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Primary Health Care:

Potential Home for Family-Focused Preventive Interventions

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Abstract

Family-focused prevention programs have been shown to effectively reduce a range of negative behavioral health outcomes but have had limited reach. Three key barriers must be overcome to expand the reach of family-focused prevention programs and thereby achieve a significant public health impact. These barriers are: (1) current social norms and perceptions of parenting programs; (2) concerns about the expertise and legitimacy of sponsoring organizations to offer parenting advice; and (3) a paucity of stable, sustainable funding mechanisms. Primary healthcare settings are well positioned to overcome these barriers. Recent changes within health care make primary care settings an increasingly favorable home for family-focused prevention and suggest possibilities for sustainable funding of family-focused prevention programs. This paper discusses the existing advantages of primary care settings and lays out a plan to move toward realizing the potential public health impact of family-focused prevention through widespread implementation in primary healthcare settings.

Introduction

A substantial body of research has demonstrated the positive effects of family-focused prevention programs offered in a variety of settings and across families with diverse structures and economic, cultural, and racial compositions.[1,2] The positive effects of these programs indicate promise for broad public health impact on children's well-being. However, their full potential has yet to be realized because their reach has been limited. Their potential can be fulfilled by integrating them into primary healthcare settings, where most families already receive advice about child development and health. Primary care providers (e.g., pediatricians, family physicians, nurse practitioners, physicians' assistants) are often the first resource consulted when parents have concerns about their children's behavior. This paper discusses the steps needed to bridge the gap between existing findings and widespread dissemination of evidence-based family-focused prevention programs in primary care.

Outcomes of Family-Focused Prevention Programs

The IOM's Forum on Promoting Children's Cognitive, Affective, and Behavioral Health[3] highlighted the increasing number of tested and effective family-focused prevention programs that promote the well-being of children from pre-birth through mid-adolescence. Some programs are universal preventive interventions, offered to all parents without regard to level of risk, such as expectant parents or families whose children are entering adolescence. Selective preventive interventions serve parents of children with special needs or vulnerabilities, such as children born to unmarried teen mothers or children of divorced parents. Indicated preventive interventions target parents of young people already showing early symptoms of behavioral health problems such as disruptive behaviors or autism.

Tested family-focused programs have significantly improved outcomes for children.[4–12] A summary of 11 meta-analyses of family-focused prevention programs shows consistent beneficial effects on child health and behavior across studies.[13] The Annie E. Casey Foundation's Blueprints for Healthy Youth Development,[2] a continuously updated

systematic review of experimentally tested preventive interventions, currently lists 16 family-focused prevention programs that meet rigorous standards for evaluation quality, intervention impact, implementation specificity, and dissemination readiness.[1] These programs serve parents and other adults raising children from before birth through mid-adolescence; have been implemented in a variety of community, school, and clinical settings; and include all three prevention types: universal, selective, and indicated. Effects include improvements in positive social behaviors and reductions in behavioral health problems including anxiety, depression, substance abuse, aggressive behavior, conduct problems, violence, delinquency, and crime (Table 1). These programs are ready for dissemination.

Ten of these 16 family-focused prevention programs have been subjected to rigorous benefit–cost analyses by the Washington State Institute for Public Policy.[14] Eight of the ten produced more economic benefits to society than they cost because of their effects in preventing future behavioral health problems including depression, violence, crime, and drug abuse. These eight were estimated through Monte Carlo simulations as likely to produce positive net returns on investment 52%–99% of the time.[2]

Barriers to Widespread Implementation and Engagement

Few of these effective family-focused prevention programs have moved beyond research trials into widespread implementation. Three barriers must be overcome to significantly expand their reach:

1. Social norms and perceptions limit participation.
2. Legitimacy of sponsoring organizations to offer parenting advice is unclear.
3. A source of stable, sustainable funding is needed.

Providing family-focused prevention programs through primary care may address these barriers. After describing the first two barriers, the potential of primary care to achieve widespread implementation of effective family-focused prevention is discussed. The paper then returns to the third barrier, the question of stable, sustainable funding.

Social Norms and Perceptions Limit Participation

Because there is not a shared expectation that participating in parenting programs will help parents successfully raise children, and because parenting programs have typically been provided to parents whose children are already having behavioral problems, there is potential stigma associated with attending. Qualitative studies have found that stigma (e.g., fear of being labeled a bad parent) is a barrier to engaging in parenting programs.[15–17] Primary care settings have the potential to overcome this barrier. Obstetrics clinics and hospitals currently provide prenatal and birthing classes led by family life educators; participation has become an expected part of predelivery care for many families and is often covered by insurance or offered by hospitals as part of a delivery package. Evidence-based parenting programs after a child is born are not as widespread. If family-focused prevention programs were provided through primary care, and social norms changed to promote these types of programs as important for families to achieve optimal well-being of children, the

associated stigma would likely fade and the reach of these programs could increase substantially.

Legitimacy of Sponsoring Organizations to Offer Parenting Advice Is Not Clear

There is not a universally accepted "service home" for family-focused prevention programs beyond birthing classes. Early childhood educators recognize the importance of parent-focused education, but often lack the expertise, time, and resources to engage parents.[18] Parents are not always confident that sponsoring preschools, schools, or community organizations have expertise in parenting, a key consideration given that a facilitator of engagement in parenting programs is a known and trusted program deliverer.[15] Parents who did not have positive experiences in school or who have difficulty attending owing to other obligations or logistic demands may refrain from participation. Parenting programs provided through mental health, child welfare, or other social services may be seen as punitive or indicative of parenting failure, reinforcing associated stigma. All of these considerations may help explain limited parental participation.[19] Family-focused prevention programs offered through primary care would benefit from families' non-stigmatizing, trusting relationships with primary care providers[20] and would likely engage more families.

Potential for Widespread Implementation in Primary Care Settings

Widespread and sustainable implementation of family-focused prevention programs is possible with stigma reduction, provider legitimacy, and sustainable funding. These goals can be achieved through implementing preventive parenting programs in primary care. This approach is consistent with American Academy of Pediatrics (AAP) policies, endorsing the responsibility of the pediatric primary care provider to detect non-typical development early, advise parents about developmental concerns, provide brief behavioral counseling, and promote evidence-based prevention programs.[21–23]

Primary care providers' credibility with parents provides a unique and powerful opportunity for engagement.[20] Most parents are motivated to enhance their child's health and learn about their own role in ensuring their child's well-being. The parent–provider relationship grows in the first year after birth as the result of frequent well-child visits scheduled at regular intervals, opening the door for universal engagement in parenting programs. The trust parents place in their primary care provider leads them to seek advice about a range of concerns, including behavioral problems, and primary care providers are typically the first point of contact for families with these concerns.[24,25]

The AAP's Bright Futures Guidelines for Health Supervision of Infants, Children, and Adolescents are evidence-based standards for pediatric preventive care and screening from birth through age 21 years. The Bright Futures Periodicity Schedule, incorporated in the Affordable Care Act (ACA), calls for regular well-child pediatric visits from birth through adolescence, providing guidelines across development to reinforce parenting skills universally and to screen for the need for selective or indicated preventive interventions through targeted screening questions. A broad spectrum of services could be offered, including universal prevention programs through parenting education or selective and indicated prevention programs through brief consultation on specific problems, technology-

based resources, seminars, or multisession parenting groups. Although some providers may have limited training in behavioral health, primary care creates a logical point for potential engagement in prevention programs, whether interventions are implemented by the primary care provider or by allied health professionals (e.g., psychologists, social workers, nurses, child development specialists, parent coaches). The numerous ways to implement such services in primary care, as well as the advantages of this setting, can be seen from the wide range of models for behavioral healthcare integration into primary care that have emerged.[26]

Promising Evidence of Feasibility and Effectiveness

Table 2 highlights several studies that have evaluated family-focused preventive programs in primary care settings and indicates the feasibility of implementing these programs in primary care. Studies were identified through a search employing PubMed and PsycINFO, by combining primary care terms (e.g., *pediatric**, *family medicine*, *primary care*) with family-focused programming terms (e.g., *parenting*, *parent training*, *family-focused*, specific intervention names); additional studies were identified through citation analysis. Although thorough, the purpose was to identify examples and not to serve as an exhaustive, systematic literature review.

Results suggest that implementation of preventive parenting programs in primary care can achieve high provider satisfaction with screenings and services,[27,28] and that provider skills in parent consultation can be measurably improved.[29] These studies also demonstrate that a range of healthcare staff, including nurses, psychologists, social workers, and community health workers, can be trained to successfully implement these programs with little additional workload for the primary care provider.[27,29–33]

Most Table 2 studies show effects on parenting outcomes, and some show effects on child outcomes. Training pediatric residents in the brief parent consultation model of Primary Care Triple P (Positive Parenting Program) produced positive changes in parents' discipline practices, with greatest effects on parents with the lowest baseline scores.[29] In a randomized trial of a shortened version of Incredible Years delivered by non-physician staff in pediatric settings, Perrin et al.[30] found decreases in observed negative parenting (standardized mean difference, −0.38) and reductions after 1 year in presence and intensity of child behavior problems (standardized mean differences between −0.43 and −0.59). Given the longitudinal relationship between early behavior problems and future behavioral, mental, and academic outcomes,[34–36] these results suggest a potential public health impact. The Healthy Steps program is not included in Table 2 because it offers more comprehensive services in primary care than many family-focused prevention programs. However, it has also been found to improve parenting practices, decrease child behavioral health problems,[37,38] and decrease the impact of maternal childhood trauma on their own children's development.[38]

The considerable body of literature supporting the effectiveness of family-focused prevention programs in community settings is robust and has demonstrated that the effects of parent training on child outcomes may grow over time.[39] Recent studies within primary care settings give cause for optimism. Although well-designed studies in primary care settings with longer follow-up are needed to ascertain the consistency of effects on child outcomes in

this setting, the potential population-level public health benefits of evidence-based family-focused prevention programs could be substantial.

Consider, for example, that although only 17% of eligible families participated in the universal Strengthening Families 10–14 Program in the PROSPER study, community-wide reductions in youth substance use initiation and improvements in parental monitoring, consistent discipline, and parent–child relationship quality were observed.[19,40] Reductions in drug and alcohol use were due, in part, to diffusion of the effects of Strengthening Families 10–14 beyond participating families through peer friendship networks.[41] What might be the public health impact if effective family-focused prevention programs reached 42% of eligible families, as was the case in Perrin and colleague's trial[30] of Incredible Years in pediatric practices and urban community health settings? What might be the public health impact if family-focused preventive interventions in primary care were embedded in a community's strategic plan for preventing child and adolescent behavioral health problems supported by community leaders from the media, business, religious and civic organizations, public health, education, law enforcement, human services, and local government?[42]

Stable, Sustainable Funding Is Needed

Although parenting programs in primary care have been shown to be efficacious and cost effective in research trials, they have rarely been sustained in primary care following the exit of the research team because these programs typically have not been covered by insurance or Medicaid.[43] Payment problems arise around three questions. What services are billable and who is credentialed to bill for what service? Is a child diagnosis required in order to bill or are preventive parenting services for subclinical problems billable? Must the child/patient be present for preventive services provided to parents to be billable? Widespread integration of family-focused prevention programs into primary care will require addressing insurance issues through clear policy and regulatory standards so that primary care providers can be paid for these services.

The possibility of funding family-focused preventive services through primary care has been illustrated by the Healthy Steps program,[44] the Centering Parenting program,[45] and Triple P in Washington State,[46] which have succeeded in arranging payment through insurance or, in the Washington State example, through state Medicaid reimbursement for Level 2 and Level 3 Triple P services provided by a pediatrician, a pediatrician's assistant, or a nurse practitioner trained and certified to deliver Triple P. These examples suggest that family-focused preventive programs in primary care can be reimbursed, but currently, family-focused preventive services are not covered consistently by private or public payers.

Changes in Health Care Provide Opportunities

Three significant changes in health care increase the potential for widespread implementation of family-focused prevention programs in primary care: the ACA, the growing support for the concept of a primary care medical home, and the increasing emphasis on integrated provision of behavioral health and physical health care. The first provides a possible means of sustainable funding for these services, given both its emphasis on prevention and the possibility of a two-generation approach to child health. The latter two

provide additional support for primary care as the setting in which to promote and implement proven family-focused prevention programs.

Prevention Emphasis and Funding in The Affordable Care Act

The nearly universal nature of pediatric primary care under the ACA makes it a non-stigmatizing setting for families from every background, including disadvantaged and ethnic minority families. Under the ACA, estimated 2014 rates of uninsured children aged <18 years have fallen to 5.5%, with 96.4% of all children reported to have a usual place to go for medical care.[47] The U.S. can capitalize on the expanded access to health insurance provided though the ACA to reach nearly all families, including underserved and previously uninsured people. Parents who might have waited in the past to seek help until significant behavioral problems were unbearable can be engaged early through well-child visits before the escalation of maladaptive parent–child interactions.

The incorporation of the AAP's Bright Futures Guidelines in the ACA supports the implementation of family-focused prevention programs in primary care. The guidelines recognize that the efforts of pediatric care providers to promote their patients' health are likely to fail without the active and skillful participation of the parents of their patients. The guidelines suggest that all parents consider attending parent education programs and recommend referrals for parents of children with difficult behavioral problems.

Under the ACA, family-focused preventive services could be reimbursed by insurance without copay if the U.S. Preventive Services Task Force determines that "there is high certainty that the net benefit is substantial" or "there is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial." This potential to facilitate the widespread implementation of family-focused prevention programs is noteworthy. The study by Perrin et al.[30] in Table 2 appears to meet these standards in a well-controlled experimental trial conducted in 11 primary pediatric care settings. However, additional rigorous studies that demonstrate effective models based in primary care likely will be needed to gain U.S. Preventive Services Task Force approval.

Further, with the ACA-stimulated increase of Accountable Care Organizations, healthcare providers are becoming more "accountable" for the population health of communities. Efforts to promote population health are supported by a number of recent initiatives. The Centers for Medicare and Medicaid Services funds innovative solutions to healthcare delivery issues that address population health. The Patient-Centered Outcomes Research Institute seeks to "improve the quality and relevance of evidence available to help patients, caregivers, clinicians, employers, insurers, and policy makers make informed health decisions" about screening, diagnosis, prevention, and treatment of health and emotional conditions. The Robert Wood Johnson Foundation is partnering with the Institute for Healthcare Improvement in the Spreading Community Accelerators through Learning and Evaluation Initiative to equip communities with skills and resources to address factors that "contribute to health, lead complex change, and advance equity." These initiatives create opportunities to explore integration of family-focused prevention programs into primary care and effects on patient and community-level outcomes such as parental absenteeism or child functioning in daycare or school.

Primary Care Medical Home Model

Primary care medical homes are defined as patient- or family-centered partnerships between primary care providers and patients/families that provide coordinated, comprehensive, accessible, quality care.[48] The standard of care is that all children—particularly those with special needs—have access to a family-centered medical home for their preventive, acute, and chronic care needs. Support for the medical home model has increased across the majority of U.S. healthcare delivery systems and pediatric providers nationwide.[49] The primary care medical home model magnifies the potential of primary care to address the barriers of stigma and provider legitimacy identified earlier and could increase the uptake of these programs.

Integration of Physical and Behavioral Health Care

The creation of integrated practices, in which behavioral health and medical providers co-locate to provide appropriate services to patients and their families, is increasing. Integrated pediatric care provides a means of achieving broad delivery of behavioral and mental health care,[26,50] and randomized trials have found positive effects of integrated care on youths' behavioral health compared with usual primary care.[51] In settings with existing co-located mental health clinicians, facilitating parenting programs could be a natural extension of these clinicians' roles. The presence of co-located allied health professionals who are trained to provide family-focused prevention programs would reinforce the appropriateness of primary care settings as a delivery home for these programs.

A Call for Action and Research

In order to achieve widespread effective implementation of family-focused prevention programs to promote children's well-being and prevent behavioral health problems, the authors recommend that five actions be pursued.

Create an Adequately Funded Research Foundation to Support Integration of Effective Family-Focused Prevention Programs Into Primary Care

Studies need to address two areas:

1. Are parenting programs more effective for improving child health outcomes than care as usual in the primary care setting? What outcomes (e.g., parenting, absenteeism, child behavior) are affected and at what dosage? What are essential components and permissible modifications as programs are tailored for different communities and diverse populations?
2. What factors promote successful implementation of parenting programs in or through primary care?

For consideration as a U.S. Preventive Services Task Force–recommended clinical preventive service, additional research is needed to demonstrate the effectiveness of parenting programs when delivered in, or through, primary care practices and to examine long-term outcomes for children and families.

To address the needs of all parents,[52,53] sociocultural adaptations that address the needs of diverse populations and ages, the use of technology to enhance spread, and the sponsorship of preventive parenting programs by primary care providers in typical primary care and community settings (e.g., workplaces, schools, malls), will be necessary. Culturally tailored preventive interventions show promise for overcoming ethnic or racial barriers to parental participation.[54,55] More study is needed of the formats through which parenting supports may be delivered through primary care, whether in clinics, in community settings, or using technology-based delivery approaches to mitigate logistical challenges of child care, transportation, and nontraditional work hours.[56] Interventions delivered online have been found to have an impact on parenting practices and child behavioral outcomes[57] and are feasible to implement through primary care settings.[58]

In addition, implementation studies that address barriers and facilitators to incorporation into primary care should be pursued. The emerging field of implementation science specifically addresses factors that influence how change takes place and offers recommendations for more widespread dissemination. Models identify a variety of factors affecting implementation, including the external environment (e.g., norms/payment), organizational characteristics (e.g., providers, structure), characteristics of the innovation (e.g., evidence base, adoptability, trialability), and processes used[59–61] to promote and sustain adoption.

Increase Public Awareness of the Effectiveness of Family-Focused Prevention Programs and Change Public Norms Regarding Participation

Few parents know about the effectiveness of parenting programs for promoting children's healthy development. A public awareness campaign is needed, focused on changing parents' expectations regarding participation in tested and effective parenting programs. Linking this campaign to initiatives providing parenting programs in primary care will likely increase expectations for participation among parents.

Increase Awareness, Acceptance, and Opportunities Among Primary Care Providers for the Incorporation of Preventive Parenting Into Primary Care

All primary care provider professional societies will need to embrace preventive parenting. The AAP has recently developed tools and training opportunities to enhance trainees' and clinicians' identification of behavioral health issues.[62] It will be important to integrate education about family-focused preventive interventions into these training programs.

Further, quality improvement learning collaboratives exploring the use of evidence-based parenting programs could provide a mechanism to assess feasibility, implementation, and outcomes when integrated into primary care. Support for preventive primary care collaboratives could be provided by a combination of business, foundation, and federal funding, similar to programs such as those promoted by the Patient-Centered Primary Care Collaborative,[63] the Agency for Healthcare Research and Quality's EvidenceNOW program[64] addressing preventive cardiovascular health in adults, and the Centers for Disease Control and Prevention's Program Collaboration and Service Integration for infectious diseases.[65] Current maintenance of certification requirements for physicians calls for participation in quality improvement activities and could accelerate the development of

learning collaboratives focused on family-focused prevention programs.[66,67] It will be particularly beneficial to explore approaches to implementing effective family-focused prevention programs in primary care practices that have adopted a co-located model of physical and behavioral health care and established funding for these services.

Prepare a Work Force That Can Effectively and Efficiently Deliver Proven Family-Focused Prevention Programs in Primary Care Settings

Nurses, social workers, family therapists, behavioral specialists, psychologists, counselors, and family educators could all be effective providers of family-focused prevention programs if trained in delivery methods and collaborative/team practice skills. Interprofessional training promises to prepare a range of health professionals to work as a team.[68] University programs should include this approach to training as part of degree tracks, and licensed professionals should have affordable access to training in these areas. Competency in prevention, behavioral screening and interventions, and interdisciplinary practice should be included in the certification process for participants.

Advocate for a Specific Focus on Child Health in Implementation Efforts Under the Affordable Care Act

The ACA goal of adding value to health care by increasing quality while decreasing costs has resulted in a focus on adult health care. The proportion of the U.S. healthcare dollar spent on child health is relatively small, and child health has not yet garnered sufficient attention. The long-term costs of children's behavioral health problems for families and society and the potential long-term savings from providing effective family-focused preventive interventions in primary care need to be articulated publically to foster a focus on children through the ACA.

Conclusions

Widespread implementation of family-focused evidence-based preventive interventions through primary care could be achieved in the next decade. There is strong evidence for these programs in community settings but they are underutilized. Studies of these programs in primary care show that delivery in this setting is feasible, and recent policy changes create opportunities that can contribute to their sustainability. The U.S. is on the cusp of having the necessary pieces in place for widespread integration of evidence-based family-focused preventive interventions into primary health care. The authors envision a system in which every family has access to effective preventive programs at their level of need. Through concerted action stimulated and reinforced by community leaders committed to promoting children's behavioral health through evidence-based approaches, the potential public health benefits of family-focused preventive interventions can be realized.

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Table 1

Family-Focused Preventive Programs Rated as "Model" or "Promising" Programs[a] by Blueprints for Healthy Youth Development[1,2]

Program (Target age)	Impact	Summary (level of prevention; universal, selective, or indicated)
Family Foundations (0–2)	Antisocial-aggressive behavior, anxiety, conduct problems, depression, externalizing, internalizing, prosocial with peers	(Universal) A universal prevention program to improve mother, child, and birth outcomes through promoting co-parenting quality among couples who are expecting their first child.
Nurse-Family Partnership (0–2)	Child maltreatment, delinquency and criminal behavior, early cognitive development, internalizing, mental health - other, physical health and well-being, preschool communication/ language development, reciprocal parent-child warmth	(Selective) A nurse home visiting program for first-time pregnant mothers that sends nurses to work one-on-one with the pregnant women to improve prenatal and child rearing practices through the child's second birthday.
Family Check-up (toddler version; 0–2)	Conduct problems, externalizing, internalizing, reciprocal parent-child warmth	(Universal or Selective) The toddler version of the Family Check-up (FCU) aims to prevent conduct problems among at-risk toddlers by improving the quality of parenting and has demonstrated success in increasing and maintaining parents' use of Positive Behavior Support.
Triple P System (0–11)	Child maltreatment, mental health–other	(Universal or Selective) A public health approach to reach all parents in a community to enhance parental competence and prevent or alter dysfunctional parenting practices, thereby reducing family risk factors both for child maltreatment and for children's behavioral and emotional problems.
Incredible Years–Parent (3–11)	Antisocial-aggressive behavior, close relationships with parents, conduct problems, depression, externalizing, internalizing, positive social/ prosocial behavior	(Universal, Selective, or Indicated) A group- based parenting program that strengthens parent competencies to promote young children's social, emotional, and academic competence and prevent the development of conduct problems, delivered in weekly group sessions for 3–5 months.
Parent Management Training–Oregon Model (3–18)	Antisocial-aggressive behavior, conduct problems, delinquency and criminal behavior, externalizing, internalizing	(Selective or Indicated) A group- or individual- based parent training program that teaches effective family management strategies and parenting skills, including skill encouragement, setting limits/positive discipline, monitoring, problem solving, and positive involvement, in order to reduce antisocial and behavior problems in children.
Parent-Child Interaction Therapy (PCIT; 3– 11)	Antisocial-aggressive behavior, child maltreatment, conduct problems	(Selective or Indicated) A 12-week treatment for young children with emotional and behavioral problems, with half-hour parent-child sessions, that places emphasis on improving the parent-child relationship, teaching effective parenting skills, and encouraging effective discipline.
New Beginnings (For children of divorce; 5–18)	Antisocial-aggressive behavior, close relationships with parents, externalizing, internalizing, mental health - other, reciprocal parent-child warmth, sexual risk behaviors	(Selective) New Beginnings promotes resilience in children after parental divorce by providing mothers with group- and individual-based sessions.
Strong African American Families Program (5–11)	Alcohol, close relationships with parents, delinquency and criminal behavior, truancy - school attendance	(Universal) A 7-week interactive educational program for African American parents and their early adolescent children that includes separate weekly parent and child skills-building followed by a family session to reduce adolescent substance use, conduct problems, and sexual involvement.
Strengthening Families (10–14)	Alcohol, antisocial- aggressive behavior, close relationships with parents, illicit drug use, internalizing, tobacco	(Universal) A 7-session group parenting and youth skills program that includes separate weekly parent effectiveness training and child skills-building, followed by a family session to promote good parenting skills and positive family relationships, proven to

Program (Target age)	Impact	Summary (level of prevention; universal, selective, or indicated)
		reduce aggressive and hostile behavior, substance abuse in adolescence, and improve family relationships.
EFFEKT (12–14)	Alcohol, delinquency and criminal behavior	(Universal) A program to reduce teenage alcohol use primarily by providing information to parents delivered through the schools.
Familias Unidas Preventive Intervention (12– 18)	Externalizing, illicit drug use, sexual risk behaviors	(Selective) A family-based intervention to promote protection against, and reduce risk for, behavior problems, illicit drug use, cigarette use, and unsafe sexual behavior in Hispanic youth and adolescents.
Guiding Good Choices (12–14)	Alcohol, delinquency and criminal behavior, depression, illicit drug use	(Universal) A family competency training program to enhance parenting behaviors and skills, to enhance effective child management behaviors and parent-child interactions and bonding, to teach children skills to resist peer influence, and to reduce adolescent problem behaviors.
Positive Family Support–Family Check-up (12–14)	Alcohol, depression, sexual risk behaviors, tobacco	(Universal, Selective, or Indicated) Positive Family Support-Family Check-Up is a family- based, 3-tiered intervention that targets adolescent problem behavior at the universal, selected, and indicated levels. Goals are to reduce problem behavior and risk for substance abuse and depression, improve family management practices and communication skills, as well as adolescents' self-regulation skills and prosocial behaviors.
Functional Family Therapy (FFT; 12–18)	Delinquency and criminal behavior, illicit drug use	(Selective or Indicated) A short-term family therapy intervention and juvenile diversion program helping at-risk children and delinquent youth to overcome adolescent behavior problems, conduct disorder, substance abuse, and delinquency. Therapists work with families to assess family behaviors that maintain delinquent behavior, modify dysfunctional family communication, train family members to negotiate effectively, set clear rules about privileges and responsibilities, and generalize changes to community contexts and relationships.
Multisystemic Therapy–Problem Sexual Behavior (MST-PSB; 12–18)	Academic performance, adult crime, delinquency and criminal behavior, illicit drug use, mental health - other, prosocial with peers, sexual risk behaviors, sexual violence	(Indicated) A juvenile sex offender treatment program to reduce criminal and antisocial behavior, especially problem sexual behavior, by providing intensive family therapy services in the youth's natural environment over a 5- to 7-month period.

[a]Table information taken directly from the website for Annie E. Casey Foundation's Blueprints for Healthy Youth Development at the University of Colorado's Center for the Study and Prevention of Violence[2]

Table 2

Outcomes of Parenting Programs Delivered Through Primary Health Care Contexts

Article	Intervention	Study design	Sample	Child and parenting outcomes
Incredible years				
Lavigne et al. 2008[34]	Incredible Years, 12 sessions vs. IY reading material	RCT with 3 arms: nurse- led groups, psychologist- led groups, and IY reading materials only	117 families (49 in nurse group, 37 in psychologist group, 31 in reading material group) of children with early oppositional defiant disorder, aged 3–6 (*m* = 4.6) years. (U.S.)	No significant effects on observed parent-child interactions. Child oppositional and overall behavioral problems improved in families attending 7–9 sessions or more in either active treatment arm. Not considering dose, there was no effect of condition on child outcomes as all groups improved at 12 months.
Perrin et al. 2014[30]	Incredible Years, 10 sessions	RCT with waitlist control (in 5 sites participants were randomized; in 6 sites all families received Incredible Years)	273 parents (212 in IY) reporting disruptive behaviors of children aged 2– 4 (*m*=2.8) years. (U.S.)	Reductions in negative parenting from pre to post and 12- month follow-up in both treatment groups (randomized and not). Significant treatment improvement compared to controls. Improvement in child disruptive behaviors (parent reported) in treatment groups compared to control group.
Reedtz et al. 2011[32]	Incredible Years, 6 sessions	RCT (Control received nothing)	186 parents (89 in IY) from a community sample with sub-clinical behavior concerns, children aged 2– 8 (*m*=3.9) years. (Norway)	Positive parenting and satisfaction increased and harsh discipline decreased in both conditions at follow-up with significantly larger change in the treatment group. Child behavior problems declined significantly more in the treatment group at post but the effect of treatment was not significant at 1-year follow-up because the control group behavior problems declined to the same lower level.
Primary Care Triple P				
de Graaf et al. 2009[69]	PCTP	Quasi- experimental comparison at pre-post follow-up of PCTP and usual care in matched regions	129 families (87 PCTP), children with mild to moderate behavior problems, (*m* age=6.2 years). (Netherlands)	Parenting dysfunction, laxness, and competence outcomes showed significant treatment effect of PCTP at 3-month follow-up. Reduction of child emotional and behavioral problems in both PCTP and control conditions (sustained at 3 months). No significant effect of condition on child outcomes.
McConnell et al. 2012[70]	PCTP	Quasi- experimental, post-test only usual care comparison group	923 parents (172 had received PCTP) of children (*m* age=2.8 years). (Canada)	No effect of condition on parenting outcomes. No effect of condition on child behavior outcomes.
McCormick et al. 2014[29]	Resident MDs received training in PCTP	Randomized at the provider level with a waitlist control	53 residents (25 PCTP, 28 control)/101 (51 saw PCTP-trained resident) parents of children (*m* age=4.8 years). (U.S.)	Effect of provider training seen in parent discipline practices compared to control post- intervention. No effect of PCTP resident training on child externalizing symptoms at 3- month follow-up.
Spijkers et al. 2013[71]	PCTP	RCT (compared to usual care)	81 families (47 in PCTP), children with minor psychosocial problems, aged 9–11 (*m*=10.6) years. (Netherlands)	No effect of condition on parenting behaviors or parenting stress. Both conditions improved child behavior and emotion outcomes, no effect of condition at post, 6 months, or 12 months.
Turner & Sanders, 2006[33]	PCTP	RCT with waitlist control	30 families (16 in PCTP) seeking help for behavior of child aged 2–6 years at health clinics. (Australia)	Parenting style, confidence, and maternal depression improved in treatment group. No effect of condition on parent-child observations. At post, parents in PCTP group reported fewer child behavior problems on Parent Daily Report; no effect of condition on Eyberg Child Behavior Inventory.

Article	Intervention	Study design	Sample	Child and parenting outcomes
				At 6-months, PCTP group showed decrease in behavior problems (no between-group analysis).
Other programs				
Berkovits et al. 2010[72]	Parent-Child Interaction Therapy groups vs PCIT reading materials only	Randomized pilot study comparing two versions of PCIT	30 mothers (17 in PCIT groups) of children screened for sub-clinical behavior problems, aged 3–6 (*m*=4.3) years. (U.S.)	Both versions reduced ineffective parenting and improved parental feelings of control; no significant effect of condition. Both versions reduced child behavior problems at 6- month follow-up; no effect of condition.
Borowsky et al. 2004[73]	Youth mental health screening and referral and telephone-administered positive parenting	RCT (compared to usual care)	224 children aged 7–15 (*m*=11) years with indicated psycho-social problem. (U.S.)	Parents in treatment group reported less corporal punishment at post. No significant effect of condition on monitoring or positive parenting. Intervention condition yielded fewer behavior problems and parent-reported bullying and violence at 9-month follow-up. No effect of condition on youth anxiety/ depression.
Hiscock et al. 2008[74]	3-session attachment and social learning-based parent training	Cluster Randomized Trial (compared to usual care)	733 mothers in 40 clinics (329 families within 18 clusters in treatment group), 8- month old children. (Australia)	Parents in treatment group reported less harsh parenting and fewer unreasonable expectations at 24 months. No effect of treatment within or between groups on externalizing or internalizing at 18 or 24 months.
Kjobli & Ogden, 2012[31]	Brief Parent Training, 3–5 sessions (based on Parent Management Training - Oregon Model)	RCT - effectiveness trial relying on clinician's judgement of need (compared to usual care)	216 families (108 in BPT) of children aged 3– 12 (*m*=7.3) years indicating early conduct problems. (Norway)	Treatment increased positive parenting, and reduced harsh and inconsistent discipline at post-test compared to control. Positive effect of treatment on parent-reported child behavior, anxiety and depression symptoms, and social competence outcomes at post-test. No effect of condition on teacher-reported child outcomes.

IY, Incredible Years; PCTP, Primary Care Triple P; PCIT, Parent-Child Interaction Therapy; BPT, Brief Parent Training