organizational drivers.

Also positively associated with agency continuation of Triple P implementation across the evaluation period were the number of Triple P practitioners at the agency (only having one Triple P practitioner was associated with greater risk of agency discontinuation), having a favorable agency implementation climate for Triple P, and more formally developed agency sustainability plans to support the ongoing implementation of Triple P. Overall, both county and agency sustainability plans could benefit from additional development and documentation across both counties.

TPIE evaluation results clearly suggest that the two areas of greatest developmental need among county agencies are practitioner coaching and fidelity assessment infrastructure and best practices. Not only were best practices for practitioner coaching and fidelity assessment less in place at the agency-level, but county implementation teams also appeared to have fewer resources and abilities to work with local agencies to ensure such best practices. Addressing these two infrastructure gaps may be important not only to supporting county Triple P practitioners' delivery of Triple P interventions as intended, but also practitioners' use of Triple P interventions over time (Aarons, Fettes, Flores, & Sommerfeld, 2009; Aarons, Sommerfeld, Hecht, Silovsky, & Chaffin, 2009; Joyce & Showers, 2002). The support of staff from Triple P America and, potentially, Triple P researchers and program developers in the United States and abroad may be helpful to county Triple P coalitions in increasing the use of implementation best practices for coaching and for developing or acquiring practical, efficient, and multiple forms of fidelity assessments that can be used in the field.

Based on longitudinal evaluation results, TPIE evaluators offer a number of detailed recommendations for continuing to support scale-up of the Triple P system of interventions within and across Cabarrus and Mecklenburg counties. To support putting some or all of the recommendations into place, county leadership and implementation support staff will benefit from ongoing support from:

- their primary funder, the North Carolina Division of Public Health;
- their program purveyor, Triple P America; and
- local agency leadership and staff within agencies implementing Triple P.

In addition, they may benefit from the support of a full range of co-creation partners (e.g., Aldridge, Boothroyd, Fleming, Jarboe, Morrow, Ritchie, & Sebian, in press; Metz & Albers, 2014), including:

- Triple P researchers and developers in the United States and abroad;
- other local and state funders, including public agencies and private foundations (e.g., to diversify and sustain funding);
- local community partners, including youth and families being served by county Triple P services (e.g., to ensure ongoing cultural and community fit of Triple P interventions and implementation practices); and
- active implementation technical assistance providers (e.g., to increase county implementation team capacity to ensure the development of active implementation infrastructure and best practices across local agencies).

The purpose of the Triple P Implementation Evaluation project, funded by the Duke Endowment, was to evaluate capacity and infrastructure for the active implementation of, and service delivery associated with, the Triple P system of interventions in two North Carolina counties to inform planning for impact and sustainability.

Background

Purpose & Theoretical Foundations of the Triple P Implementation Evaluation

Over the past decade, the field of implementation science has shifted from passive approaches to supporting implementation, largely recognized as "diffusion" – or "letting it happen," and "dissemination" – or "helping it happen", to more active implementation strategies designed to "make it happen" (Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004, p. 593). Implementation research has demonstrated that passive approaches to implementation are largely insufficient (e.g., Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Greenhalgh, et al., 2004; Joyce & Showers, 2002; Nutt, 2002; Wiltsey Stirman, Kimberly, Cook, Calloway, Castro, & Charns, 2012), whereas more active strategies hold promise for ensuring effective implementation and realization of intended benefits (e.g., Fixsen, Blase, Naoom, & Wallace, 2009; Fixsen, Blase, Timbers, & Wolf, 2001; Fixsen, et al., 2005; Joyce & Showers, 2002; Marzano, Waters, & McNulty, 2005; Meyers, Durlak, & Wandersman, 2012; Saldana & Chamberlain, 2012).

The purpose of the Triple P Implementation Evaluation project (TPIE), funded by The Duke Endowment, was to evaluate capacity and infrastructure for the *active* implementation of, and service delivery associated with, the Triple P system of interventions in two North Carolina counties to inform the planning process for impact and sustainability. Specifically, within Cabarrus and Mecklenburg counties, TPIE assessments targeted various levels of the Triple P delivery system, including county-level implementation capacity, agency implementation climate and infrastructure, practitioner adherence to intended Triple P session content, and the penetration of Triple P interventions within the county. Although not a primary focus of the current evaluation, TPIE evaluators also obtained and reviewed early longitudinal county data regarding child maltreatment rates and foster care placement rates in Cabarrus and Mecklenburg counties to inspect emerging trends possibly related to intervention impact. Altogether, these system levels form a cascading logic model of support (e.g., Metz & Bartley, 2012) from county implementation support staff through agency implementation supports to practitioners and, eventually, to parents and families (see Figure 1).

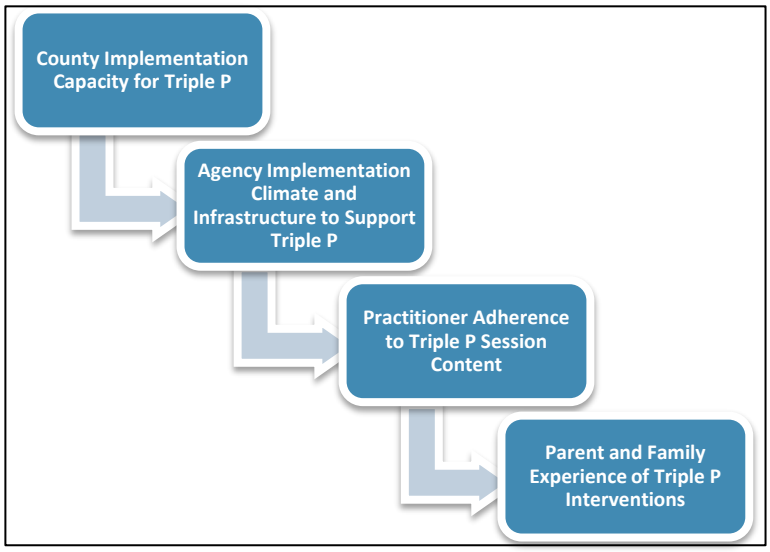

Figure 1. TPIE cascading logic model of implementation support.

The top level of the cascading logic model for the TPIE project was county implementation capacity. "Capacity" refers to a "set of abilities and resources to support a level of desired performance – whether by an individual or an organization of any size" (US AID and MEASURE Evaluation, 2012, slide 3). Implementation scientists and researchers generally agree that the capacity of county, regional, and state leadership and implementation teams to coordinate, manage, and support the implementation of interventions in local service agencies plays an important role in the viability, success, and sustainability of evidence-based practice scale-up (e.g., Fixsen, Blase, Metz, & Van Dyke, 2013; Hawkins, Catalano, & Arthur, 2002; Metz & Bartley, 2012; Rhoades, Bumbarger, & Moore, 2012; Wandersman, Duffy, Flaspohler, Nonnan, Lubell, Stillman, et al., 2008). Although of contextual interest, assessment of state implementation capacity for Triple P was outside the scope of the TPIE project.

Strong county implementation capacity is critical to support the next system level down, where local agencies must develop or acquire through partnerships the necessary implementation infrastructure to support practitioners' delivery of chosen interventions as intended. Fixsen and colleagues (2009) identified widely recognized active implementation infrastructure and best practices, or "drivers", that are necessary within service agencies to support practitioners' delivery of chosen interventions as intended (for an updated discussion of implementation drivers, see Metz & Bartley, 2012). Metz and colleagues (2014), in an evaluation of the implementation of an innovative practice model in a county child welfare system, observed that the presence of implementation drivers may be associated with the delivery of the practice model as intended (i.e., high fidelity). Metz and Albers (2014) note that building visible implementation infrastructure often requires close, stage-based collaboration among implementing sites, intervention developers and purveyors, and funders and policy-makers.

Also within the agency level of the prevention system, an important precursor to ensuring the presence, quality, and sustainability of implementation drivers is agency leaders' support for, and prioritization of, adopted interventions. Without support from agency leadership, the implementation of chosen interventions is unlikely to be successful or sustainable (e.g., Damanpour, 1991; Glisson & James, 2002; Klein & Sorra, 1996; Panzano, Seffrin, Chaney-Jones, Roth, Crane-Ross, Massatti, et al., 2004). Klein, Conn, and Sorra (2001) demonstrated that organizational implementation climate, as rated by organizational staff, was a key marker of organizational leadership support for, and prioritization of, implementing chosen innovations.

At the delivery end of the cascading logic model are practitioners' adherence to intended Triple P session content and family experience of Triple P interventions. The delivery of core *intervention* components as intended (i.e., with fidelity) and penetration of interventions into the target population are critical benchmarks for establishing confidence that intended child and family outcomes will be realized at scale (e.g., Blase & Fixsen, 2013; Chamberlain, 2003; Eames, Daley, Hutchings, Whitaker, Jones, Hughes, et al., 2009; Fixsen, et al., 2005; Forgatch, Patterson, & DeGarmo, 2005; Mihalic, 2004; Schoenwald, Sheidow, & Letourneau, 2004). Practitioner adherence to intended session content is a key component of intervention fidelity and may not only help determine whether anticipated outcomes can be expected, but also whether infrastructure and practices supporting practitioners' delivery of adopted interventions need to be strengthened (Mihalic, 2004; Blase & Fixsen, 2013).

This cascading logic model of implementation support, from county implementation support staff through agency implementation supports to practitioners and, eventually, to parents and families,

provided the framework through which TPIE evaluators examined Cabarrus and Mecklenburg county Triple P implementation supports for success and sustainability.

Participating County Characteristics

Cabarrus County (the yellow county in Figure 2) and Mecklenburg County (the blue county in Figure 2) are jointly located in the Piedmont region of North Carolina on and just north of the border with South Carolina. These two counties were selected for the Triple P Implementation Evaluation (TPIE) in consultation with the North Carolina Division of Public Health (NC DPH) and Triple P America. Selection criteria for being involved in TPIE included having an operational county coalition to oversee the scale-up of Triple P, having established a county Triple P coordinator, and having demonstrated responsiveness to state partners assisting with the scale-up of Triple P (e.g., Triple P America and NC DPH). A third county was initially approached for involvement in TPIE, though declined because the county Triple P coordinator had only recently been hired and because that county Triple P coalition reported to a local foundation not in partnership with the TPIE project. County agreements to participate in TPIE were made following informational phone calls between TPIE evaluators and county implementation support staff.

Cabarrus County, home to the cities of Kannapolis and Concord, offers a mix of urban and rural settings with an estimated population of 192,103 (U.S. Census Bureau, 2015a). The Cabarrus County Triple P Coalition was a member of the first cohort of counties to begin scaling-up the Triple P system of interventions in 2012 with funding from NC DPH. Cabarrus County was initially awarded $325,581 per year for three years to scale-up Triple P, with a fourth year later awarded at the same amount. Given Cabarrus' estimated population of youth under 18 (50,331; U.S. Census Bureau, 2015a), this translates into approximately **$6.47 per youth**.

Mecklenburg County, home to North Carolina's largest city – Charlotte, is North Carolina's largest county with an estimated population of 1,012,539 (U.S. Census Bureau, 2015b). The Mecklenburg County Triple P Coalition was a member of the *second* cohort of counties to begin scaling-up the Triple P system of interventions in 2013 with funding from NC DPH. Though Mecklenburg County was also initially awarded $325,581 per year for three years to scale-up Triple P, state budget changes and resulting fiscal decisions resulted in an actual award of $147,000 per year for three years. Given Mecklenburg's estimated population of youth under 18 (249,085; U.S. Census Bureau, 2015b), this translates into approximately **$0.59 per youth**, a substantially smaller amount than in Cabarrus County.

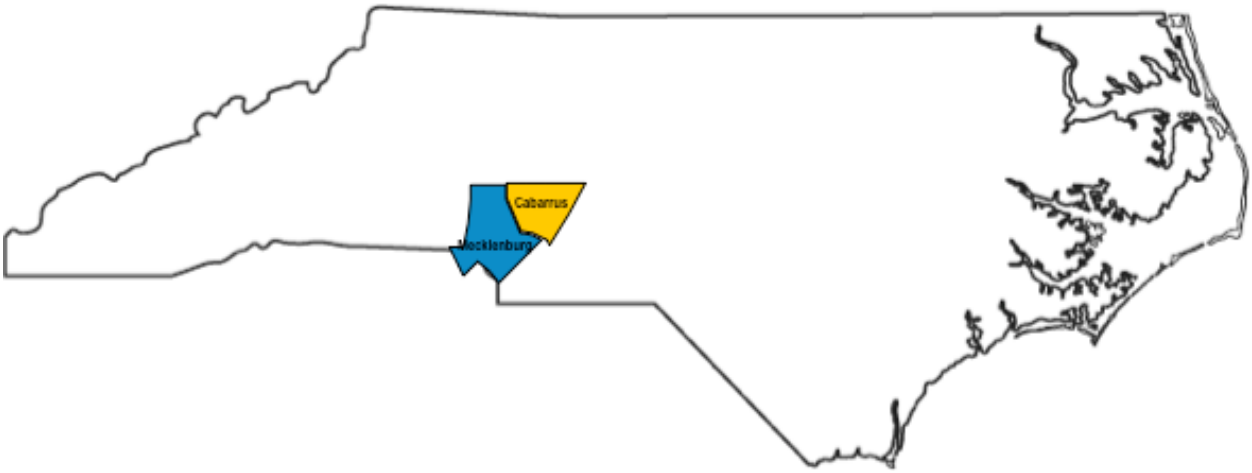

Figure 2. Location of Cabarrus (yellow) and Mecklenburg (blue) counties, North Carolina.

The county Triple P coalitions in both Mecklenburg and Cabarrus were led by each county's department of public health and involved a wide range of public and private organizations serving families with children and youth ages birth through 17. Each county Triple P coalition was an active participant in the North Carolina State Triple P Learning Collaborative during TPIE. The state learning collaborative met quarterly, bringing together key implementation support staff from Triple P counties across North Carolina, Triple P implementation consultants and program staff from Triple P America, and state funders. In addition to receiving program updates, professional support, and peer-support through the state learning collaborative, both Cabarrus and Mecklenburg counties received direct implementation support from implementation consultants associated with Triple P America during TPIE.

At the beginning of the project, TPIE evaluators and Triple P America implementation consultants agreed to not actively discuss emerging findings and recommendations from the evaluation, though semi-annual TPIE reports for each county were available to implementation consultants through each county Triple P coordinator. Likewise, TPIE evaluators agreed to refrain from providing any active implementation support directly to participating counties during the project, though county Triple P coordinators did receive a copy of semi-annual TPIE interim reports with county-specific data and findings that they could review and share at their discretion. While *county* implementation support staff regularly reported that they reviewed and made action plans based on these semi-annual reports (e.g., plans to strengthen fidelity assessment infrastructure, sustain Triple P services), the overwhelming majority of implementation support staff *within local service agencies* delivering Triple P did not. Therefore, we believe our assessments reflect a relatively unbiased picture of the natural implementation and scale-up of Triple P during the two-year evaluation period.

Evaluation Methods

The TPIE project ran from January 2014 through December 2015 with semi-annual assessments related to the project's primary aims in the spring and fall of each year. In the early stages of the project, TPIE evaluators recognized a need to further develop and tailor county implementation capacity and agency implementation infrastructure assessments to provide more valid and reliable data than was originally possible through the adoption and revision of existing instruments. Thus, TPIE county and agency implementation assessment instruments evolved across the two years of the project, with the largest evolution occurring between the Time 1 (spring 2014) and Time 2 (fall 2014) assessment periods. Due to the significant changes between Time 1 and Time 2 county and agency implementation assessments, data from Time 1 assessments were not comparable with later data and are thus excluded from this final report. For the interested reader, Time 1 county and agency implementation assessments and related findings are discussed in the first set of interim reports that emerged from the TPIE project (Aldridge, Boothroyd, Prinz, & Naoom, 2014a; Aldridge, Boothroyd, Prinz, & Naoom, 2014b).

County and agency implementation assessments used across Time 2 (fall 2014), Time 3 (spring 2015), and Time 4 (fall 2015) and other project evaluation methods used across all four assessment points are described below.

County Implementation Capacity

The ***Prevention System County Capacity Assessment for the Triple P System of Interventions*** **(PS-CCA-TP)** was developed by TPIE evaluators to provide an assessment of key abilities and related resources in counties implementing the Triple P system of interventions. The PS-CCA-TP was adapted from previous

assessment protocols used to measure the capacity of counties or school districts to effectively support the implementation and scaling of evidence-based interventions (i.e., Duda, Ingram-West, Tadesco, Putnam, Buenerostro, Chaparro, & Horner, 2012; Van Dyke, Fleming, Duda, Ingram-West, Tadesco, Putnam, et al., 2012). The PS-CCA-TP was heavily revised at Time 2 and then refined at Time 3 and Time 4 based on experience facilitating the assessment with county implementation support staff and existing theories of implementation infrastructure and best practice (e.g., Blase, Van Dyke, & Fixsen, 2013; Fixsen, Blase, Naoom, & Wallace, 2009; Metz & Bartley, 2012). Adjustments included clarified item language, simplified scales, and further alignment with identified implementation best practices (i.e., Blase, Van Dyke, & Fixsen, 2013). However, psychometric examination indicated that the measure yielded comparable data across the three time points presented, with very few exceptions.

The PS-CCA-TP is a facilitated group self-assessment. Intended participants include:

(1) county leaders with executive authority related to the scale-up of Triple P in the county;
(2) county-level staff who manage and support the day-to-day implementation and scale-up of Triple P interventions across the county;
(3) if applicable, county-level staff who are involved in identifying or selecting local agency practitioners to be trained in Triple P interventions;
(4) county-level staff who are coordinating or facilitating access to Triple P trainings;
(5) county-level staff who are coordinating or facilitating access to coaching supports for Triple P practitioners after Triple P training; and
(6) county-level staff who are involved in collecting or managing data relative to the implementation and scale-up of Triple P.

Some counties have more or fewer staff that participate in the PS-CCA-TP.

The PS-CCA-TP, as delivered at Time 4, includes 104 items across 11 scales related to county implementation support teams (County Leadership Team and County Implementation Team), the county's alignment of their prevention system to respond to parent and family needs with interventions from the Triple P system (Prevention System Alignment), the ability of the county to develop and carry out action plans to support the implementation and scaling of Triple P (Action Planning), and the ability of the county to support the development of core implementation infrastructure and best practices across local agencies implementing Triple P interventions (Recruitment & Selection, Training, Coaching, Fidelity Assessment, Decision-Support Data System, Facilitative Administration, and Systems Intervention). All PS-CCA-TP scale definitions are listed in Table 1.

During administration of the PS-CCA-TP, participants individually rate, and then come to group consensus on, each item using a three point scale, with "0" indicating "no activities or elements of this item are in place and/or these activities or elements have not yet been initiated," "1" indicating "some activities or elements of this item are in place and/or initiated," and "2" indicating "all activities or elements of the item are adhered to and there is clear evidence to support this." An example item in the County Implementation Team scale is, "there is a clearly identified County Implementation Team, consisting of three or more individuals, that is responsible for coordinating and supporting day-to-day Triple P implementation and scale-up activities across the county." An example Implementation Drivers item (from the Recruitment & Selection scale) is, "the County Implementation Team ensures that individuals making Triple P practitioner selection decisions have sufficient understanding of the key principles, skills, and abilities required to effectively deliver Triple P." Summing ratings for items in each

PS-CCA-TP Scale Definitions	
Scale	**Definition**
County Leadership Team	The county has formally and sustainably organized a leadership team from within the countywide prevention system that has the commitment and authority to lead Triple P scale-up across the county.
County Implementation Team	The county has formally and sustainably organized a team of three or more individuals, led by one or two identified leaders, that has the ability and capacity to coordinate and support day-to-day Triple P scale-up activities across the county.
Prevention System Alignment	The county has systematically assessed the wellbeing needs of children and families within the county and selects and aligns Triple P interventions responsively. In addition, the county has systematically assessed the strengths and needs of the countywide prevention system related to the scale-up of Triple P and selects and aligns agency partners responsively.
Action Planning	The county regularly obtains data and information about the ongoing implementation of Triple P across agencies and develops, updates, and carries out responsive action plans to advance implementation and scale-up efforts.
Recruitment & Selection	The county works closely with local service agencies to ensure the use of best practices for Triple P practitioner recruitment and selection.
Training	The county works closely with local agencies and Triple P America to ensure the use of best practices for training Triple P practitioners to deliver Triple P to the county's population.
Coaching	The county works closely with local agencies to ensure the use of best practices for coaching Triple P practitioners after their accreditation and as they deliver Triple P to children and families.
Fidelity Assessment	The county works closely with local agencies to ensure the use of best practices for assessing whether or not core Triple P components are delivered as intended by Triple P practitioners to children and families.
Decision-Support Data System	The county works closely with local agencies to use best practices to gather, use, and share implementation and intervention data for decision-making to improve the implementation of Triple P across the county.
Facilitative Administration	The county uses best practices to solicit, document, and use information about Coalition and agency policy and practice facilitators and barriers to improve the implementation of Triple P across the county.
Systems Intervention	The county works closely with local agencies and other key partners to solicit, document, and use information about Triple P successes and larger systems needs to improve and sustain the implementation and scale-up of Triple P across the county. Additionally, the county facilitates key Triple P system activities, including the Triple P Stay Positive media campaign and county referral networks.

Table 1. PS-CCA-TP scale definitions.

scale and dividing by the total points possible generates raw scale scores. A raw composite score is also calculated using all items in the instrument. Raw scores are then converted to percentage scores, allowing the results to be interpreted as *the percent to which capacity is in place*.

Across all TPIE assessment time points, PS-CCA-TPs were conducted on-site with county implementation support staff.

Agency Implementation Infrastructure & Best Practices

To assess the presence of active implementation infrastructure and best practices among local agencies to support the intended delivery of Triple P interventions, TPIE evaluators developed for Time 2 the ***Implementation Drivers Assessment for Agencies Implementing Triple P Interventions (IDA-TP)***. TPIE evaluators relied heavily on previously established implementation drivers assessments and technical assistance tools for the development of IDA-TP items and scales (i.e., Aldridge, Naoom, Boothroyd, & Prinz, 2014; Blase, Van Dyke, Duda, & Fixsen, 2011; Blase, Van Dyke, & Fixsen, 2013; Ogden, Bjørnebekk, Kjøbli, Patras, Christiansen, Taraldsen, et al., 2012; Van Dyke, Blase, Sims, & Fixsen, 2013). At Time 3 and Time 4, the IDA-TP was refined based on available reliability data, experience facilitating the assessment with agency implementation support staff, and existing frameworks of implementation infrastructure and best practices (e.g., Blase, Van Dyke, & Fixsen, 2013; Fixsen et al., 2009; Metz & Bartley, 2012). These later adjustments included clarified item language and further alignment with identified implementation best practices (i.e., Blase, Van Dyke, & Fixsen, 2013). With very few exceptions, these adjustments did not interfere with the comparability of data across these three time points.

The IDA-TP is a facilitated group self-assessment. Intended participants include:

(1) agency leaders with executive authority related to the implementation of Triple P interventions in the agency,
(2) agency staff who coordinate and manage day-to-day implementation support for Triple P interventions in the agency,
(3) agency staff who are involved in identifying or selecting agency practitioners to be trained in Triple P interventions,
(4) agency staff who are coordinating or facilitating agency practitioners' participation in Triple P trainings,
(5) agency staff who are providing or facilitating agency Triple P practitioners' participation in coaching after Triple P training, and
(6) agency staff who are involved in collecting or managing data relative to the delivery of Triple P interventions.

Some agencies have more or fewer staff that participate in the group interview. Triple P practitioners who focus solely on delivering Triple P interventions and who are not involved in any of the roles described above are usually not respondents for the IDA-TP.

The IDA-TP, as delivered at Time 4, includes 83 items across an Agency Implementation Capacity scale and seven Implementation Drivers scales (Recruitment & Selection, Training, Coaching, Fidelity Assessment, Decision-Support Data Systems, Facilitative Administration, and Systems Intervention). Agency Implementation Capacity items are designed to assess the resources and abilities within agencies to use active implementation strategies to support Triple P interventions. Implementation Drivers items are designed to assess the presence and quality of active implementation infrastructure and best practices to support the delivery of Triple P interventions as intended within local service agencies. IDA-TP scale definitions are listed in Table 2.

With the support of a trained TPIE facilitator, IDA-TP participants individually rate, and then come to group consensus on, each item using a three-point scale, with "0" indicating "no activities or elements of

IDA-TP Scale Definitions	
Scale	**Definition**
Agency Implementation Capacity	The agency has formally and sustainably organized and aligned leadership and team-based staff support with the authority, capacity, and abilities to coordinate and support day-to-day Triple P implementation activities within the agency.
Recruitment & Selection	The agency uses best practices for the recruitment and/or selection of practitioners to deliver Triple P to the agency's target population.
Training	The agency uses best practices for training Triple P practitioners to deliver Triple P to the agency's target population.
Coaching	The agency uses best practices for coaching Triple P practitioners as they deliver Triple P interventions to children and families.
Fidelity Assessment	The agency uses best practices for assessing whether or not core Triple P components are delivered as intended by Triple P practitioners to children and families.
Decision-Support Data System	The agency uses best practices to gather, use, and share implementation and intervention data for decision-making to improve the implementation of Triple P within the agency.
Facilitative Administration	The agency uses best practices to solicit, document, and use information about agency policy and practice facilitators and barriers to improve the implementation of Triple P within the agency.
Systems Intervention	The agency uses best practices to solicit, document, and use information about Triple P successes and larger systems needs to improve and sustain the implementation of Triple P within the agency. Additionally, the agency participates in key Triple P system activities, including the Triple P Stay Positive media campaign and county referral networks.

Table 2. IDA-TP scale definitions.

this item are in place and/or these activities or elements have not yet been initiated," "1" indicating "some activities or elements of this item are in place and/or initiated," and "2" indicating "all activities or elements of the item are adhered to and there is clear evidence to support this." An example item in the Agency Implementation Capacity scale is, "the agency has clearly identified an Agency Implementation Team, consisting of three or more individuals, that is responsible for coordinating and supporting the day-to-day implementation of Triple P." An example Implementation Drivers item (from the Recruitment & Selection scale) is, "individuals who are making Triple P practitioner selection decisions have sufficient understanding of the key principles, skills, and abilities required to effectively deliver Triple P." Summing ratings for items in each scale and dividing by the total points possible generates raw *scale scores*. A raw *Implementation Drivers Composite score* (incorporating items across the seven implementation drivers scales) is also calculated. Raw scores are then converted to percentage scores, allowing results to be interpreted as *the percent to which implementation infrastructure and best practices are in place*.

Across TPIE assessments, IDA-TPs were generally conducted on-site with agency leaders and implementation support staff, though phone assessments were occasionally conducted when on-site meetings were not possible. In such cases when an agency supplied only one respondent for the IDA-TP, TPIE facilitators and the respondent either determined that the individual had sufficient knowledge of the agency's Triple P implementation infrastructure and practices to reliably complete the assessment,

or the TPIE facilitator followed-up with other agency staff to incorporate additional needed perspectives.

At Time 4, internal consistency for the **Implementation Drivers Composite** scale in both the Cabarrus and Mecklenburg samples was strong (Cabarrus α = 0.96, Mecklenburg α = 0.96). Where enough score variability was present to test internal consistency among IDA-TP scales, internal consistency was good to strong (**Agency Implementation Capacity** – Cabarrus α = 0.83, Mecklenburg α = 0.84; **Recruitment & Selection** – Mecklenburg α = 0.75; **Coaching** – Cabarrus α = 0.77, Mecklenburg α = 0.76; **Fidelity Assessment** – Cabarrus α = 0.92, Mecklenburg α = 0.89; **Decision-Support Data System** – Cabarrus α = 0.81, Mecklenburg α = 0.88; **Facilitative Administration** – Cabarrus α = 0.91, Mecklenburg α = 0.91; and **Systems Intervention** – Cabarrus α = 0.88, Mecklenburg α = 0.81). Sample variance was insufficient in the Cabarrus Time 4 sample to test internal consistency for the Recruitment & Selection scale (*m* = 86%, *sd* = 12%) and in both county Time 4 samples to test internal consistency for the **Training** subscale (Cabarrus *m* = 96%, *sd* = 6%, Mecklenburg *m* = 91%, *sd* = 10%). Internal consistency among IDA-TP scales for county samples at Time 2 and Time 3 assessments are reported in prior TPIE interim reports (Aldridge, Murray, & Prinz, 2014; Aldridge, Murray, Prinz, & McManus, 2014; Aldridge, Murray, Prinz, & McManus, 2015a; Aldridge, Murray, Prinz, & McManus, 2015b).

Web-Based Triple P Practitioner Surveys

Semi-annual web-based Triple P practitioner surveys were sent to active Triple P practitioners in each county at roughly the same time that TPIE evaluators were conducting on-site county and agency implementation assessments. At Time 1, the TPIE project manager emailed tailored links to active county Triple P practitioners using contact information provided by implementation support staff in Cabarrus and Mecklenburg counties. At Times 2, 3, and 4, each County Triple P Coordinator embedded, on behalf of the TPIE project, a general link to the TPIE Triple P practitioner survey within a regular quarterly data collection email being sent by county implementation support staff to county Triple P practitioners. This shift in administration protocol was made at Time 2 to reduce the amount of emails county Triple P practitioners were getting in relation to their Triple P activities and responsibilities.

Practitioner surveys included three sections: practitioner professional characteristics, adherence to Triple P session content, and agency implementation climate.

Professional Characteristics

Several items were included in the practitioner survey related to practitioner professional characteristics, including county and agency affiliation, professional affiliation, number of years practicing child and family services, number of years working at current agency, and participation in county Triple P trainings and Triple P accreditations.

Adherence to Triple P Session Content

Triple P presently makes available to trained practitioners, and encourages the use of, "session checklists" for tracking adherence to intended session content for Triple P interventions. These tools provide a standardized way for Triple P practitioners and agencies implementing Triple P to assess whether Triple P content is being delivered as intended within and across Triple P intervention sessions.

As part of TPIE's online practitioner survey, county Triple P practitioners were asked to report which Triple P session, from which Triple P intervention, they most recently completed, even if the Triple P session, as designed, required more than one family meeting to complete. Respondents were then

presented with the Triple P session checklist matching this report. Survey respondents were encouraged to refer to their session notes, family reports, or other service documentation that would help them retrospectively recall which components of the session they covered and which components were skipped. TPIE evaluators then calculated the percentage of possible session components that were completed during delivery of the session. These scores were averaged across practitioners within Triple P interventions and sessions (different Triple P interventions and sessions have different numbers of core content components). Asgary-Eden & Lee (2011, 2012) previously used this methodology for assessing adherence to Triple P interventions in an examination of factors associated with adherence in a large Triple P scale-up initiative in Canada.

Agency Implementation Climate

TPIE evaluators adapted a seven-item measure of implementation climate originally developed by Klein, Conn, and Sorra (2001). Language modifications were made to tailor the measure for the implementation of Triple P interventions in local service agencies. Each item is rated on a 5-point Likert scale ranging from (1) not true to (5) true. An example item is, "People at this organization think that the implementation of Triple P is important." A scale score is calculated by averaging scores across all items; lower scores represent a less favorable implementation climate and higher scores represent a more favorable implementation climate. For interpretation of evaluation results, agencies were considered to have hospitable implementation climates if the mean scale score for the agency was equal to or greater than the scale midpoint (3). At Time 4, internal consistency for the scale in both the Cabarrus and Mecklenburg samples was good (Cabarrus $\alpha = 0.88$, Mecklenburg $\alpha = 0.86$). Internal consistency for county samples at Time 1, Time 2, and Time 3 assessments were similarly strong, and are reported in prior TPIE interim reports (Aldridge, et al., 2014a; Aldridge, et al., 2014b; Aldridge, Murray, & Prinz, 2014; Aldridge, Murray, Prinz, & McManus, 2014; Aldridge, et al., 2015a; Aldridge, et al., 2015b).

Data and Information Provided by County and State Evaluation Partners

County implementation support staff supplied TPIE evaluators with semi-annual data regarding **local agency participation status** within the county Triple P coalition, **county Triple P practitioner training and activity statuses**, and the **reach of Triple P intervention delivery** within each county. These data corresponded to each of the four TPIE assessment points. County implementation support staff also provided support materials related to the county's implementation and scale-up of Triple P (e.g., strategic plans, training reports, local evaluation measures, status updates) to TPIE evaluators as requested and available during the evaluation project.

In the final months of the TPIE project, evaluation staff at the North Carolina Division of Public Health provided TPIE evaluators with SFY09-10 through SFY14-15 **child maltreatment and foster care placement data** for Cabarrus and Mecklenburg counties and the state as a whole. Although TPIE evaluators had hoped to obtain similar data regarding child maltreatment injuries, these data were not available in time for this final project report.

Evaluation Results

County Implementation Capacity

Participants in each county's administration of the PS-CCA-TP across the 2nd, 3rd, and 4th assessment time points (those for which PS-CCA-TP data are comparable) are listed in Table 3. These participants

PS-CCA-TP Participants			
	Name	**Agency**	**Role**
Cabarrus	Barbara Sheppard	Cabarrus Health Alliance	Health Initiatives Director
	Gina Hofert	Cabarrus Health Alliance	Triple P Director & Evaluator
	Megan Shuping (T3-T4 only)	Cabarrus Health Alliance	Triple P Program Coordinator
	Amy Bartlett	Cabarrus Health Alliance	Triple P Program Coordinator
Mecklenburg	Cathy Henderson	Mecklenburg County Health Dept.	Triple P Coordinator
	Michael Kennedy	Mecklenburg County Health Dept.	Triple P Advisory Board
	Hannah Sawyer	Mecklenburg County Health Dept.	Management Analyst, MCHD
	Crystal Stilwell	Mecklenburg County Health Dept.	Sr. Manager, MCHD

Table 3. County Capacity Assessment participants for Time 2 (fall 2014), Time 3 (spring 2015) and Time 4 (fall 2015) assessments.

constituted all key county-level staff that were responsible for leading and managing the day-to-day implementation of the Triple P system of interventions within each county.

Scope of the Triple P System of Interventions in Each County

In preparation for the PS-CCA-TP, respondents were asked to report all Triple P interventions being implemented or planned for implementation in their county. Given the nature of the Triple P system of interventions as a public health approach to parenting and family support, implementing a wide array of Triple P interventions may be important for achieving optimal system reach and intended population-level outcomes. In addition, knowing the variety of Triple P interventions being implemented and planned for implementation is important for understanding the amount of capacity that may be needed from the county to support scale-up. A stage-based view of Triple P intervention implementation for each county at Time 4 (fall 2015) is reported in Table 4. Triple P intervention implementation at Time 1 (spring 2014), Time 2 (fall 2014), and Time 3 (spring 2015) are reported in prior TPIE interim reports (Aldridge, et al., 2014a; Aldridge, et al., 2014b; Aldridge, Murray, & Prinz, 2014; Aldridge, Murray, Prinz, & McManus, 2014; Aldridge, et al., 2015a; Aldridge, et al., 2015b).

A few shifts in the staging of Triple P interventions within each county since Time 3 are noteworthy. First, Mecklenburg County implementation support staff reported that Level 3 Discussion Group had reached full implementation. The **full implementation stage** is achieved when the majority of county practitioners intended to be trained are delivering interventions with fidelity and agencies have accommodated these interventions as part of business as usual (e.g., Fixsen et al., 2013; Metz & Bartley, 2012). County implementation coordinators in each county reported using data and information such as *short-term family outcome data*, *reviews of county Triple P practitioners' contact records with county families*, and *handfuls of practitioner self-report of high fidelity delivery* to judge whether an intervention had reached full implementation.

Second, several Triple P interventions in each county had progressed to the initial implementation stage. The **initial implementation stage** is often characterized by new practice behaviors among practitioners, new administrative behaviors among agency leaders, identifying and addressing implementation

Stage of Implementation for County Triple P Interventions				
	Exploration	**Installation**	**Initial Implementation**	**Full Implementation**
Cabarrus County	L3 Discussion Group Teen	L2 Brief Primary Care Teen[1]	L2 Seminar[1]	L3 Primary Care
	L5 Family Transition	L5 Group Lifestyle	L2 Brief Primary Care[1]	L3 Primary Care Teen
		L5 Enhanced[1]	L3 Discussion Group	L3 Primary Care Stepping Stones
			L4 Standard	
			L4 Triple P Online[1]	
Mecklenburg County	L3 Primary Care Stepping Stones	L3 Discussion Group Teen[1]	L2 Seminar	L3 Primary Care
	L4 Standard Stepping Stones	L5 Group Lifestyle[1]	L2 Seminar Teen[1]	L3 Primary Care Teen
	L4 Group Stepping Stones[1]	L5 Enhanced[1]	L4 Standard[1]	L3 Discussion Group[1]
	L5 Family Transitions		L4 Group	
			L4 Group Teen	
			L5 Pathways[1]	

Table 4. A stage-based overview of Triple P intervention implementation in Cabarrus & Mecklenburg Counties, fall 2015.

barriers, maintaining practitioner and stakeholder buy-in, and early data collection and use for quality improvement (e.g., Fixsen et al., 2013; Metz & Bartley, 2012). In Cabarrus County, Level 2 Seminar, Level 2 Brief Primary Care, and Level 4 Triple P Online had each advanced to initial implementation. In Mecklenburg County, Level 2 Seminar Teen, Level 4 Standard, and Level 5 Pathways had moved to the initial implementation stage.

Finally, some Triple P interventions in each county had progressed to the installation stage. The **installation stage** is characterized by initial expenditure of county resources, practitioner training and accreditation processes, and agency preparation to begin delivering interventions to families (e.g., Fixsen et al., 2013; Metz & Bartley, 2012). In Cabarrus County, practitioners were being trained in Level 2 Brief Primary Care Teen and Level 5 Enhanced for the first time. In Mecklenburg County, practitioners were being trained in Level 3 Discussion Group Teen, Level 5 Group Lifestyle, and Level 5 Enhanced for the first time.

Overall, it is noteworthy that both counties had made investments to newly install or advanced several Triple P interventions across their counties since last spring. In fact, **this marks a significant expansion of the Triple P systems in each county for the first time since the fall 2014 assessment period (Time 2)**.

[1] These interventions had advanced stages of implementation since spring 2015.

Longitudinal PS-CCA-TP Results

County PS-CCA-TP scale and composite scores for Time 2, Time 3, and Time 4 are depicted in Figures 3 and 4. The nature of revisions to the Coaching scale between Time 2 and Time 3 assessments prevents a direct comparison of scale results and, likewise, interpretation of changes in this area between this assessment point and later ones.

When interpreting *county capacity to support the development of active implementation infrastructure and best practices across local agencies* (the blue bars in Figures 3 and 4), it is important to keep in mind that implementation drivers are considered compensatory (Fixsen et al., 2005; Fixsen et al., 2009). That is, strengths in one area of implementation infrastructure and practice at the agency level (e.g., coaching) may compensate for deficits in other areas (e.g., training). **It is unlikely that local service agencies would need to be near perfect across all implementation drivers to support the effective implementation of Triple P**.

Cabarrus County

Several patterns are noteworthy in the PS-CCA-TP results for Cabarrus County. First, county implementation capacity remained relatively stable across the evaluation period, though a pattern of slight improvement was observed from Time 3 to Time 4, resulting in the county reporting that implementation capacity was at its highest as the TPIE evaluation period closed. Results suggest that the county had *consistent and strong resources and abilities* (conceptualized as above 80% in place) across its county leadership team and county implementation team to support the implementation and scale-up of Triple P across the county (the red bars in Figure 3). Of particular note is that PS-CCA-TP respondents reported **the county implementation team had grown from four members with a combined 2.675 FTE at Time 3 to five members with a combined 3.25 FTE by Time 4**. County PS-CCA-TP respondents indicated for the first time at Time 4 that they believed the amount of dedicated time and effort among county implementation team members was ideal to fully support the scale-up of Triple P across the county.

Cabarrus PS-CCA-TP results also suggest that the county had *consistent and strong resources and abilities* to support alignment of the county prevention system to implement Triple P; to conduct regular action plans to advance the scale-up of Triple P; to work closely with local agencies to ensure the use of implementation drivers best practices for training practitioners in Triple P and for gathering and using data for decision-making; and to solicit and use information about Triple P successes and larger systems needs to improve and sustain the scale-up of Triple P (systems intervention). Furthermore, results suggest that, by the end of the TPIE evaluation period, the county had *good resources and abilities* (conceptualized as between 70-80% in place) to solicit and use information about the County Triple P Coalition's and agencies' policy and practice facilitators and barriers to improve the scale-up of Triple P (facilitative administration).

It is noteworthy that almost all of Cabarrus County's strengths are in areas related to organizational teams (County Leadership Team, County Implementation Team), organizational processes (Prevention System Alignment, Action Planning), and organizational implementation drivers (Decision Support Data System, Facilitative Administration, Systems Intervention). The lone exception to this pattern is the county's strong resources and abilities to work with local agencies to ensure the use of training best practices, which was likely bolstered by the county's partnership with Triple P America to conduct all Triple P training for chosen practitioners. The county's strong resources and abilities to work with local

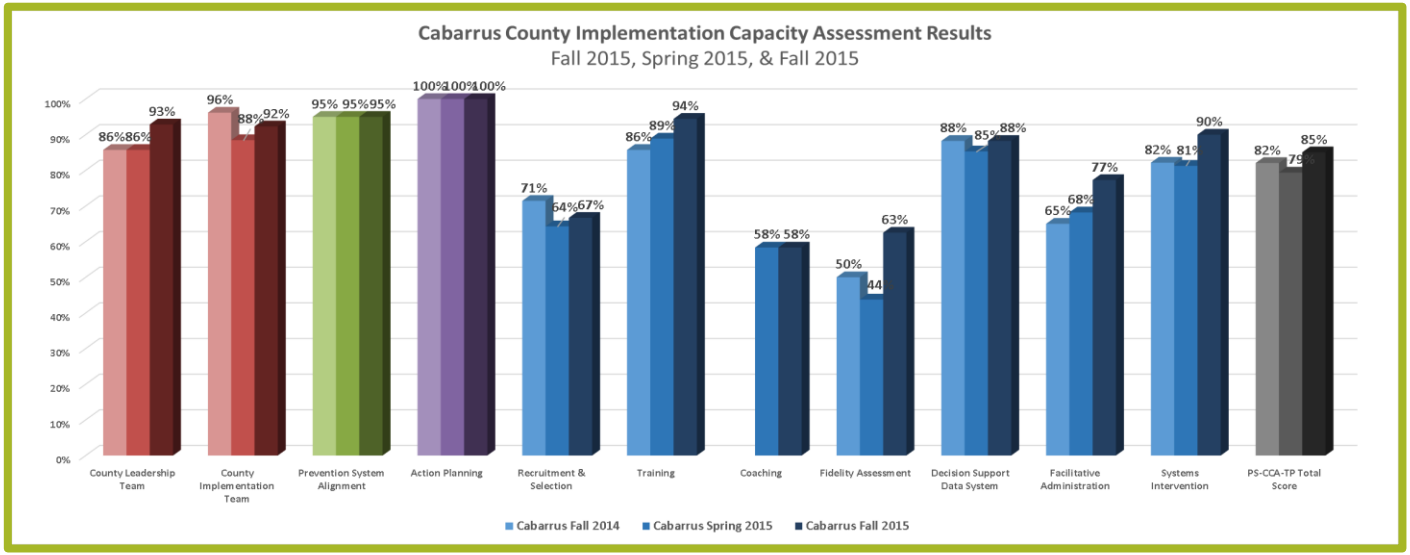

Figure 3. County implementation capacity assessment results for Cabarrus County, fall 2014 - fall 2015.

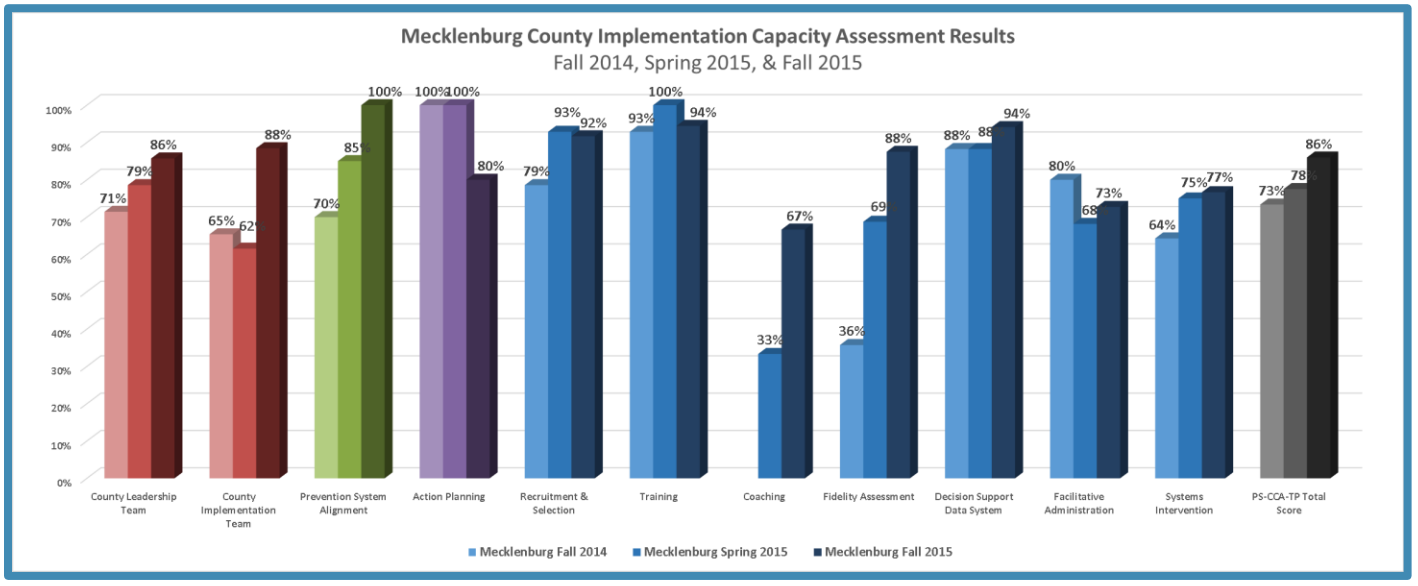

Figure 4. County implementation capacity assessment results for Mecklenburg County, fall 2014 - fall 2015.

agencies to ensure data collection and use during decision-making was likely strengthened by the county's participation in statewide Triple P evaluation activities, which brought shared intervention measures and expectations for quarterly data reporting to the county.

Despite these strengths, PS-CCA-TP results consistently suggest that the county's resources and abilities to work with local agencies to ensure the use of implementation drivers best practices for Triple P practitioner recruitment and selection, coaching, and fidelity assessment may *benefit from additional development* (conceptualized as below 70% in place). In contrast to the capacity strengths Cabarrus appears to have related to *organizational* factors, each of these three developmental needs fit within the *competency* implementation drivers (Recruitment and Selection, Training, Coaching, Fidelity Assessment): implementation infrastructure and best practices to ensure practitioners' competence and confidence to deliver Triple P as intended. Again, the lone exception to this pattern was the county's resources and abilities to work with local agencies to ensure the use of training best practices.

Mecklenburg County

Several patterns are likewise noteworthy in the PS-CCA-TP results for Mecklenburg County. First, where there was initially room to grow at Time 2, there was an overall pattern of improvement by Time 4. The four exceptions to this pattern – Action Planning, Training, Decision Support Data System, and Facilitative Administration – were each in areas already reflecting strong resources and abilities at Time 2. This pattern of improvement is typified by results that suggest, by Time 4, the county had developed *strong resources and abilities* across its county leadership team and county implementation team to support the implementation and scale-up of Triple P across the county (the red bars in Figure 4). Of particular note is that PS-CCA-TP respondents reported **the county implementation team had grown from four members with a combined 1.25 FTE at Time 3 to five members with a combined 2.04 FTE by Time 4**. However, this was largely achieved through the very recent addition of one new county implementation team member at 0.75 FTE at Time 4. In addition to the time and support the new member may need to fully step into the work of the county implementation team, this overall dedicated FTE was still shy of the 2.12 to 2.5 FTE that county PS-CCA-TP respondents indicated would be ideal to fully support the scale-up of Triple P across the county.

Mecklenburg PS-CCA-TP results also suggest that the county had fairly *consistent and strong resources and abilities* to conduct regular action plans to advance the scale-up of Triple P and, through Time 3 and into Time 4, had developed *strong resources and abilities* to support alignment of the county prevention system to implement Triple P (the purple and green bars in Figure 4, respectfully). Though it is notable that county resources and abilities to action plan dropped from Time 3 to Time 4, additional longitudinal data would be helpful to see if the trend becomes concerning.

Regarding county capacity to work with local agencies to ensure the use of implementation best practices related to the competency drivers (the first four sets of blue bars in Figure 4), results suggest that Mecklenburg had *consistent and strong resources and abilities* related to practitioner recruitment and selection and practitioner training. As in Cabarrus County, Mecklenburg County capacity to work with local agencies to ensure best practices for training was likely bolstered by the county's partnership with Triple P America to conduct all Triple P training for selected practitioners. Results further suggest that the county's most dramatic capacity improvements during the TPIE evaluation period were related to supporting the other two competency implementation drivers: Coaching and Fidelity Assessment. As in Cabarrus County, early results indicated that these were the areas originally in need of the most

development in Mecklenburg County. Though still likely in *need of additional development*, the county's resources and abilities to work with local agencies to ensure coaching best practices were twice as developed at Time 4 as they were at Time 3. Similarly, county resources and abilities to work with local agencies to ensure fidelity assessment best practices more than doubled from Time 2 and became a *strength* by Time 4.

Finally, regarding county capacity to work with local agencies to ensure the use of implementation best practices related to the organizational drivers (the last three sets of blue bars in Figure 4), results suggest that Mecklenburg had *consistent and strong resources and abilities* to ensure best practices for gathering and using data for decision-making. As in Cabarrus County, capacity in this area was likely strengthened by Mecklenburg County's participation in statewide Triple P evaluation activities. At Time 4, PS-CCA-TP results also suggested that Mecklenburg had *good resources and abilities* to solicit and use information about the County Triple P Coalition's and agencies' policy and practice facilitators and barriers to improve the scale-up of Triple P (facilitative administration) and, likewise, to solicit and use information about Triple P successes and larger systems needs to improve and sustain the scale-up of Triple P (systems intervention).

County Sustainability Planning

The PS-CCA-TP includes three items that tap into the presence of sustainability plans to support county leadership and implementation team capacity and the overall implementation of Triple P beyond the initial grant awards from the State of North Carolina. Although **these three items should not be considered a full assessment of the sustainability of Triple P implementation**, they do provide helpful information toward this end. For each of these three items, a response of "2" on the PS-CCA-TP zero-to-two response scale carried an additional criteria that the sustainability plan must be in documented form, which provides greater confidence towards sustainability than an assumed or informal plan. Cabarrus and Mecklenburg County responses for these three items across Time 2, Time 3, and Time 4 assessments are reported in Tables 5 and 6.

Responses for PS-CCA-TP Sustainability Plan Items – Cabarrus County				
Item	**Response Range**	**Fall 2014 Response**	**Spring 2015 Response**	**Fall 2015 Response**
(CLT7) There is a documented plan to sustain the County Leadership Team's involvement in the implementation and scale-up of Triple P beyond the county service grant.	0-2	1 – "Partially in Place"	1 – "Partially in Place"	1 – "Partially in Place"
(CIT13) There is a documented plan to sustain the positions on the County Implementation Team (including the County Implementation Coordinator) beyond the county service grant.	0-2	0 – "Not in Place"	1 – "Partially in Place"	1 – "Partially in Place"
(SI15) The county has a documented plan to sustain the necessary financial and programmatic resources needed to support the ongoing implementation of Triple P beyond the county service grant.	0-2	1 – "Partially in Place"	1 – "Partially in Place"	1 – "Partially in Place"

Table 5. Cabarrus County responses to PS-CCA-TP items assessing the presence of sustainability plans.

Responses for PS-CCA-TP Sustainability Plan Items – Mecklenburg County				
Item	Response Range	Fall 2014 Response	Spring 2015 Response	Fall 2015 Response
(CLT7) There is a documented plan to sustain the County Leadership Team's involvement in the implementation and scale-up of Triple P beyond the county service grant.	0-2	0 – "Not in Place"	1 – "Partially in Place"	2 – "Fully in Place
(CIT13) There is a documented plan to sustain the positions on the County Implementation Team (including the County Implementation Coordinator) beyond the county service grant.	0-2	0 – "Not in Place"	0 – "Not in Place"	1 – "Partially in Place"
(SI15) The county has a documented plan to sustain the necessary financial and programmatic resources needed to support the ongoing implementation of Triple P beyond the county service grant.	0-2	0 – "Not in Place"	1 – "Partially in Place"	1 – "Partially in Place"

Table 6. Mecklenburg County responses to PS-CCA-TP items assessing the presence of sustainability plans.

Generally, response patterns suggest limited progress developing sustainability plans within each county across the evaluation period. The one exception to this is for Mecklenburg County's leadership team, for which PS-CCA-TP respondents indicated, for the first time, the presence of documented sustainability plans at Time 4.

Agency Implementation Climate, Infrastructure, & Continuation

Agency implementation climate and infrastructure results are reported in aggregate – across all participating agencies in each county. Thus, an understanding of agencies' participation, across the evaluation period, in their respective county Triple P coalitions and TPIE assessments is helpful for interpreting results. This information is reported in Table 7. Three observations are made. First, agencies in Cabarrus County had a higher rate of continuing participation in their county's Triple P coalition than agencies in Mecklenburg County. Second, the rate of active agencies' participation in IDA-TP assessments remained at or above 90% across the evaluation period, suggesting confidence in the representativeness of IDA-TP results at each assessment point. Likewise, sample sizes of active agencies represented within TPIE implementation climate datasets at each assessment point suggest confidence in the representativeness of climate results across the evaluation period.

Agency Implementation Climate

When interpreting implementation climate scores across agencies, which were derived from web-based Triple P practitioner survey data, it is important to keep in mind that the number of Triple P practitioners in each agency varied. Some agencies only had one Triple P practitioner at any given assessment point. At Time 4, one agency had as many as fourteen. The number of practitioners, by agency, participating in web-based Triple P practitioner surveys at Time 4 is reported later in this report. Similar descriptive numbers from prior assessment points are reported in prior TPIE interim reports (Aldridge, et al., 2014a; Aldridge, et al., 2014b; Aldridge, Murray, & Prinz, 2014; Aldridge, Murray, Prinz, & McManus, 2014; Aldridge, et al., 2015a; Aldridge, et al., 2015b).

	Agency Participation Active and inactive agencies in county Triple P coalitions		**IDA-TP Participation** % of *active* agencies that participated in IDA-TPs		**Hospitable Implement. Climates** % of *active* agencies with hospitable implementation climates (N = sample size from total active)	
	Cabarrus	**Mecklenburg**	**Cabarrus**	**Mecklenburg**	**Cabarrus**	**Mecklenburg**
Spring 2014 (Time 1)	11 Active	10 Active	Not applicable	Not applicable	91% (N = 11)	100% (N = 10)
Fall 2014 (Time 2)	18 Active	20 Active	94%	90%	94% (N = 18)	72% (N = 18)
Spring 2015 (Time 3)	19 Active	15 Active 5 Inactive	100%	93%	89% (N = 18)	85%[2] (N = 13)
Fall 2015 (Time 4)	23 Active 3 Inactive	18 Active 8 Inactive	96%	94%	81%[2] (N = 21)	94%[2] (N = 17)

Table 7. Agency participation in county Triple P coalitions, IDA-TP participation, and hospitable implementation climates across all four TPIE assessment points.

The percentages of active agencies surveyed that had hospitable implementation climates at each assessment point are reported in Table 7. Although clear trends are not evident from a cursory review of the data, a more detailed analysis does suggest interpretable patterns. As noted in Table 7, the percentages of active agencies surveyed at Time 4 in Cabarrus and at Time 3 and Time 4 in Mecklenburg, by definition, did not include the agencies that were no longer active in their county's Triple P coalition. Among the five agencies that discontinued participation in the Mecklenburg County Triple P Coalition by Time 3, at least three had unfavorable implementation climates at Time 2 (m = 2.71, 2.14, and 1.57). Practitioners from the other two agencies did not participate in the Time 2 web-based Triple P practitioner survey, which might likewise have indicated that Triple P was a low priority in these agencies. Categorizing these five inactive agencies as "not hospitable," only 61% of all agencies surveyed or inactive in Mecklenburg might have been considered "hospitable" for Triple P at Time 3.

Similar analyses can be useful when examining Time 4 agency implementation climate data. In Cabarrus County, one of the three agencies that discontinued participation in the Cabarrus County Triple P Coalition by Time 4 had an unfavorable implementation climate at Time 3 (m = 2.21). Practitioners from another did not participate in the Time 3 web-based Triple P practitioner survey. The third – a new agency at Time 4 – closed due to financial problems before being able to participate in TPIE assessments. Categorizing the first two inactive agencies as "not hospitable" and excluding the last due to missing data and participation, only 74% of all agencies surveyed or inactive in Cabarrus might have been considered "hospitable "for Triple P at Time 4. In Mecklenburg County, one of the four additional agencies that discontinued participation in the Mecklenburg County Triple P Coalition by Time 4 had an unfavorable implementation climate at Time 3 (m = 2.43). Survey data from Triple P practitioners within the other three agencies suggested that these agencies were "hospitable" for Triple P at Time 3.

[2] These percentages do not take into account the agencies that were no longer active in their county's Triple P coalition at the time of assessment, the implications of which are discussed in the text of this section.

Categorizing these agencies accordingly and adding in the four still inactive agencies from Time 3, each categorized as "not hospitable" from Time 2, only 76% of agencies surveyed or inactive in Mecklenburg might have been considered "hospitable" for Triple P at Time 4.

With these additional analyses, clearer patterns emerge within each county across the evaluation period. **In Cabarrus County, the percentage of agencies surveyed or inactive that might have been considered "hospitable" for Triple P appears to be declining across the final three assessment points. In Mecklenburg County, though starting at a perfect 100%, the percentage dramatically dropped at Time 2, continued to decline at Time 3, and then rebounded when seven new agencies were added at Time 4. At the end of the TPIE evaluation period, data suggests that about three-quarters of agencies ever involved in each county Triple P coalition might be considered "hospitable" for Triple P.**

Agency Implementation Infrastructure & Best Practices

As a reminder, when interpreting results about the infrastructure and best practices to support the implementation of Triple P across local agencies, it is important to keep in mind that implementation drivers are considered compensatory (Fixsen et al., 2005; Fixsen et al., 2009). That is, strengths in one area of implementation infrastructure (e.g., coaching) may compensate for deficits in other areas of implementation infrastructure (e.g., training). **It is unlikely that local service agencies would need to be near perfect across all implementation drivers to support effective implementation of Triple P**.

County IDA-TP scale and implementation drivers composite scores for Time 2 (fall 2014), Time 3 (spring 2015), and Time 4 (fall 2015) are depicted in Figures 5 and 6. The nature of revisions to the Agency Implementation Capacity scale and Coaching scale between Time 2 and Time 3 assessments prevents a direct comparison of scale results and, likewise, interpretation of changes in these areas between these time points and later ones.

Cabarrus County

Several patterns are noteworthy in the IDA-TP results for Cabarrus County. First, like its counterpart county implementation capacity results, local agency implementation infrastructure and best practices remained relatively stable across the evaluation period. Results suggest that agencies across the county had consistent leadership and implementation team capacity (the red bars in Figure 5)*, though it may still benefit from additional development* (conceptualized as below 70% in place). Notably, at Time 4 **only seven of the 22 participating agencies (32%) had clearly identified teams of three or more staff members fully in place to manage and coordinate day-to-day Triple P implementation activities**. Nine agencies had only one individual in such a role (i.e., an implementation coordinator). In addition, IDA-TP respondents at Time 3[3] reported that agency implementation team members across the county were allocated an average of 7.10% time and effort for agency implementation support activities. **When asked what the ideal allocation of time and effort would be for agency implementation team members, respondents – on average – nearly doubled the allocation** to 13.90%. Among the 48 agency

[3] Because of the large number of new agencies joining the Cabarrus County Triple P Coalition at Time 4 (N = 7) compared to Time 3 (N = 1), TPIE evaluators chose to report here only Time 3 data related to agency implementation team member time and effort. Though Time 4 data regarding agency implementation team member time and effort followed similar patterns, agencies that had just joined the Triple P coalition at Time 4 were likely still developing a full sense of the time and effort needed to support all Triple P implementation activities within their agencies.

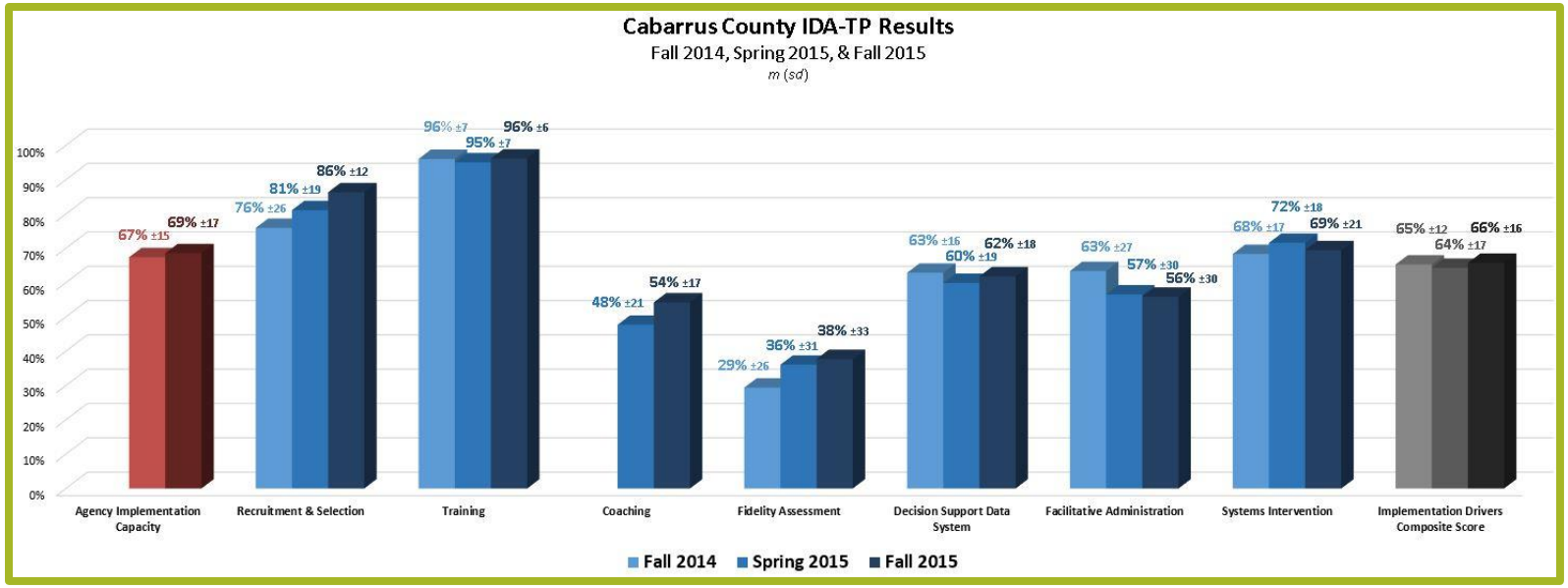

Figure 5. Agency implementation drivers assessment results for Cabarrus County, fall 2014 - fall 2015.

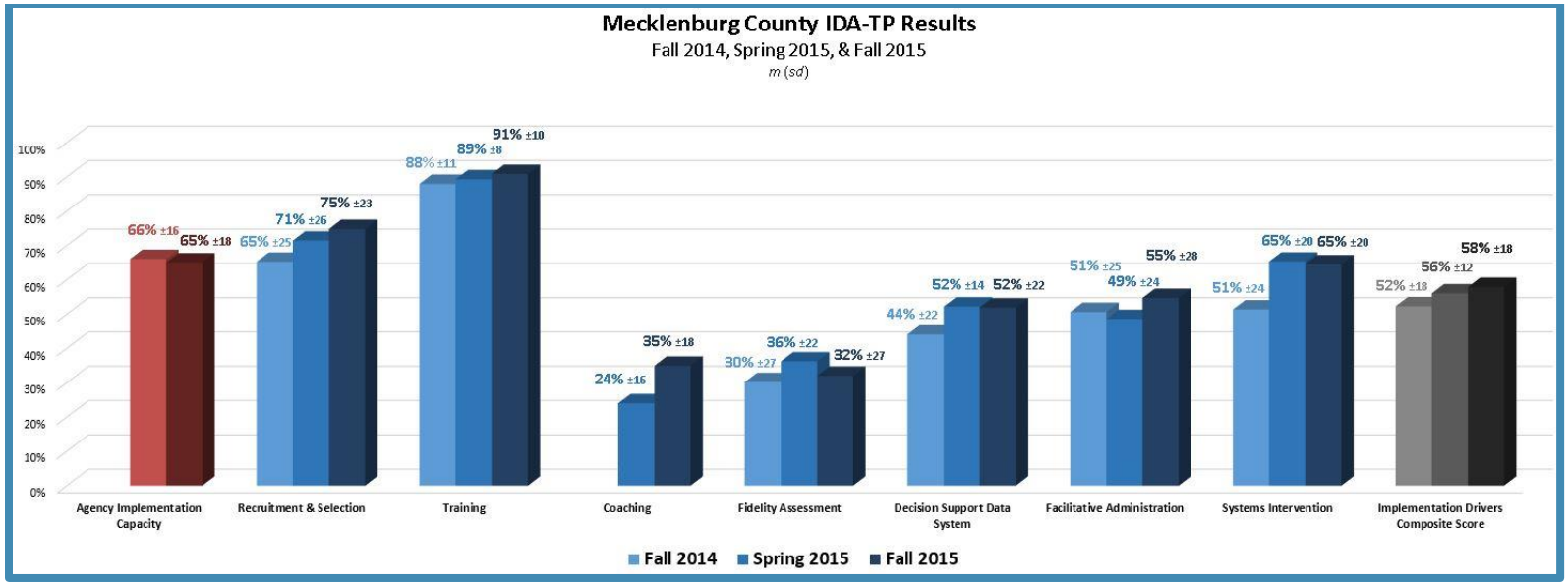

Figure 6. Agency implementation drivers assessment results for Mecklenburg County, fall 2014 - fall 2015.

implementation team members across Cabarrus County at Time 3, **IDA-TP respondents suggested that an increase in FTE would be ideal 70.80% of the time**.

Regarding agency implementation infrastructure and best practices to support practitioner competence and confidence to use Triple P as intended (the first four sets of blue bars in Figure 5), results suggest that Cabarrus County agencies had *strong infrastructure and practices* (conceptualized as above 80% in place) related to practitioner selection and practitioner training. In fact, despite relative consistency in most other areas, the recruitment and selection driver appeared to strengthen across the evaluation period. As with county-level implementation capacity, infrastructure and best practices for practitioner training were likely bolstered by the county's partnership with Triple P America to conduct all Triple P training for county practitioners. Despite these strengths, *the agency implementation infrastructure and practices in most need of additional development across the county* were related to the other two competency implementation drivers: practitioner coaching and fidelity assessment. Though some gains were apparent related to these two implementation drivers across the evaluation period, they remain the least in place.

Finally, results suggest that Cabarrus agencies' infrastructure and practices to provide hospitable organizational and systems environments for the continuous improvement of Triple P implementation (the last three sets of blue bars in Figure 5) *were generally in need of additional development* across the evaluation period. Of these implementation drivers, agency practices to solicit, document, and use information about Triple P successes and larger systems needs to improve and sustain the implementation of Triple P (systems intervention) were the most in place. On the other hand, agency practices to solicit, document, and use information about agency policy and practice facilitators and barriers to improve the implementation of Triple P (facilitative administration) appeared to be slightly slipping across the evaluation period.

Mecklenburg County

Several patterns are likewise noteworthy in the IDA-TP results for Mecklenburg County. First, although agency implementation infrastructure and best practices across the county were generally less in place compared to Cabarrus County, a pattern of slight improvement was evident across the TPIE evaluation period. Though this interpretation is complicated given the amount of agency attrition witnessed across Time 3 and Time 4 in Mecklenburg (i.e., it is possible that those agencies with less well-developed implementation infrastructure were discontinuing their involvement in the county Triple P coalition), the pattern of improvement resembles the same pattern of improvement that was evident across county-level implementation capacity in Mecklenburg during the evaluation period.

Regarding individual scales, results suggest that agencies across the county had consistent leadership and implementation team capacity (the red bars in Figure 6), though – as in Cabarrus County – *it may still benefit from additional development*. Notably, at Time 4 **only three of the 17 participating agencies (18%) had clearly identified teams of three or more staff members fully in place to manage and coordinate day-to-day Triple P implementation activities**. Seven agencies had only one individual in such a role (i.e., an implementation coordinator). In addition, Time 3[4] IDA-TP respondents reported that

[4] Because of the large number of new agencies joining the Mecklenburg County Triple P Coalition at Time 4 (N=7) compared to Time 3 (N = 0), TPIE evaluators chose to report here only Time 3 data related to agency implementation team member time and effort. Though Time 4 data regarding agency implementation team member time and effort followed similar patterns, agencies that had just joined the Triple P coalition at Time 4

agency implementation team members across the county were allocated an average of 8.49% time and effort for agency implementation support activities. **When asked what the ideal allocation of time and effort would be for agency implementation team members, respondents – like their Cabarrus County counterparts – nearly doubled the allocation** to 16.34% on average. Similarly, among the 29 agency implementation team members across Mecklenburg County at Time 3, **IDA-TP respondents suggested that an increase in FTE would be ideal 75.90% of the time**.

Regarding agency implementation infrastructure and best practices to support practitioner competence and confidence to use Triple P as intended (the first four sets of blue bars in Figure 6), results suggest that Mecklenburg County agencies had *good implementation infrastructure and practices* (conceptualized as between 70%-80% in place) related to practitioner recruitment and selection and *strong implementation infrastructure and practices* (conceptualized as above 80% in place) related to practitioner training. As in Cabarrus County, the recruitment and selection driver showed some of the best gains across the evaluation period and practitioner training was likely bolstered by the county's partnership with Triple P America to conduct all Triple P training in the county. Also like agencies across Cabarrus County, *the agency implementation infrastructure and practices in most need of additional development* were related to the other two competency implementation drivers: practitioner coaching and fidelity assessment. Though some meaningful gains were apparent related to the coaching driver across the last two assessment points of the evaluation period, both of these implementation drivers remain the least in place.

Finally, results suggest that Mecklenburg agencies' infrastructure and practices to provide hospitable organizational and systems environments for the continuous improvement of Triple P implementation (the last three sets of blue bars in Figure 6) *remained in need of additional development* across the evaluation period. Similar to agencies across Cabarrus County, Mecklenburg agency practices to solicit, document, and use information about Triple P successes and larger systems needs to improve and sustain the implementation of Triple P (systems intervention) were the most in place among the organizational implementation drivers. The systems intervention driver also showed the most improvement of any implementation driver across the evaluation period.

Agency Cohort Analyses

Because the length of time that an agency has been implementing interventions may influence the development of agency implementation infrastructure and best practices, TPIE evaluators examined Time 4 IDA-TP results individually, accounting for agencies' length of time supporting Triple P implementation.

For these analyses, Time 4 Cabarrus County agencies were split into three cohorts. Agencies in Cohort 1 (N = 9) first trained practitioners in 2013 and had a mean length of time of 944 days (*sd* = 148 days) since first sending an agency practitioner to a Triple P training. Agencies in Cohort 2 (N = 7) first trained practitioners in 2014 and had a mean length of time of 513 days (*sd* = 73 days) since first sending an agency practitioner to a Triple P training. Agencies involved in Cohort 3 (N = 6) first trained practitioners in 2015 and had a mean length of time of 191 days (*sd* = 48 days) since first sending an agency practitioner to a Triple P training. Cabarrus County fall 2015 IDA-TP scale and Implementation Drivers Composite means by cohort, represented as percentage scores, are depicted in Figure 7.

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were likely still developing a full sense of the time and effort needed to support all Triple P implementation activities within their agencies.

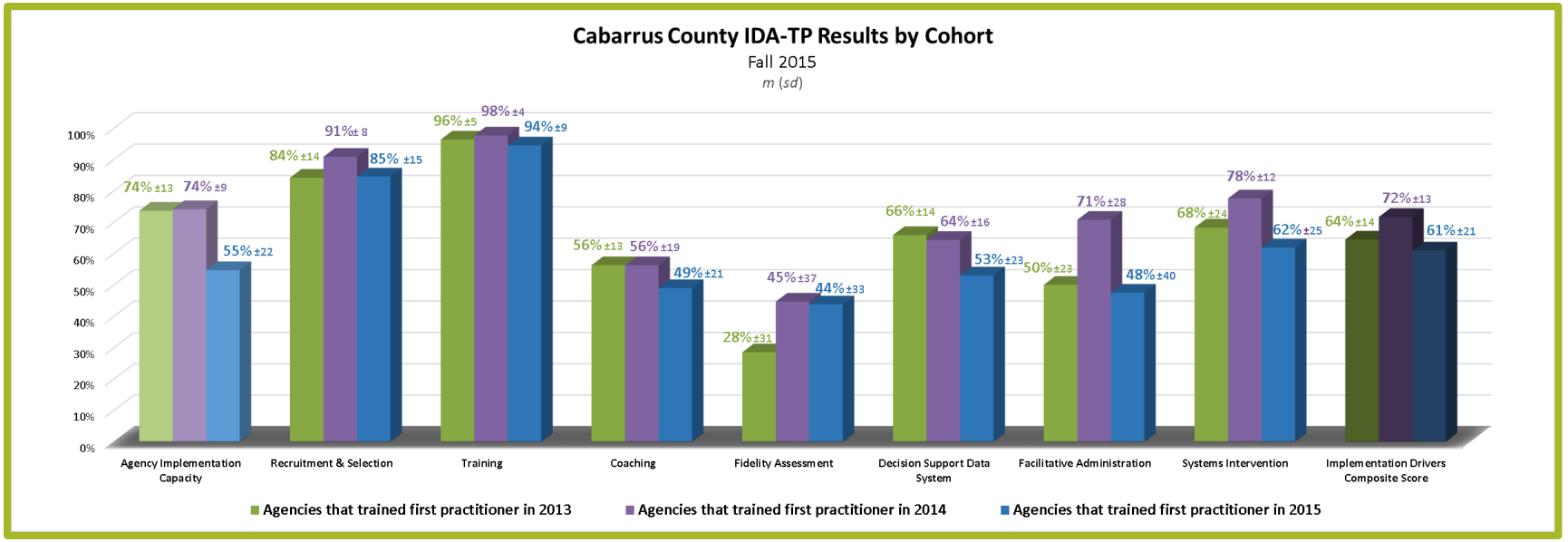

Figure 7. Agency implementation drivers assessment results for Cabarrus County by agency cohort, fall 2015.

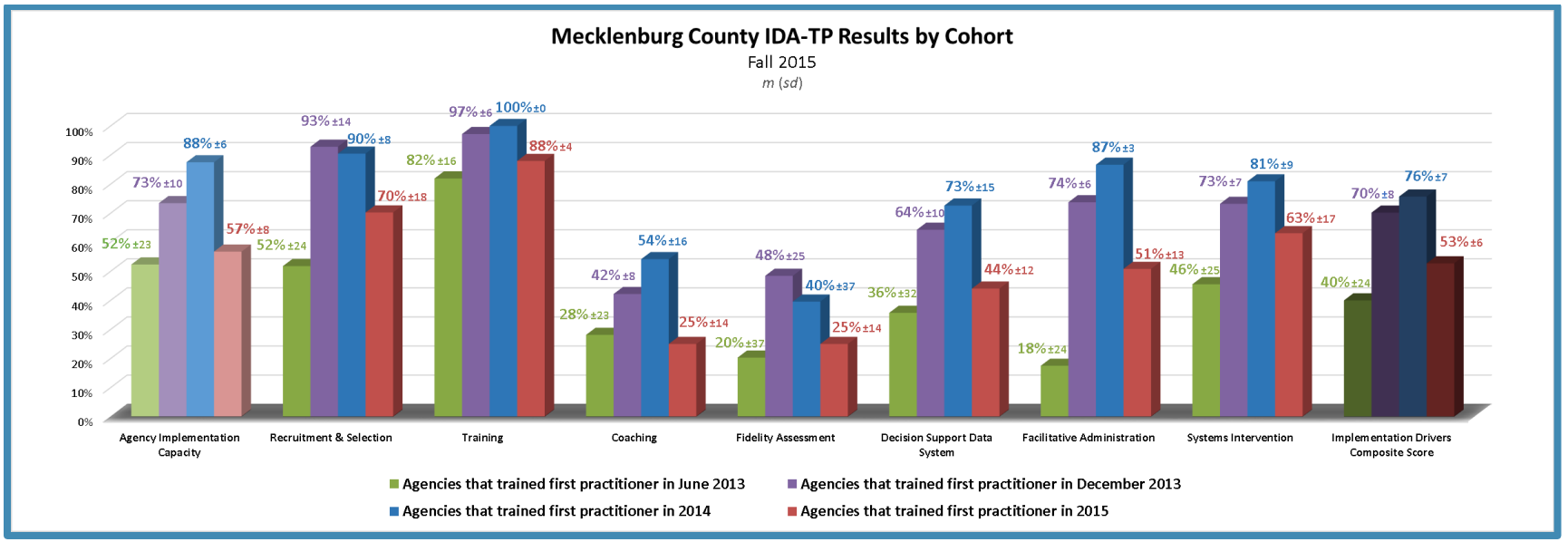

Figure 8. Agency implementation drivers assessment results for Mecklenburg County by agency cohort, fall 2015.

Statistically significant differences among the overall profile of scale scores between agencies assigned to Cohorts 1, 2, and 3 in Cabarrus did not emerge [Wilks' λ = .252, *F* (16, 24) = 1.49, *p* = .18, partial eta squared = 0.498], though the sample size of 22 agencies that participated in fall 2015 TPIE agency assessments yielded only modest power for these analyses (power = 0.67). Notwithstanding the modest power and given that a visual inspection of the scales and composite score suggests few potentially meaningful differences between cohorts, TPIE evaluators conservatively decided not to examine univariate tests for differences among Cabarrus agency cohorts.

Similarly, Time 4 Mecklenburg County agencies were split into four cohorts. Agencies in Cohort 1 (N = 4) first trained practitioners in June 2013 and had a mean length of time of 871 days (*sd* = 1 day) since first sending an agency practitioner to a Triple P training. Agencies involved in Cohort 2 (N = 4) first trained practitioners in December 2013 and had a mean length of time of 688 days (*sd* = 1 day) since first sending an agency practitioner to a Triple P training. Agencies involved in Cohort 3 (N = 3) first trained practitioners in August 2014 and had a mean length of time of 455 days (*sd* = 1 day) since first sending an agency practitioner to a Triple P training. Agencies involved in Cohort 4 (N = 6) first trained practitioners in 2015 and had a mean length of time of 168 days (*sd* = 43 days) since first sending an agency practitioner to a Triple P training. Mecklenburg County fall 2015 IDA-TP scale and Implementation Drivers Composite means by cohort, represented as percentage scores, are depicted in Figure 8.

Statistically significant differences among the overall profile of scale scores between agencies assigned to Cohorts 1, 2, 3, and 4 in Mecklenburg did not emerge [Wilks' λ = .084, *F* (24, 18) = 1.01, *p* = .50, partial eta squared =0.562], though these analyses were *substantially* underpowered (power = 0.43) with the sample size of 17 agencies that participated in fall 2015 TPIE agency assessments. Given this lack of power at the multivariate level and that a visual inspection of the scale and composite score differences *suggests possible meaningful differences* between cohorts, TPIE evaluators decided to cautiously examine univariate tests.

Significant univariate main effects for cohort were obtained for the **Agency Implementation Capacity** [*F* (3, 13) = 5.26, p <.05, partial eta square = .548], **Recruitment and Selection** [*F* (3, 13) = 4.53, p <.05, partial eta square = .511], **Training** [*F* (3, 13) = 3.58, p <.05, partial eta square = .45], **Facilitative Administration** [*F* (3, 13) = 16.39, p <.01, partial eta square = .791], and **Implementation Drivers Composite** scales [*F* (3, 13) = 5.92, p <.01]. Post-hoc tests revealed the following significant differences:

- between the Cohort 3 mean (higher) and Cohorts 1 and 4 means for Agency Implementation Capacity (Tukey HSD $p < 0.05$ for both comparisons);
- between the Cohort 2 (higher) and Cohort 1 means for Recruitment and Selection (Tukey HSD $p < 0.05$);
- between the Cohort 3 (higher) and Cohort 4 means for Training (Games-Howell $p < 0.01$);
- between the Cohorts 2, 3, and 4 means (higher) and the Cohort 1 mean for Facilitative Administration (Tukey HSD $p < 0.01$, $p < 0.01$, and $p < 0.05$ respectively);
- between the Cohort 3 (higher) and Cohort 4 means for Facilitative Administration (Tukey HSD $p < 0.05$); and
- between the Cohorts 2 and 3 means (higher) and Cohort 1 mean for the Implementation Drivers Composite scale (Tukey HSD $p < 0.05$ for both comparisons).

Taken together and alongside a visual inspection of other scale differences in Figure 8, **these results suggest that Mecklenburg agencies in Cohorts 2 and 3 had better developed implementation infrastructure and best practices than Mecklenburg agencies in Cohorts 1 and 4** as the TPIE evaluation period closed. Furthermore, when TPIE evaluators visually examined changes over time *within* Mecklenburg agency cohorts, it was observed that **agency implementation capacity, infrastructure, and practices were generally falling out of place among Cohort 1 agencies as the evaluation period progressed**. This was in contrast to the observation that **agency implementation capacity, infrastructure, and practices were generally better developed across Cohort 2 and Cohort 3 agencies as the evaluation period progressed**.

Agency Sustainability Planning

The IDA-TP includes three items that tap into the presence of agency sustainability plans to support agency leadership and implementation team capacity and the overall implementation of Triple P interventions within agencies beyond the initial grant awards from the State of North Carolina. Although **these three items should not be considered a full assessment of the sustainability of Triple P implementation within local agencies**, they do provide helpful information toward this end. For each of these three items, a response of "2" on the zero-to-two response scale carried an additional criteria that the sustainability plan must be in documented form, which provides greater evidence of sustainability than an assumed or informal plan. Time 2, Time 3, and Time 4 IDA-TP item means and standard deviations across county agencies for these three items are reported in Tables 8 and 9.

Results suggest that sustainability plans were "partially in place" among local agencies implementing Triple P interventions in both counties as the TPIE evaluation period closed. It may be noteworthy that the presence of sustainability plans appeared to be increasing across time among Cabarrus agencies while their progression was observed to stall at the final assessment point among Mecklenburg agencies.

Descriptives for Sustainability Plan Items – Cabarrus Agencies				
IDA-TP Item	**Response Range**	**Fall 2014 Mean (*sd*)**	**Spring 2015 Mean (*sd*)**	**Fall 2015 Mean (*sd*)**
(AIC4) There is a documented plan to sustain the involvement of executive leaders in the implementation of chosen Triple P interventions in the agency beyond the county service grant.	0-2	0.65 (0.70)	0.84 (0.69)	1.00 (0.76)
(AIC16) There is a documented plan to sustain the positions on the Agency Implementation Team (including the Agency Implementation Coordinator) beyond the county service grant.	0-2	0.71 (0.69)	0.58 (0.77)	1.09 (0.75)
(SI14) A sustainability plan has been developed to continue the necessary financial and programmatic resources to support the implementation and delivery of chosen Triple P interventions beyond the county service grant.	0-2	0.71 (0.59)	0.89 (0.57)	1.05 (0.72)

Table 8. Response ranges, means, and standard deviations for items assessing the presence of implementation sustainability plans. Wording was slightly, though not significantly, altered between IDA-TP versions for fall 2014, spring 2015, and fall 2015.

Descriptives for Sustainability Plan Items- Mecklenburg Agencies				
IDA-TP Item	Response Range	Fall 2014 Mean (*sd*)	Spring 2015 Mean (*sd*)	Fall 2015 Mean (*sd*)
(AIC4) There is a documented plan to sustain the involvement of executive leaders in the implementation of chosen Triple P interventions in the agency beyond the county service grant.	0-2	0.61 (0.70)	1.14 (0.77)	1.00 (0.87)
(AIC16) There is a documented plan to sustain the positions on the Agency Implementation Team (including the Agency Implementation Coordinator) beyond the county service grant.	0-2	0.67 (0.77)	1.14 (0.86)	1.06 (0.90)
(SI14) A sustainability plan has been developed to continue the necessary financial and programmatic resources to support the implementation and delivery of chosen Triple P interventions beyond the county service grant.	0-2	0.78 (0.65)	1.14 (0.66)	1.00 (0.87)

Table 9. Response ranges, means, and standard deviations for items assessing the presence of implementation sustainability plans. Wording was slightly, though not significantly, altered between IDA-TP versions for fall 2014, spring 2015, and fall 2015.

TPIE evaluators considered the influence that the length of time that an agency had been implementing Triple P interventions might have on the presence of sustainability plans. Though not reported in detail here, these cohort analyses – using the same Time 4 agency cohort assignments described above – generally replicated the patterns of findings from Time 4 agency cohort analyses regarding IDA-TP scales. That is, no significant results emerged when comparing the presence of sustainability plans between cohorts of agencies in Cabarrus County. However, among cohorts of agencies in Mecklenburg County, the presence of sustainability plans among Cohort 3 agencies was generally higher than the presence of sustainability plans among Cohort 1 and Cohort 4 agencies. Furthermore, when TPIE evaluators visually examined changes over time *within* Mecklenburg agency cohorts, it was observed that **agency sustainability plans appeared to be falling out of place among Cohort 1 agencies by the end of the evaluation period**. This was in contrast to the observation that **agency sustainability plans appeared to be better developed across Cohort 2 and Cohort 3 agencies as the evaluation period progressed**.

Predicting Continued Implementation of Triple P within Agencies

As reported above, though the majority of local agencies continued active implementation of Triple P interventions and participation in their county Triple P coalition throughout the TPIE evaluation period, some agencies in each county did not. This number was higher for Mecklenburg County at both Time 3 (Mecklenburg N = 5, Cabarrus N = 0) and at Time 4 (Mecklenburg N = 8, Cabarrus N = 3). TPIE evaluators were interested in factors that may be related to agencies' continued implementation of Triple P and examined four variables.

TPIE evaluators examined predictors of continuation in a combined sample of 50 agencies across the two counties to increase reliability of results. Of the 39 agencies implementing Triple P interventions for

at least six months prior to Time 4 assessments, 11 had become inactive (28%)[5]. **Agencies that continued active Triple P implementation had significantly more trained practitioners** (3.96 vs. 1.27; t = 4.35, p = .000), **greater evidence of sustainability plans** (52% in place vs. 10.5% in place; t = 6.16, p = .002), **and more well developed agency leadership and implementation teams** (72.5% in place vs. 52% in place; t = 3.58, p = .001) as measured by the IDA-TP Agency Implementation Capacity scale. There was a trend suggesting that agencies continuing active implementation of Triple P were more likely to have a positive implementation climate as rated by agency practitioners ($m \geq 3$ on 1-5 scale; X^2 = 3.66, p = .056). Odds ratios indicated that **agencies with only 1 practitioner were 9.8 times more likely to become inactive** and **those with low climate scores were 4.8 times more likely to become inactive**.

For Cabarrus County specifically, 2 of 19 (10.5%) agencies implementing more than six months had become inactive by Time 4 assessments. **Of the 23 agencies that remained actively implementing Triple P interventions at Time 4, 12 (52%) had at least one categorical risk factor for becoming inactive** (7 agencies had only 1 Triple P practitioner; 4 agencies had unfavorable implementation climates; 1 agency had both risk factors).

For Mecklenburg County specifically, 9 of 20 (45%) agencies implementing more than six months had become inactive by Time 4 assessments. **Of the 18 agencies that remained actively implementing Triple P interventions at Time 4, 5 (28%) had at least one categorical risk factor for becoming inactive** (4 agencies with only 1 Triple P practitioner; 1 agency had an unfavorable implementation climate). It should be noted, however, that implementation climate data was missing from three active Mecklenburg agencies at Time 4 assessments.

Practitioner Characteristics & Adherence

An understanding of Triple P practitioners' active delivery of Triple P interventions through their county Triple P coalitions and their response rates for TPIE's web-based Triple P practitioner surveys is helpful for interpreting results related to county Triple P practitioner characteristics and adherence to Triple P. This information is reported in Table 10. Two observations are made. First, across the last three assessment points, practitioners in Cabarrus County had higher rates of active Triple P delivery through their county Triple P coalition than practitioners in Mecklenburg County. Although a practitioner may have continued to deliver Triple P after discontinuing their participation in their county Triple P coalition (e.g., because the practitioner left their agency or their agency discontinued their participation in the county Triple P coalition), they would have been doing so without the system of implementation monitoring and support created by their county Triple P coalition (which offered, for example, access to additional Triple P trainings, peer support networks, data collection and analysis, agency consultation, etc.). Second, the percentages of active county Triple P practitioners who responded to TPIE's web-based Triple P practitioner surveys remained at or above 75% across the evaluation period, suggesting confidence in the representativeness of practitioner survey results at each assessment point.

[5] This calculation involves one agency that changed from active to inactive at the Time 3 assessment point and then changed back from inactive to active at the Time 4 assessment point. During analyses of factors related to agencies' continued implementation of Triple P, this agency was included as an inactive agency. Because it had not been more than six months that this agency had restarted their implementation of Triple P by Time 4, they were not *additionally* included in these analyses as an agency actively implementing Triple P interventions for more than six months.

	Active Practitioner Rate % of trained practitioners who were actively or intending to deliver Triple P		Survey Response Rate % of active practitioners who responded to the survey with usable data (N = sample size from total active)	
	Cabarrus	Mecklenburg	Cabarrus	Mecklenburg
Spring 2014 (Time 1)	89% (42 of 47)	95% (36 of 38)	88% (N = 37)	75% (N = 27)
Fall 2014 (Time 2)	86% (72 of 84)	79% (50 of 63)	81% (N = 58)	82% (N = 41)
Spring 2015 (Time 3)	84% (71 of 85)	66% (43 of 65)	87% (N = 62)	84% (N = 36)
Fall 2015 (Time 4)	78% (96 of 123)	70% (74 of 106)	79% (N = 76)	78% (N = 58)

Table 10. Active practitioner and survey response rates for Cabarrus & Mecklenburg counties across the TPIE evaluation period.

With some exceptions where longitudinal data are helpful for interpretation, descriptive statistics are reported only from Time 4 below. Similar descriptive statistics from prior assessment points are reported in prior TPIE interim reports (Aldridge, et al., 2014a; Aldridge, et al., 2014b; Aldridge, Murray, & Prinz, 2014; Aldridge, Murray, Prinz, & McManus, 2014; Aldridge, et al., 2015a; Aldridge, et al., 2015b).

Practitioner Professional Characteristics

TPIE's web-based Triple P practitioner survey inquired about several professional characteristics, including county and agency affiliation, professional identification, and practice longevity. In the **Time 4 Cabarrus County practitioner sample, 22 of the 23 active local service agencies** and **six private practitioners** were represented (see Table 11). Time 4 Cabarrus survey respondents indicated that they had been **working at their current service agency on average 7.6 years** (N = 67; *sd* = 5.76 years; range was less than 1 year to 31 years). Beyond their current agency tenures, respondents indicated that they had been **practicing child and family services on average 12.28 years** (N = 64; *sd* = 9.14 years; range was less than 1 year to 38 years).

In the **Time 4 Mecklenburg County practitioner sample, each of the 18 active local service agencies** and **three private practitioners** were represented (see Table 12). Time 4 Mecklenburg survey respondents had been **working at their current service agency on average 5.8 years** (N = 50; *sd* = 7.57 years; range was less than 1 year to 39 years). Additionally, respondents had been **practicing child and family services on average 12.31 years** (N = 50; *sd* = 8.60 years; range was less than 1 year to 37 years).

The professional identifications of survey respondents within each county sample are reported in Tables 13 and 14. **Nearly half of respondents** in each county sample identified as either a **mental health provider or social worker**. Given the role of Triple P interventions in preventing and intervening in child social, emotional, and behavioral disorders and child abuse and neglect, these professional clusters are not unexpected.

Fall 2015 Sample of Cabarrus County Practitioners – Agency Affiliation		
Agency	**Count**	**Percent of Sample**
Cabarrus County Schools	9	11.8%
Cabarrus Department of Human Services	4	5.3%
Cabarrus Health Alliance	13	17.1%
Cabarrus Rowan Community Health Center	1	1.3%
Carolina Counseling	4	5.3%
Carolina Counseling and Consultation (FKA Nazareth Children's Home)	1	1.3%
Children's Advocacy Center, Jeff Gordon's Children's Hospital at CMC - NorthEast	1	1.3%
Carolina Parenting Solutions	6	7.9%
CDSA	2	2.6%
Community Specialized Services, Inc.	1	1.3%
Conflict Resolution Center	1	1.3%
Cooperative Christian Ministry	1	1.3%
Daymark Recovery Services	4	5.3%
Developmental and Behavioral Pediatrics of the Carolinas	2	2.6%
Hope, Heal, and Peace Center	2	2.6%
Kannapolis City Schools	7	9.2%
Kids Interactive Developmental Services	2	2.6%
Kids Korner Child Development	1	1.3%
RHA Behavioral Health Services	2	2.6%
Sims Consulting and Counseling	3	3.9%
Suburban Pediatrics	1	1.3%
Thompson Child & Family Focus	2	2.6%
Private Practice	6	1.3%
TOTAL	76	100%

Table 11. Agency affiliations among the sample of Cabarrus County Triple P practitioners who completed the TPIE fall 2015 online practitioner survey.

Fall 2015 Sample of Mecklenburg County Practitioners – Agency Affiliation		
Agency	**Count**	**Percent of Sample**
Access Family Services	1	1.7%
Charlotte Family Housing	2	3.5%
Children's Home Society	1	1.7%
Department of Social Services	4	7.0%
Mental Health Assn. of Central Carolinas	6	10.4%
Community Services Association (FKA First Baptist Church West)	1	1.7%
New Opportunity Mentoring Program	3	5.3%
The Learning Collaborative	1	1.7%
Alexander Youth Network	4	6.9%
Mecklenburg County Health Department	14	24.1%
Against All Odds	2	3.5%
Community Care Partners of Greater Mecklenburg	3	5.3%
Alternative Living Solutions	1	1.7%
Cano Family Services	2	3.5%
Renaissance West Initiative	3	5.2%
First Presbyterian Church	4	6.9%
Provisions Counseling Services, Inc.	1	1.7%
Novant Health Developmental & Behavioral Pediatrics	1	1.7%
Private Practitioners	3	5.2%
TOTAL	57[6]	100%

Table 12. Agency affiliations among the sample of Mecklenburg County Triple P practitioners who completed the TPIE fall 2015 online practitioner survey.

[6] One participant did not indicate their agency affiliation.

Cabarrus County Practitioners – Professional Identification		
Title	**Count**	**Percent of Sample**
Social Worker	18	23.7%
Law Enforcement Officer	1	1.3%
Physician/Health Care Provider	4	5.3%
Nurse/Medical Staff Clinical Support	8	10.5%
Counselor/Psychologist/Mental Health Provider	25	32.9%
Daycare/Preschool Worker	1	1.3%
Program Administrator/Coordinator	2	2.6%
Other	9[7]	11.8%
Early Childhood Inclusion Specialist (1)		
Parent Liaison/Family Support (2)		
Developmental Play Therapist (1)		
Child Life (1)		
Graduate Student (1)		
School Counselor (1)		
Truancy Liaison Counselor (1)		
Missing	8	1.3%
TOTAL	76	100%

Table 13. Professional identification among the Cabarrus County Triple P practitioner sample, fall 2015.

Sample of Mecklenburg County Practitioner – Professional Identification		
Title	**Count**	**Percent of Sample**
Social Worker	11	19%
Teacher/aid	3	5.2%
Nurse/medical staff/clinical support	7	12.1%
Counselor/Psychologist/Mental Health Provider	12	20.7%
Public health educator/community outreach worker/care manager	4	6.9%
Program Administrator/Coordinator	6	10.3%
Other	7[7]	12.1%
Certified Family Support (1)		
Family Involvement Specialist (1)		
Health Check Coordinator (1)		
Peer Family Support Partner (1)		
Trainer (1)		
Youth Engagement (1)		
Missing	8	13.8%
TOTAL	58	100%

Table 14. Professional identification among the Mecklenburg County Triple P practitioner sample, fall 2015.

[7] One practitioner in each county sample indicated "other" but then did not specify their professional identification.

Practitioner Training Status

Training participation, accreditation, and active status at Time 4 for all county Triple P practitioners by Triple P intervention are reported in Table 15. In some cases, special accreditation was provided in lieu of attending a full separate training, as is recommended by the developer (e.g., for Primary Care Teen Triple P after Primary Care Triple P was completed). By the end of the TPIE evaluation period, **a total of 123 unique practitioners were trained in Cabarrus County** and a **total of 106 unique practitioners were trained in Mecklenburg County.** It is important to note that more than 40% of the practitioners in each county had been trained in more than one intervention (Mecklenburg = 41%; Cabarrus = 50%).

Fall 2015 County Practitioners – Triple P Training, Accreditation, and Active Status						
Triple P Intervention	Cabarrus			Mecklenburg		
	Trained	Accredited	Active	Trained	Accredited	Active
Primary Care (0-12)	74	60	57	95	90	65
Primary Care Teen	50	40	37	29	29	19
Selected Seminar	6	--	6	12	10	8
Pathways	--	--	--	1	1	0
Standard (0-12)	20	19	16	13	12	10
Discussion Group	10	10	8	9	9	6
Group (0-12)	--	--	--	4	4	3
Group (Teen)	--	--	--	2	2	1
Brief Primary Care (0-12)	20	19[8]	20	--	--	--
Primary Care Stepping Stones	20	20	17	--	--	--

Table 15. Training participation, accreditation, and active status at Time 4 for all county Triple P practitioners by Triple P intervention.

Practitioner Delivery of Triple P and Adherence to Session Content

In considering practitioners' adherence to the delivery of intended Triple P session content across Triple P interventions, it is helpful to take into consideration the longevity of practitioners' experience with Triple P. All of the survey respondents in Cabarrus County who had delivered Triple P by Time 4 provided information on the month and year in which they were initially trained in Triple P and the date of completion of their last Triple P session. Results indicated that, **on average, 377 days (N = 52; *sd* = 294; range of 35 to 948 days) had passed between practitioners' initial Triple P training and completion of their last Triple P session**. In the Mecklenburg County Time 4 practitioner sample, nearly half respondents who had started delivering Triple P (26 of 56; 46%) provided information on the month and year in which they were initially trained in Triple P and the date of completion of their last Triple P session. Results indicated that, **on average, 427 days (N = 26; *sd* = 256; range of 92 to 863 days) had passed between practitioners' initial Triple P training and completion of their last Triple P session**.

[8] The one Brief Primary Care Triple P practitioner in Cabarrus County who was not yet accredited by Time 4 assessments has since completed her accreditation process.

Most notable here is the significant range in experience of practitioners, which is understandable given the number of separate cohorts trained.

Longitudinal data regarding practitioners' active delivery of, and adherence to, Triple P sessions are reported in Table 16. An important observation is that, across all four assessment points, **a higher percentage of active Cabarrus County Triple P practitioners had delivered Triple P interventions than among active Mecklenburg County Triple P practitioners**. Of course, the percentages reported in Table 16 reflect only the percentage of *active* practitioners *surveyed* who had delivered Triple P at all. When both *active* and *inactive* practitioners are considered, the percentage of *total trained practitioners* who were delivering Triple P interventions through their county Triple P coalition at Time 4 is likely much smaller. For example, extrapolating the delivery rates at Time 4 across the full population of active practitioners, Cabarrus County had approximately 78 active practitioners (81% of 96) who had delivered Triple P out of the 123 total practitioners trained since the start of the county Triple P coalition. This translates into **approximately a 63% rate of delivering Triple P through the Cabarrus County Triple P Coalition among all trained Cabarrus County Triple P practitioners**. Similar methodology carried out with the full population of Mecklenburg County active practitioners results in **approximately a 41% (44 out of 106) rate of delivering Triple P through the Mecklenburg County Triple P Coalition among all trained Mecklenburg County Triple P practitioners** at Time 4. These rates are approximate because TPIE evaluators do not know for certain whether or not Time 4 active practitioners that did not respond to the TPIE web-based Triple P practitioner survey had delivered Triple P.

Despite these differences in the active delivery of Triple P among Cabarrus and Mecklenburg county Triple P practitioners, **practitioners' self-reported adherence to Triple P session content was similar in both counties,** with the exception of the final assessment point. At Time 4, the self-reported adherence among Mecklenburg County Triple P practitioners was noticeably higher than at previous assessment points. It is unclear, at this time, what factors might have contributed to this increased self-report of session content adherence. Additional longitudinal data would be helpful to see if the trend continues.

	Delivery **% of *active* practitioners surveyed who had delivered Triple P at all** (N = sample size from total active)		**Delivery Adherence** **Among surveyed practitioners delivering Triple P within last 6 months, average completion of session checklist items** (N = sample size from total delivering)	
	Cabarrus	**Mecklenburg**	**Cabarrus**	**Mecklenburg**
Spring 2014 (Time 1)	92% (N = 37)	56% (N = 27)	84% (N = 34)	84% (N = 15)
Fall 2014 (Time 2)	93% (N = 57)	63% (N = 40)	87% (N = 53)	84% (N = 25)
Spring 2015 (Time 3)	84% (N = 62)	78% (N = 36)	86% (N = 46)	86% (N = 27)
Fall 2015 (Time 4)	81% (N = 74)	59% (N = 58)	79% (N = 46)	96% (N = 32)

Table 16. Overall delivery and average adherence to Triple P session content across all four TPIE assessment points in Cabarrus & Mecklenburg Counties.

The breakdown of Time 4 practitioner adherence data by Triple P intervention and session are reported in Tables 17 and 18. It is noteworthy that, although Cabarrus County Triple P practitioners' self-reported fairly high adherence for most Triple P sessions, there were a few sessions for which more than one practitioner reported lower adherence to session content (average session adherence less than 70%). These included Primary Care Triple P session 1 and Standard Triple P sessions 1 and 2. Though the small

Cabarrus County Practitioners – Self-reported Adherence during Last Triple P Session				
Last Triple P Session Delivered	**Count**	**Percent of Sample**	**Percent of Possible Session Components Completed**	***SD***
Primary Care Triple P	**22**	**29.7%**		
Session 1	4	5.4%	66%	.12
Session 2	7	935%	96%	.06
Session 3	1	1.4%	69%	n/a
Session 4	10	13.5%	Unavailable[9]	n/a
Primary Care Teen Triple P	**5**	6.8%		
Session 1	2	2.7%	86%	.20
Session 2	1	1.4%	100%	n/a
Session 4	2	2.7%	90%	.14
Primary Care Stepping Stones	**4**	5.4%		
Session 1	1	1.4%	78%	n/a
Session 2	1	1.4%	78%	n/a
Session 3	1	1.4%	60%	n/a
Session 4	1	1.4%	100%	n/a
Standard Triple P	**10**	13.5%		
Session 1	2	2.7%	54%	.23
Session 2	2	2.7%	50%	.21
Session 4	3	4.1%	86%	.15
Session 8	1	1.4%	100%	n/a
Session 10	2	2.7%	100%	.00
Discussion Group	**1**	1.4%		
Session 1	1	1.4%	61%	n/a
Brief Primary Care	**14**	18.9%		
Session 1	4	5.4%	77%	.14
Session 2	10	13.5%	76%	.12
No delivery of Triple P to date	**14**	18.9%		
Delivery more than 6 months ago	**4**	5.4%		
TOTAL	74	100%		

Table 17. Self-reported adherence to intended Triple P session content during practitioners' most recent Triple P session, Cabarrus County, fall 2015.

[9] Although 10 practitioners in Cabarrus County indicated that Primary Care Triple P session 4 was their last session delivered, an error in the TPIE web-based practitioner survey design at Time 4 prevented those practitioners from providing their adherence data.

Mecklenburg County Practitioners – Self-Reported Adherence during Last Triple P Session				
Last Triple P Session Delivered	**Count**	**Percent of Sample**	**Percent of Possible Session Components Completed**	***SD***
Primary Care Triple P	**22**	37.9%		
Session 1	13	22.4%	91%	.11
Session 2	5	8.6%	78%	.27
Session 3	2	3.5%	92%	.00
Session 4	2	3.5%	100%[10]	n/a
Primary Care Teen Triple P	**2**	3.5%		
Session 3	1	1.7%	100%	n/a
Session 4	1	1.7%	100%	n/a
Selected Seminar (0-12)	**1**	1.7%		
Seminar 1	1	1.7%	100%	n/a
Standard (0-12)	**4**	6.9%		
Session 3	2	3.5%	96%	.06
Session 4	2	3.5%	97%	.04
Discussion Group	**1**	1.7%		
Session 8	1	1.7%	100%	n/a
Group Triple P (0-12)	**2**	3.5%		
Session 2	1	1.7%	97%	n/a
Session 3	1	1.7%	98%	n/a
No delivery of Triple P to date	**24**	41.3%		
Delivery more than 6 mo. ago	**2**	3.5%		
TOTAL	58	100%		

Table 18. Self-reported adherence to intended Triple P session content during practitioners' most recent Triple P session, Mecklenburg County, fall 2015.

sample size and limited scope of the current evaluation make it difficult to know why adherence was lower for some sessions than others, on the handful of occasions that respondents provided optional notes about their service delivery or reasons that session activities were not completed, they noted that some aspects of the session were not applicable, had been reviewed in prior interactions with the parent, or had to be modified due to parent need. For example, Time 4 Cabarrus practitioner comments described parents who were experiencing multiple stressors that weren't all related to parenting, running out of time to complete all items designed for a given session, and parents' noncompliance with the completion of assessment material intended for review during the session. A few practitioners also noted that a child was present and acting out during the session, which made completion of all session agenda items difficult.

[10] Although two practitioners in Mecklenburg County indicated that Primary Care Triple P session 4 was their last session delivered, an error in the TPIE web-based practitioner survey design at Time 4 prevented one of these practitioners from providing their adherence data.

Countywide Reach of Triple P Interventions & Family Wellbeing Indicators

Countywide Reach of Triple P Interventions

When interpreting the number of families served by county Triple P practitioners, the size of each county's population is important context. 2014 U.S. Census county population estimates (the latest population estimates available at the time of this report) and the reach of Triple P interventions within each county by the fall of 2015 are reported in Table 19. Reach data include the number of caregivers that Triple P practitioners had contact with and the number of children in the houses of those caregivers since the launch of the Triple P coalitions in each county. County implementation support staff sharing these data with TPIE evaluators cautioned that some duplication may be present due to methods used early in the state's Triple P data reporting process, though an investigation by both counties' support staff indicated that duplication was minimal. For Cabarrus County, data suggest that Triple P interventions may have made a modest, but possibly meaningful reach to county children and families. On the other hand, Mecklenburg County is still in the process of establishing a meaningful reach of Triple P interventions to children and families in their sizable population.

	2014 County Population Estimates and Reach of Triple P by Fall 2015	
	Cabarrus	Mecklenburg
Overall Population	192,103	1,012,539
Children under 5	12,102	70,878
Children under 18	50,331	249,085
# children in the households of caregivers contacted by Triple P practitioners as of fall 2015	**6374** (12.6%)	**8012** (3.2%)
Approximate families[11]	26,490	131,097
# caregivers contacted by Triple P practitioners as of fall 2015	**4686** (17.7%)	**2943** (2.2%)

Table 19. 2014 County population estimates (Cabarrus population estimates: U.S. Census Bureau, 2015a; Mecklenburg Population estimates: U.S. Census Bureau, 2015b) and reach of Triple P interventions through fall 2015, as provided by county implementation support staff.

Countywide Family Wellbeing Indicators

Population prevalence rates for child maltreatment related indicators are tracked over time for each county in North Carolina. Examination of trends over time provides a glimpse of how Cabarrus and Mecklenburg counties are doing on such indicators (e.g., child maltreatment substantiations, foster care placements). **However, the TPIE evaluation team strongly cautions that in the absence of randomization and adequate controls, it is not possible to make legitimate causal inferences from the observed trends in the population prevalence rates (i.e., after onset of implementation and scale-up of the Triple P intervention system in each of the two counties).** Yearly data pertain to children in the birth to 17-year-old range (which matches the target age ranges for the county Triple P coalitions in Cabarrus and Mecklenburg counties) and are available for each fiscal year.

[11] "Approximate families" calculated using the assumption of 1.9 children per family in the United States (U.S. Census Bureau, 2015c).

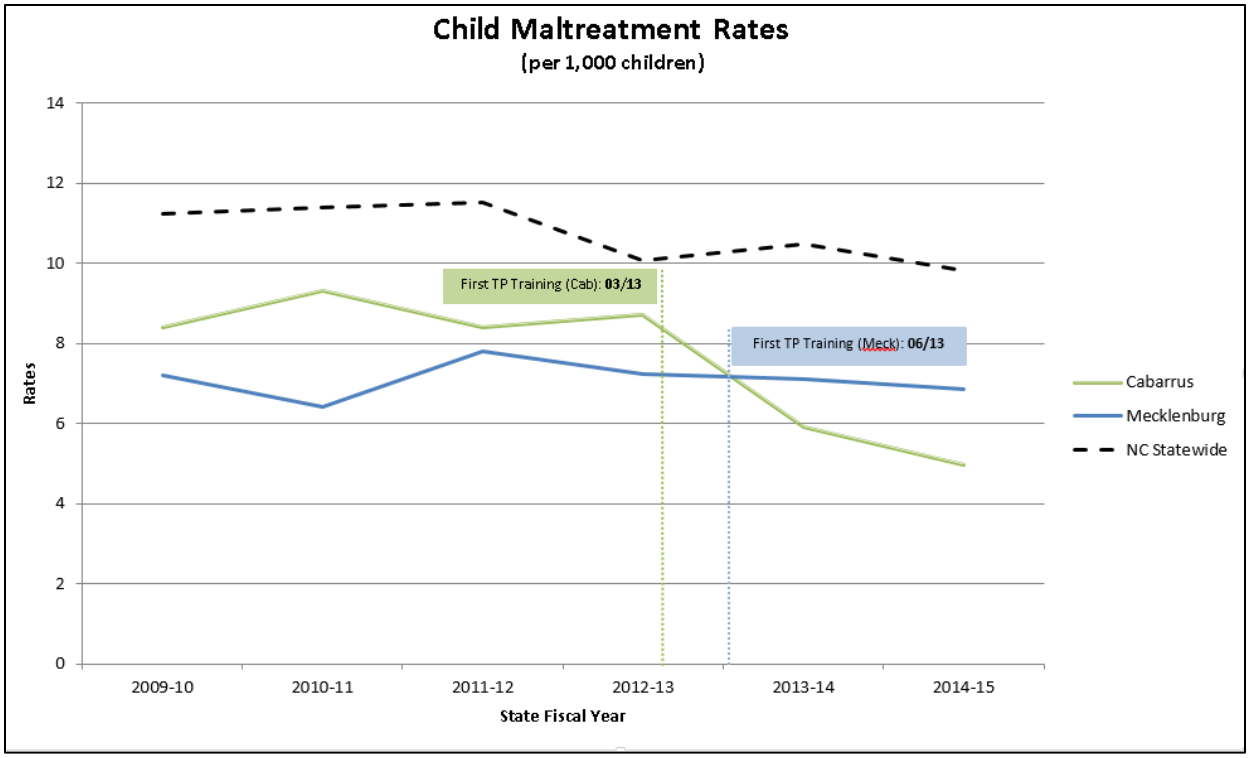

Figure 9. Child maltreatment rates for Cabarrus and Mecklenburg counties and statewide for North Carolina, State Fiscal Years 2009-10 through 2014-15.

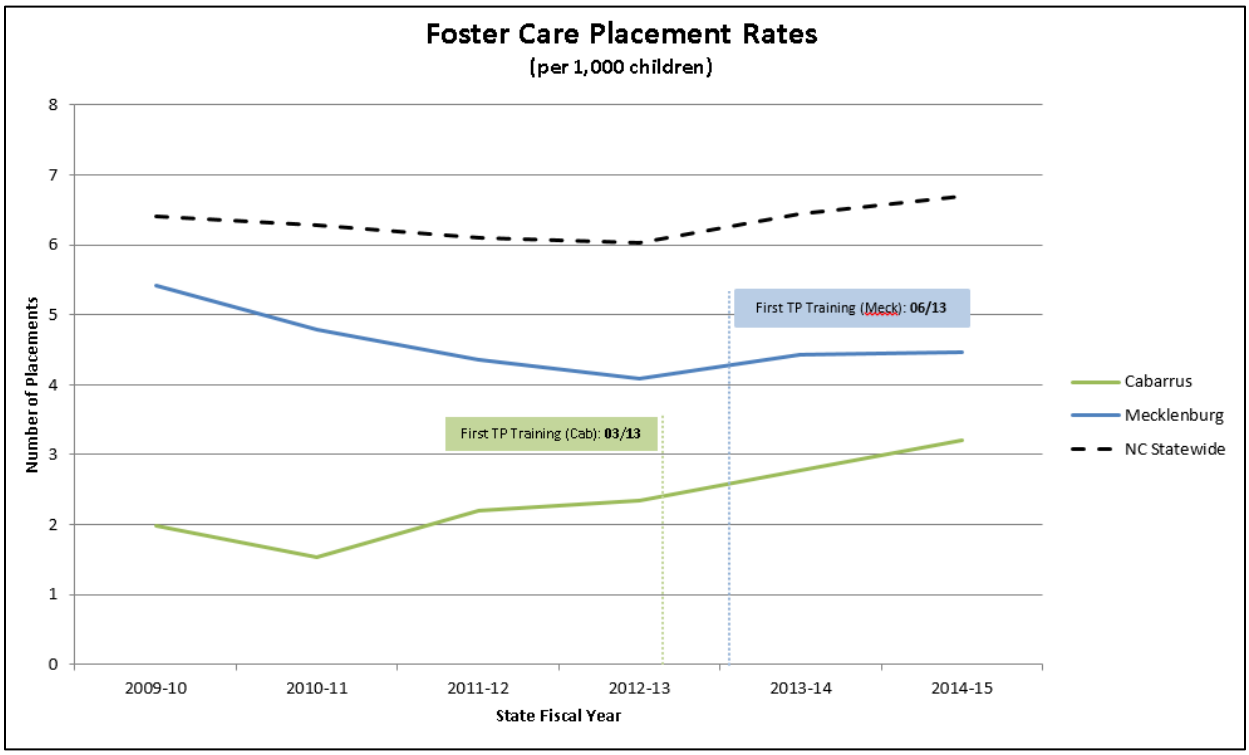

Figure 10. Foster care placement rates for Cabarrus and Mecklenburg counties and statewide for North Carolina, State Fiscal Years 2009-10 through 2014-15.

With respect to child maltreatment substantiations (see Figure 9), the trend for Cabarrus County suggests a drop two years in a row (SFY2013-14 and SFY2014-15), which occurred after Triple P training of practitioners was initiated in that county. The statewide trend seems to be somewhat flat during that same period. The trend for Mecklenburg County does not reflect a change in trajectory during that same period, although it should be noted that county practitioners' Triple P training started later and has not yielded as much intervention penetration as that in Cabarrus County. Data for the next two years may provide additional insight about the longer-term trends in both counties.

The trends for foster care placement (see Figure 10) show that observed rates for Cabarrus and Mecklenburg counties for SFY2013-14 and SFY2014-15 are similar to the trend for the statewide rate. Two caveats are noted. First, foster care placements for the older portion of the birth-to-17 age range (i.e., 12-17) may include placements not triggered by child maltreatment (e.g., youth getting into trouble for violent behavior), but such nuanced data are not available within the state data system to disentangle this issue or to examine birth-to-11 age group separately. Second, data for the next two years may provide additional insight about the longer-term trends for foster care placements in both counties.

At the time of this report, county and state data on hospital treatment of child-maltreatment injuries were not yet available from state evaluators.

Discussion and Recommendations

The purpose of the Triple P Implementation Evaluation project (TPIE) was to evaluate capacity and infrastructure for the *active* implementation of, and service delivery associated with, the Triple P system of interventions in two North Carolina counties. Across a two-year evaluation period in Cabarrus and Mecklenburg counties, data collected were intended to inform the planning process for impact and sustainability. Reflecting on the longitudinal evaluation results, several points are worth discussing.

First, **TPIE evaluators are pleased that county implementation capacity and agency implementation infrastructure assessments, with favorable indications of reliability, were developed as a byproduct of TPIE**. The PS-CCA-TP and IDA-TP offer assessments of capacity and infrastructure to support the implementation of Triple P across multiple levels of the county prevention system, consistent with the cascading logic model of implementation support presented at the beginning of this report. That the patterns of peaks and valleys across the implementation drivers scales (the blue bars in results graphs) are relatively similar across each county's PS-CCA-TP and IDA-TP results also offers some face validity to these instruments. That is, where county capacity to work with agencies to support the use of implementation best practices was stronger, agency implementation infrastructure and best practices were more in place. TPIE evaluators intend to work with the datasets collected throughout the two-year evaluation period to further test the reliability and validity of these assessment instruments. Their potential use as quality improvement tools for counties in North Carolina wanting to scale-up Triple P across their county prevention system is also an opportunity resulting from TPIE.

In reviewing county implementation capacity and agency implementation infrastructure results over the TPIE evaluation period, any discussion should begin with recognition of the progress these two county Triple P coalitions, in partnership with their primary funder – the North Carolina Division of Public Health – and program purveyor – Triple P America – have made since their inception. The work of successfully implementing and scaling evidence-based programs across county prevention systems is complex,

indefinite, and shaped by local county context. **The investment of time, energy, and human and financial resources that the county coalitions and their partners have made thus far to improve the wellbeing of children and families in Cabarrus and Mecklenburg counties through effective parenting and family support programs is laudable**.

Through the end of the TPIE evaluation period, each county had established a meaningful amount of county-level capacity to support the implementation and scale-up of Triple P, a diverse coalition of local agencies to deliver Triple P across multiple access points, a handful of strengths within agency infrastructure and best practices to support the growing number of practitioners to deliver Triple P, and in Cabarrus County, a promising reach of Triple P services into the county's population of children and families. **Progress to date appears stronger on the organizational side of implementation** (i.e., leadership and implementation teams at county and agency levels, county action planning and prevention system alignment, and organizational implementation drivers at county and agency levels) **and in the development of infrastructure and best practices to support practitioner recruitment and selection and practitioner training in Triple P**.

In addition to highlighting achievements to date, TPIE evaluation results reveal gaps within county implementation capacity and agency implementation infrastructure that might be the target of future developmental efforts. First, it is noteworthy that, within each county, agency implementation infrastructure appeared to lag county implementation capacity. That is, just because a county had developed a county implementation team with the resources and abilities to work closely with local agencies did not ensure that agency implementation infrastructure and best practices were well in place across the county. Therefore, **even if county implementation support teams are confident about their own development in a particular area, they may need to keep in mind that the local agencies they support are possibly earlier in their own developmental trajectories**.

This lag appeared greater in Mecklenburg County, where the county implementation team had historically lower capacity (particularly in terms of formally allocated time and effort), the county received substantially less state resources to support the scale-up of Triple P, and the county prevention system and population are much larger. Time 4 gains in Mecklenburg County implementation capacity related to practitioner coaching and fidelity assessment were also not yet mirrored within agency implementation infrastructure. It may be that the newly reported strength in Mecklenburg County implementation team capacity at Time 4 needs time to mature and possibly even additional implementation team member time and effort to make an impact at the agency-level. It is promising, however, that agency implementation infrastructure and best practices were showing a slightly favorable developmental trajectory in Mecklenburg, even if primarily attributable to the second and third cohorts of agencies to join the Mecklenburg County Triple P Coalition.

The Mecklenburg County Triple P Coalition also evidenced higher rates of agency and practitioner attrition and lower rates of practitioners having yet delivered Triple P during the TPIE evaluation period. **This suggests that the impacts of factors such as historically lower county implementation team capacity and less resources to support the scale-up of Triple P in a very large county may extend not only to the development of agency implementation infrastructure, but also to agency continuation of Triple P implementation and practitioner continuation of Triple P delivery within the county Triple P coalition**. In fact, interpreting that agency implementation infrastructure and best practices within Mecklenburg County are on a slow but positive developmental trajectory is cautiously made because

such gains could alternately be resultant from differential agency attrition (i.e., those agencies with less well-developed implementation infrastructure leaving the county Triple P coalition).

That stronger developmental gains are not evident in agency implementation infrastructure and sustainability planning in Cabarrus or Mecklenburg counties across time (with the exception of cohorts 2 and 3 in Mecklenburg) also needs consideration. Though the reasons for this lack of expected development over time are unclear, **county implementation teams may want to re-examine the ways in which they are working with local agencies to ensure the ongoing development of agency implementation infrastructure and best practices**. In particular, agency leaders and implementation team members may benefit from more developmentally focused and supportive behavioral coaching from county implementation team members around active implementation infrastructure and best practices. Likewise, county implementation team members may need support from their purveyor – Triple P America – and other active implementation technical assistance providers to ensure they are well grounded in developmental approaches to growing active implementation infrastructure and best practices to support Triple P.

Agencies also have a role to play in supporting their own development for implementing Triple P, which is largely maintained by having enough agency implementation team capacity to move agency implementation forward on a day-to-day basis. TPIE evaluation results suggest a need to increase agency implementation team capacity, both in terms of team membership numbers and in allocating formal time and effort to support implementation. Without at least three team members and adequate time and effort supporting daily implementation activities in an agency, the agency risks insufficient support for its Triple P practitioners and continuation of Triple P implementation could be precarious in the event of team member turnover. In line with this latter point, agency implementation capacity was significantly associated with agencies' continuation with Triple P implementation across the two TPIE counties. The presence of implementation teams has been associated with greater use and sustainability of innovative practices and programs in other research and evaluation samples as well (Fixsen et al., 2001; Saldana & Chamberlain, 2012). Increasing agency implementation team capacity may also accelerate improvements related to the three organizational implementation drivers across agencies (decision-support data systems, facilitative administration, and systems intervention); agency leadership and implementation teams largely ensure best practices related to these organizational drivers.

Another way in which agencies can support their own efforts to sustainably implement Triple P is to ensure that they have sufficient *Triple P practitioner capacity*. TPIE results indicated that agencies with only 1 practitioner were 9.8 times more likely to become inactive. Research by Klest (2014) likewise found that clustering three or more practitioners using the same evidence-based program within an organization had significant and favorable outcomes on practitioners' use of the program, their agency's integration of the program well into the organization, and their agency's continuation with the program.

Agency leaders and, in particular, agency implementation team members also need to make sure that they are well partnered with their county implementation team or there is a possibility that the county's practices and directions become misaligned with the agency's own practices and directions over time. Close alignment of agency leadership and implementation team members with the county implementation team may also support hospitable implementation climates within agencies. County implementation team members can work with agency leadership and implementation support staff to

problem-solve challenges to Triple P implementation, use agency-specific data for quality improvement, and ensure that Triple P implementation remains a priority within the agency. As demonstrated by TPIE evaluation results and results from other evaluation and research samples, a hospitable agency implementation climate is an important factor in the successful and sustainable implementation of evidence-based interventions (e.g., Damanpour, 1991; Glisson & James, 2002; Klein & Sorra, 1996; Panzano et al., 2004).

TPIE evaluation results clearly suggest that the two areas of greatest developmental need among county agencies are practitioner coaching and fidelity assessment infrastructure and best practices. During the course of the evaluation, TPIE evaluators became aware that at least two key components in Triple P's peer support network model (which helps ensure that practitioners receive ongoing coaching after accreditation) were largely missing across both counties. Specifically, county peer support networks did not make available expert coaches with experience delivering Triple P across diverse families and communities. Likewise, county Triple P practitioners were not expected to be observed delivering Triple P to local parents and families during county peer support network meetings (even if via audio or video samples). Similarly, many local agency representatives and county Triple P practitioners were not aware of the availability or use of Triple P session checklists for monitoring adherence to the intended delivery of Triple P session content during the first two TPIE assessment periods. Although *awareness* increased by the last two assessment periods, Triple P session checklist *use for fidelity assessment* largely did not.

Even should Triple P session checklists use grow, it is worth noting that self-reported adherence data from Triple P session checklists may be limited because they are vulnerable to bias inherent in any self-report. For example, fidelity data derived from observation could indicate that practitioners are completing fewer session activities than they are self-reporting via the session checklists due to the desire to "look good" when self-reporting (i.e., social desirability bias). Moreover, self-reported adherence data do not reflect practitioner *competency* in delivering Triple P interventions. In some cases, competent delivery of a Triple P session may involve adjustments or even *intentionally skipping* some session activities based on clients' preferences and presenting concerns. **The use of a broader array of Triple P fidelity assessments – while remaining practical and efficient for Triple P practitioners and their agencies – may be beneficial for these reasons**.

The development of infrastructure and best practices related to practitioner coaching and fidelity assessment may not only improve the quality of Triple P practitioners' Triple P delivery (Hattie, 2009; Kavanagh, Spence, Strong, Wilson, Sturk, & Crow, 2003; Schoenwald, Sheidow, & Letourneau, 2004) **but also their use of Triple P across time**. Joyce and Showers (2002) demonstrated that coaching teachers within their applied setting following initial training substantially increased their use of training in innovative teaching models. Aarons, Fettes, and colleagues (2009) and Aarons, Sommerfeld, and colleagues (2009) also demonstrated that fidelity monitoring of evidence-based practices in the context of supportive coaching in community service agencies may not increase burden or burnout among practitioners and may actually *increase* practitioner retention over time. These research findings may provide additional incentive for increasing practitioner coaching and fidelity assessment best practices among local agencies. The support of staff from Triple P America and, potentially, Triple P researchers and program developers in the United States and abroad may be helpful to county Triple P coalitions in these regards.

On this last point, the county Triple P coalitions and their partners will benefit from remembering that building – or continuing the development of – visible implementation capacity and infrastructure requires close, stage-based collaboration among leadership and staff at implementation sites, intervention developers and purveyors, community partners, funders and policy-makers, and active implementation technical assistance providers (Aldridge, Boothroyd, Fleming, Jarboe, Morrow, Ritchie, & Sebian, in press; Metz & Albers, 2014). To date, the county Triple P coalitions in Cabarrus and Mecklenburg have benefited from the support of the North Carolina Division of Public Health, local agency leadership and staff within agencies implementing Triple P, and Triple P America. **To build on the strengths achieved to date and address the gaps that remain, the county Triple P coalitions in Cabarrus and Mecklenburg counties will need ongoing support from these three existing partners. In addition, they may benefit from the support of a full range of co-creation partners**, including:

- Triple P researchers and developers in the United States and abroad;
- other local and state funders, including public agencies and private foundations (e.g., to diversify and sustain funding);
- local community partners, including youth and families being served by county Triple P services (e.g., to ensure ongoing cultural and community fit of Triple P interventions and implementation practices); and
- active implementation technical assistance providers (e.g., to increase county implementation team capacity to ensure the development of active implementation infrastructure and best practices across local agencies).

Finally, it may be worth discussing the **opportunity to leverage the capacity and infrastructure developed via each county Triple P coalition for other evidence-based prevention and wellbeing strategies**. Though each county Triple P coalition may want to first ensure that capacity and infrastructure for Triple P is stabilized and sustainable and that they have fully installed a range of Triple P programs, the county coalitions could make use of the capacity that has been developed to identify, implement, and scale-up other evidence-based prevention and wellbeing strategies. In particular, new strategies that compliment Triple P's parenting and family support strategies and child and family wellbeing goals might be explored. Additional candidates for implementation should be identified in response to county wellbeing needs analyses within each county and with the participation of key county and agency partners. However, additional programs and practices might target outcomes such as academic achievement, the prevention of adolescent substance use, and youth pro-sociality behaviors (e.g., civic engagement).

Recommendations

Before turning to recommendations that emerge from TPIE evaluation results, it is important to reinforce that the county Triple P coalitions in Cabarrus and Mecklenburg counties, in partnership with their funders at the North Carolina Division of Public Health (NC DPH) and their program purveyor, Triple P America, have made meaningful progress developing local capacity and infrastructure to implement and scale-up Triple P. To build on the strengths already demonstrated in each county, TPIE evaluators, offer the following recommendations for continuing to support scale-up of the Triple P system of interventions within and across Cabarrus and Mecklenburg counties. *Recommendations are made for both counties unless otherwise specified*.

County-Level

County implementation capacity

- *In Mecklenburg County*, **increase the amount of time and effort formally allocated to County Implementation Team members** to sufficiently attend to implementation and scale-up support needs across the county's large Triple P coalition and sizable population.
- Develop county implementation teams' resources and abilities to work with local agencies to **increase the use of best practices for coaching Triple P practitioners** after their accreditation and as they deliver Triple P to children and families. Best practices for coaching include, for example:
    - ensuring there is access to coaches that have expertise and experience delivering Triple P interventions across diverse families and communities;
    - having coaches use multiple sources of information to give feedback to practitioners (e.g., observational data, session records, interviews with those familiar with the practitioner's delivery of Triple P);
    - collecting data about whether or not practitioners' abilities to effectively deliver Triple P improve as a result of coaching; and
    - providing feedback to coaches about their coaching from multiple sources of information.
- Develop county implementation teams' resources and abilities to work with local agencies to **increase the use of best practices for assessing whether or not Triple P interventions are delivered as intended**. Best practices for fidelity assessment include the *practical, efficient*, *and systematic* use of multiple forms of fidelity assessment, such as combinations of:
    - assessing whether interventions are being delivered to intended recipients and using intended formats;
    - assessing practitioner skill and competence in delivering interventions (usually via live or recorded observation, which can be randomly sampled across time);
    - assessing for intended intervention dosage (i.e., the number of intervention sessions provided to reasonably expect outcomes for a particular intervention); and
    - assessing whether or not intended content is delivered from session to session.

  Recognizing agency Triple P practitioners specifically for participating in or completing fidelity assessment procedures is also an implementation best practice.
- Given development needs for implementation infrastructure and best practice among local agencies, **ensure that the county implementation team is working with local agencies to increase the use of organizational implementation drivers best practices within their agencies** (i.e., for decision-support data systems, facilitative administration, and systems intervention).
- **Continue to develop and then document plans to sustain** county leadership teams, county implementation teams, and the necessary financial and programmatic resources needed otherwise to support the ongoing implementation and scale-up of Triple P beyond the county service grants from the North Carolina Division of Public Health.

County implementation policies and practices

- Based on results indicating that agencies are at substantially higher risk for discontinuing implementation if they have only one trained Triple P practitioner, **consider adding an agency selection criterion that agencies send three or more practitioners to Triple P training**. This

recommendation does not preclude continuing to offer training to independent or private practitioners in the county.

- Based on results indicating that agencies are at substantially higher risk for discontinuing implementation if they have an unfavorable implementation climate for Triple P and less agency capacity to support Triple P, **consider adding agency selection criteria that**
    - **agency leaders are well bought-in and engaged** with Triple P implementation processes, and
    - **the agency will commit sufficient management time and effort to an appropriately skilled agency implementation team** that will liaise with the county implementation team and support local agency Triple P implementation activities and needs. *Sufficient* time and effort may vary across agencies depending on the agency's size, complexity, and number of Triple P practitioners. However, implementation teams, by definition, consist of *at least three or more individuals* (often with a team leader or point person) responsible for coordinating and supporting the day-to-day implementation of Triple P at the agency. Implementation teams can be formed by repurposing existing management teams (which may be preferable if possible) or developing a new one.
- **Monitor identified risk factors for agency discontinuation of Triple P implementation** (i.e., poor implementation climate for Triple P, lower agency implementation support capacity, having only one Triple P practitioner, and less formal agency planning for sustainability). Among those agencies with one or more risk factors, the county implementation team may provide more intensive implementation support.
- **Consider a stage-based approach to supporting the implementation of Triple P interventions across county practitioners and local agencies.** For example:
    - **Among Triple P interventions currently in the installation stage** of implementation:
        - continue to support practitioner recruitment and selection, training, and coaching to ensure competency and confidence to deliver these interventions as intended; and
        - provide intensive active implementation support to agencies that will be hosting these new interventions to ensure that agency leadership and implementation support staff, practitioner coaching (e.g., peer support networks with expert coaches), fidelity assessment, decision-support data systems, and system strategies (e.g., media strategies, system partners) are well in place to support and optimize these interventions once they move into initial implementation.
    - **Among Triple P interventions currently in the initial implementation stage**, provide intensive active implementation support to agencies hosting these interventions to ensure that:
        - practitioners have access to and are well-supported by coaches that have expertise and experience delivering these or related Triple P interventions across diverse families and communities,
        - fidelity data demonstrate increasing delivery of these interventions as intended,
        - early outcome data are promising for the impacts on county children and families,
        - emerging implementation barriers and system needs are addressed,
        - early successes are shared and solutions to problems are spread, and

        - practitioner, agency leadership and management, and community stakeholder buy-in for these interventions is well attended to and supported.
    - **Among Triple P interventions currently in the full implementation stage**, provide ongoing active implementation support to agencies hosting these interventions to ensure that:
        - reliable and multiple forms of fidelity data (e.g., intended recipients, practitioner competence, intervention dosage, session format and content) confirm that the majority of Triple P practitioners needed to deliver these interventions for communitywide impact are doing so as intended;
        - practitioners have access to and are well-supported by ongoing peer or other professional coaching support (which may be less intensive than coaching provided during the initial implementation stage); and
        - agency leadership and implementation support staff, fidelity assessment infrastructure, decision-support data system infrastructure, and larger system strategies (e.g., media strategies, system partners) are sustained to continue to optimize these interventions and their impact on county children and families.
- **Continue to increase the reach of current Triple P interventions within county populations of children and families.** To expect population-level outcomes in *Mecklenburg County*, in particular, a sizable increase in intervention reach is likely needed. Increasing the reach of Triple P interventions in each county will involve more than training additional practitioners, particularly increasing agencies' use of implementation best practices to retain and support current practitioners to use their Triple P training and deliver Triple P interventions as intended.
- **Explore how implementation capacity and infrastructure that has been developed for Triple P may be smartly and appropriately leveraged to support the implementation and scale-up of additional countywide, evidence-based prevention and wellbeing strategies.** TPIE evaluators suggest actively pursuing this recommendation *only after* the implementation capacity and infrastructure is well established and sustainable for Triple P. Also, each county may want to more fully install a range of Triple P interventions before considering other evidence-based strategies. However, *exploring* the pursuit of this recommendation may be timely and important for strategic planning purposes.
- To support putting these recommendations into place, **county leadership and implementation support staff may benefit from partnership with a full range of implementation co-creation partners** (e.g., Aldridge, Boothroyd, Fleming, Jarboe, Morrow, Ritchie, & Sebian, in press; Metz & Albers, 2014). Co-creation partners include:
    - local agency leadership and staff within agencies implementing Triple P;
    - county funders (e.g., NC DPH, local foundations and philanthropic companies);
    - state and local policymakers;
    - local community partners, including youth and families being served by county Triple P services;
    - Triple P America and Triple P researchers/developers in the United States and abroad; and
    - active implementation technical assistance providers.

Agency-Level

Agency implementation infrastructure

- **Ensure the presence of agency implementation teams with *three or more* appropriately skilled individuals** who are responsible for coordinating and supporting the day-to-day implementation of Triple P within the agency. Likewise, **increase the amount of time and effort formally allocated to current Agency Implementation Team members** to liaise with the county implementation team and sufficiently attend to implementation support needs within the agency. *Sufficient* time and effort may vary across agencies depending on the agency's size, complexity, and number of Triple P practitioners. Implementation teams can be formed by repurposing existing management teams (which may be preferable if possible) or developing a new one.
- **Increase the use of best practices for coaching Triple P practitioners** after their accreditation and as they deliver Triple P to children and families. Best practices for coaching include, for example:
    - ensuring agency Triple P practitioners have access to coaches with expertise and experience delivering Triple P interventions across diverse families and communities;
    - having coaches use multiple sources of information to give feedback to agency Triple P practitioners (e.g., observational data, session records, interviews with those familiar with the practitioner's delivery of Triple P);
    - collecting data about whether or not agency Triple P practitioners' abilities to effectively deliver Triple P improve as a result of coaching; and
    - providing coaches feedback on their coaching from multiple sources of information.
- **Increase the use of best practices for assessing whether or not Triple P interventions are delivered as intended to children and families served by the agency**. Best practices for fidelity assessment include the *practical, efficient*, *and systematic* use of multiple forms of fidelity assessment, such as combinations of:
    - assessing whether interventions are being delivered to intended recipients and using intended formats;
    - assessing practitioner skill and competence delivering interventions (usually via live or recorded observation, which can be randomly sampled across time);
    - assessing for intended intervention dosage (i.e., the number of intervention sessions provided to reasonably expect child and family outcomes); and
    - assessing whether or not intended content is delivered from session to session.

  Recognizing agency Triple P practitioners specifically for participating in or completing fidelity assessment procedures is also an implementation best practice.
- **Increase the use of best practices to gather, use, and share implementation and intervention data for decision-making** to improve the implementation of Triple P within the agency. Best practices for decision-support data systems include, for example:
    - systematically collecting data about implementation process quality and outcomes (e.g., the quality of coaching and expected practice outcomes related to coaching), not just implementation process outputs (i.e., the number of coaching sessions attended);
    - on at least a quarterly basis, sharing agency-specific Triple P data reports widely within the agency and with community stakeholders and appropriate partners outside the agency; and

  - using Triple P data for decision-making to improve Triple P implementation practices within the agency.
- **Increase the use of best practices to solicit, document, and use information about agency policy and practice facilitators and barriers** to improve the implementation of Triple P within the agency. Best practices for facilitative administration include, for example:
  - employing usability testing (i.e., short plan-do-study-act cycles with small groups) to test and adjust the implementation of Triple P within the agency;
  - systematically soliciting information from staff and from the children, families, and/or communities the agency serves about how well its policies and practices support the implementation of Triple P; and
  - using common themes in the information gathered to strengthen internal agency policies and practices to support the implementation of Triple P.
- **Increase the use of best practices to solicit, document, and use information about Triple P successes and larger systems needs** to improve and sustain the implementation of Triple P within the agency. Best practices for systems intervention include, for example:
  - systematically soliciting information from staff and from the children, families, and/or communities the agency serves about larger service system needs related to Triple P that may be outside of the agency's immediate influence or direct control;
  - on at least a quarterly basis, sharing the agency's Triple P successes with appropriate stakeholders, partners, champions, and opinion leaders outside the agency; and
  - establishing referral channels with other county agencies that are implementing Triple P interventions.
- **Continue to develop and then document plans to sustain** agency leadership teams, agency implementation teams, and the necessary financial and programmatic resources needed otherwise to support the ongoing implementation and delivery of chosen Triple P interventions beyond the county service grants from NC DPH.

Agency implementation policies and practices

- Based on results indicating that agencies are at substantially higher risk for discontinuing implementation if they have only one trained Triple P practitioner, **ensure that the agency hosts and maintains three or more Triple P practitioners**.
- Based on results indicating that agencies are at substantially higher risk for discontinuing implementation if they have an unfavorable implementation climate for Triple P, **agency leaders may benefit their agency's implementation process by:**
  - demonstrating their ongoing commitment to the implementation of Triple P within the agency,
  - creating appropriate opportunities for change within the agency to support Triple P implementation, and
  - nurturing agency changes once they are underway.
- To support putting these recommendations into place, **agency leadership and implementation support staff may benefit from partnership with a full range of implementation co-creation partners** (e.g., Aldridge, Boothroyd, Fleming, Jarboe, Morrow, Ritchie, & Sebian, in press; Metz & Albers, 2014). Co-creation partners include:
  - internal agency staff and practitioners;

- agency funders (e.g., state and local public funders, community foundations and philanthropic businesses, third-party payers);
- state and local policymakers;
- local community partners, including youth and families being served by county Triple P services;
- Triple P America support staff; and
- county implementation leadership and support staff (i.e., from Cabarrus Health Alliance or Mecklenburg County Health Department).

Other System Partners Supporting Triple P Scale-Up

To put into place some or all of the recommendations made in this report, the county Triple P coalitions in Cabarrus and Mecklenburg counties will need ongoing support from:

- **The North Carolina Division of Public Health** (e.g., to identify ways to sustain funding);
- **Local agency leadership and staff within agencies implementing Triple P** (e.g., to identify practical and efficient ways to assess practitioners' fidelity to Triple P, to continue to identify and address local agency and larger systems challenges to the successful implementation of Triple P); and
- **Triple P America** (e.g., to increase the use of coaching best practices within county and agency peer support networks).

In addition, they may benefit from the added support of:

- **Triple P researchers and developers** in the United States and abroad (e.g., to develop practical and efficient fidelity assessment procedures for use in the field);
- **Other local and state funders such as public agencies, private foundations, and third party payers for services** (e.g., to identify diversified and sustainable funding);
- **State and local policymakers** (e.g., to remove systems barriers and spread systems solutions);
- **Local community partners**, including youth and families being served by county Triple P services (e.g., to ensure the cultural and community fit and success of Triple P interventions and implementation policies); and
- **Active implementation technical assistance providers** (e.g., for implementation capacity and development support).

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