## Himmelfarb Health Sciences Library, The George Washington University Health Sciences Research Commons

**Pediatrics Faculty Publications** 

**Pediatrics** 

8-3-2016

## Primary Health Care: Potential Home for Family-Focused Preventive Interventions

Laurel K Leslie

Christopher J Mehus

J David Hawkins

Thomas Boat

Mary Ann McCabe George Washington University

See next page for additional authors

Follow this and additional works at: https://hsrc.himmelfarb.gwu.edu/smhs\_peds\_facpubs

Part of the Family Medicine Commons, Pediatrics Commons, and the Primary Care Commons

#### **APA Citation**

Leslie, L., Mehus, C., Hawkins, J., Boat, T., McCabe, M. A., Barkin, S., Perrin, E., Metzler, C., & And 4 others (2016). Primary Health Care: Potential Home for Family-Focused Preventive Interventions. *American Journal of Preventive Medicine*, S0749-3797 (16). http://dx.doi.org/10.1016/j.amepre.2016.05.014

This Journal Article is brought to you for free and open access by the Pediatrics at Health Sciences Research Commons. It has been accepted for inclusion in Pediatrics Faculty Publications by an authorized administrator of Health Sciences Research Commons. For more information, please contact hsrc@gwu.edu.

Authors Laurel K Leslie, Christopher J Mehus, J David Hawkins, Thomas Boat, Mary Ann McCabe, Shari Barkin, Ellen C Perrin, Carol W Metzler, and And 4 others

## Primary Health Care

### Potential Home for Family-Focused Preventive Interventions

Laurel K. Leslie, MD, MPH, <sup>1</sup> Christopher J. Mehus, PhD, <sup>2</sup> J. David Hawkins, PhD, <sup>3</sup> Thomas Boat, MD, <sup>4</sup> Mary Ann McCabe, PhD, <sup>5</sup> Shari Barkin, MD, <sup>6</sup> Ellen C. Perrin, MD, <sup>7</sup> Carol W. Metzler, PhD, <sup>8</sup> Guillermo Prado, PhD, <sup>9</sup> V. Fan Tait, MD, <sup>10</sup> Randall Brown, MD, PhD, <sup>11</sup> William Beardslee, MD, <sup>12</sup>

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.

(Am J Prev Med 2016; (1): (1): (2016 American Journal of Preventive Medicine. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

#### Introduction

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.<sup>1,2</sup> The positive effects

From the <sup>1</sup>American Board of Pediatrics, Tufts University School of Medicine, Boston, Massachusetts; <sup>2</sup>Division of General Pediatrics and Adolescent Health, Department of Pediatrics, University of Minnesota, Minneapolis, Minnesota; 3Social Development Research Group, School of Social Work, University of Washington, Seattle, Washington; 4Cincinnati Children's Hospital Medical Center, Dean Emeritus, University of Cincinnati College of Medicine, Cincinnati, Ohio; <sup>5</sup>George Washington University School of Medicine, George Mason University, Washington, District of Columbia; <sup>6</sup>Department of Pediatrics, Monroe Carell Jr. Children's Hospital, Vanderbilt University, Nashville, Tennessee; <sup>7</sup>Division of Developmental-Behavioral Pediatrics, Floating Hospital for Children, Tufts Medical Center, Boston, Massachusetts; 8Oregon Research Institute, Eugene, Oregon; <sup>9</sup>Miller School of Medicine, University of Miami, Miami, Florida; 10 Department of Child Health and Wellness, American Academy of Pediatrics, Elk Grove Village, Illinois; 11Department of Family Medicine, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin; and 12Department of Psychiatry, Harvard Medical School and Children's Hospital-Boston, Boston, Massachusetts

Address correspondence to: J. David Hawkins, PhD, Social Development Research Group, School of Social Work, University of Washington, 9725 3rd Ave NE Suite 401, Seattle WA 98115. E-mail: jdh@uw.edu. 0749-3797/\$36.00

http://dx.doi.org/10.1016/j.amepre.2016.05.014

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 National Academy of Medicine's (NAM's) Forum on Promoting Children's Cognitive, Affective, and Behavioral Health<sup>3</sup> highlighted the increasing number of tested and effective family-focused prevention programs that promote the well-being of children from prebirth 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.<sup>13</sup> The Annie E. Casey Foundation's Blueprints for Healthy Youth Development,<sup>2</sup> 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. 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. <sup>14</sup> 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.<sup>2</sup>

## 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.<sup>18</sup> 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.<sup>19</sup> Family-focused prevention

**Table 1.** Family-Focused Preventive Programs Rated as "Model" or "Promising" Programs 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 reduce aggressive and hostile behavior, substance abuse in adolescence, and improve family relationships.
		(continued on next page)

Table 1. Family-Focused Preventive Programs Rated as "Model" or "Promising" Programs by Blueprints for Healthy Youth Development (continued)

Program (target age)	Impact	Summary (level of prevention; universal, selective, or indicated)
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.

Note: Table information used with permission 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.

ents about developmental con-

development early, advise par-

the pediatric primary care proendorsing the responsibility of

to

detect

non-typical

of Pediatrics (AAP)

policies,

tent with American Academy

cerns, provide brief behavioral

grams. 21-23 ence-based counseling,

and promote evid-

prevention

pro-

nting

programs in

primary

implementing preventive paregoals can be achieved through sustainable

funding.

These

tion, provider legitimacy, and

is possible with stigma reduc-

prevention programs

implementation Widespread Care Settings

of.

family-

and

sustainable

care.

This approach

is consis-

gai ensuring primary care providers are typuled at regular intervals, openopportunity for engagement.20 credibility with parents proing behavioral problems, a range of concerns, grams. The trust parents place engagement in parenting profrequent well-child visits schedyear after birth as the result of relationship grows in enhance their child's health and Most parents are motivated to vides a unique in their primary care provider learn about their own role in leads them to seek advice about Primary the The door their care parent-provider child's and powerful for universal providers the first includwelland

ing relationships families' non-stigmatizing, trustmary care would benefit from programs offered through pri-Potential for Widespread likely engage more families. Implementation in Primary providers<sup>20</sup> with primary and would

ically the first point of contact for families with these concerns. <sup>24,25</sup>

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.<sup>26</sup>

#### 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, <sup>39,40</sup> and that provider skills in parent consultation can be measurably improved. <sup>32</sup> 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. <sup>28,29,32,34,38,39</sup>

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.<sup>32</sup> In a randomized trial of a shortened version of Incredible Years delivered by nonphysician staff in pediatric settings, Perrin et al.<sup>28</sup> 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, 27,41,42 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, 43,44 and decrease the impact of maternal childhood trauma on their own children's development.<sup>44</sup>

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. 45 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. 19,46 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.<sup>47</sup> 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 colleagues' trial<sup>28</sup> 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

 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) <sup>27</sup>	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) <sup>28</sup>	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) <sup>29</sup>	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 Trip	ple P			
de Graaf et al. (2009) <sup>30</sup>	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) <sup>31</sup>	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) <sup>32</sup>	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.
				(continued on next page)

 Table 2. Outcomes of Parenting Programs Delivered Through Primary Health Care Contexts (continued)

Article	Intervention	Study design	Sample	Child and parenting outcomes
Spijkers et al. (2013) <sup>33</sup>	РСТР	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 and Sanders (2006) <sup>34</sup>	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.  At 6 months, PCTP group showed decrease in behavior problems (no between-group analysis).
Other programs				
Berkovits et al. (2010) <sup>35</sup>	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) <sup>36</sup>	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) <sup>37</sup>	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 and Ogden (2012) <sup>38</sup>	Brief Parent Training, 3– 5 sessions (based on Parent Management Training–Oregon Model)	RCT: effectiveness trial relying on clinician's judgment 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.

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

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?<sup>48</sup>

#### 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.<sup>49</sup> 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 familyfocused 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,<sup>50</sup> the Centering Parenting program,<sup>51</sup> and Triple P in Washington State,<sup>52</sup> 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. 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. 28 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

#### Leslie et al / Am J Prev Med 2016; I(I): IIII-III

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 familyfocused 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. 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. 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, <sup>26,56</sup> and randomized trials have found positive effects of integrated care on youths' behavioral health compared with usual primary care. <sup>57</sup> 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, 58,59 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. 60,61 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. 62 Interventions delivered online have been found to have an impact on parenting practices and child behavioral outcomes<sup>63</sup> and are feasible to implement through primary care settings.<sup>64</sup>

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<sup>65–67</sup> 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. <sup>68</sup> 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, 69 the Agency for Healthcare Research and Quality's EvidenceNOW program<sup>70</sup> addressing preventive cardiovascular health in adults, and the Centers for Disease Control and Prevention's Program Collaboration and Service Integration for infectious diseases.<sup>71</sup> 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. 72,73 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.<sup>74</sup> 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 evidencebased 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.

The authors thank Hendricks Brown, Wendy Keenan, Tara Mainero, and members of the Collaborative for Healthy Parenting in Primary Care of the Forum for the Promotion of Children's Cognitive, Affective, and Behavioral Health at the National Academy of Medicine and National Research Council for their encouragement and support for the development of this article.

This article is the work of the authors and does not represent the official policies of the National Academy of Medicine or the National Research Council.

Preparation of the paper was supported, in part, by the Forum for the Promotion of Children's Cognitive, Affective, and Behavioral Health of the National Research Council and the National Academy of Medicine.

This paper was conceptualized by J. David Hawkins, Laurel Leslie, Thomas Boat, Mary Ann McCabe, and V. Fan Tait. Christopher J. Mehus and J. David Hawkins produced initial drafts of the paper. All authors reviewed and edited drafts of the paper and provided content included in the final paper.

Portions of this paper were presented at the Mini-Symposium on the State-of-the-Art in Substance Use Prevention: Lessons Learned and Applications to Community and Primary Care Settings, The Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, September 8, 2015.

No financial disclosures were reported by the authors of this paper.

#### References

- Mihalic SF, Elliott DS. Evidence-based programs registry: Blueprints for Healthy Youth Development. Eval Program Plann. 2015;48:124– 131. http://dx.doi.org/10.1016/j.evalprogplan.2014.08.004.
- Blueprints for Healthy Youth Development. Blueprints Programs. www.blueprintsprograms.com/allPrograms.php. Published 2015.
- Patlak M. Strategies for Scaling Effective Family-Focused Preventive Interventions to Promote Children's Cognitive, Affective, and Behavioral Health—Workshop Summary. Washington, DC: National Academies Press, 2014.
- Eckenrode J, Campa M, Luckey DW, et al. Long-term effects of prenatal and infancy nurse home visitation on the life course of youths: 19-year follow-up of a randomized trial. *Arch Pediatr Adolesc Med.* 2010;164(1):9–15. http://dx.doi.org/10.1001/archpediatrics.2009.240.
- Gavin LE, Catalano RF, David-Ferdon C, Gloppen KM, Markham CM.
   A review of positive youth development programs that promote adolescent sexual and reproductive health. *J Adolesc Health.* 2010;46(3) (suppl):S75–S91. http://dx.doi.org/10.1016/j.jadohealth.2009.11.215.
- Haggerty KP, McGlynn-Wright A, Klima T. Promising parenting programs for reducing adolescent problem behaviors. *J Child Serv*. 2013;8(4):229–243. http://dx.doi.org/10.1108/JCS-04-2013-0016.
- Kitzman HJ, Olds DL, Cole RE, et al. Enduring effects of prenatal and infancy home visiting by nurses on children: follow-up of a randomized trial among children at age 12 years. Arch Pediatr Adolesc Med. 2010;164(5):412–418. http://dx.doi.org/10.1001/archpediatrics.2010.76.
- Menting AT, Orobio de Castro B, Matthys W. Effectiveness of the Incredible Years parent training to modify disruptive and prosocial child behavior: a meta-analytic review. Clin Psychol Rev. 2013;33 (8):901–913. http://dx.doi.org/10.1016/j.cpr.2013.07.006.

- Perrino T, Pantin H, Prado G, et al. Preventing internalizing symptoms among Hispanic adolescents: a synthesis across Familias Unidas trials. *Prev Sci.* 2014;15(6):917–928. http://dx.doi.org/10.1007/s11121-013-0448-9.
- Prado G, Cordova D, Huang S, et al. The efficacy of Familias Unidas on drug and alcohol outcomes for Hispanic delinquent youth: main effects and interaction effects by parental stress and social support. *Drug Alcohol Depend*. 2012;125(suppl 1):S18–S25. http://dx.doi.org/ 10.1016/j.drugalcdep.2012.06.011.
- Spoth R, Trudeau L, Guyll M, Shin C, Redmond C. Universal intervention effects on substance use among young adults mediated by delayed adolescent substance initiation. *J Consult Clin Psychol*. 2009;77(4):620–632. http://dx.doi.org/10.1037/a0016029.
- 12. Webster-Stratton C, Reid MJ. The Incredible Years parents, teachers and children training series: a multifaceted treatment approach for young children with conduct problems. In: Weisz JR, Kazdin AE, eds. Evidence-based Psychotherapies for Children and Adolescents. 2nd ed. New York, NY: Guilford Press; 2010:194–210.
- Jenson J, Bender K. Preventing Child and Adolescent Problem Behavior: Evidence-based Strategies in Schools, Families, and Communities. New York, NY: Oxford University Press, http://dx.doi.org/10.1093/acprof: oso/9780199766598.001.0001.
- Lee S, Aos S, Drake E, et al. Return on Investment: Evidence-based Options to Improve Statewide Outcomes. Olympia, WA: Washington State Institute for Public Policy; 2012.
- Mytton J, Ingram J, Manns S, Thomas J. Facilitators and barriers to engagement in parenting programs: a qualitative systematic review. *Health Educ Behav.* 2014;41(2):127–137. http://dx.doi.org/10.1177/ 1090198113485755.
- Bouris A, Guilamo-Ramos V, Jaccard J, et al. The feasibility of a clinic-based parent intervention to prevent HIV, sexually transmitted infections, and unintended pregnancies among Latino and African American adolescents. AIDS Patient Care STDS. 2010;24(6):381–387. http://dx.doi.org/10.1089/apc.2009.0308.
- Marshall JL, Green JM, Spiby H. Parents' views on how health professionals should work with them now to get the best for their child in the future. *Health Expect*. 2014;17(4):477–487. http://dx.doi. org/10.1111/j.1369-7625.2012.00774.x.
- Sewell T. Are we adequately preparing teachers to partner with families? Early Childhood Educ J. 2012;40(5):259–263. http://dx.doi. org/10.1007/s10643-011-0503-8.
- Spoth R, Redmond C, Shin C, et al. Substance-use outcomes at 18 months past baseline: the PROSPER Community-University Partnership trial. *Am J Prev Med.* 2007;32(5):395–402. http://dx.doi.org/10.1016/j.amepre.2007.01.014.
- Mainero T. Strategies for Scaling Tested and Effective Family-Focused Preventive Interventions to Promote Children's Cognitive, Affective, and Behavioral Health: Workshop in Brief. Washington, DC: National Academies Press; 2015.
- 21. Garner AS, Shonkoff JP, Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood Adoption and Dependent Care, Section on Developmental and Behavioral Pediatrics. Early childhood adversity, toxic stress, and the role of the pediatrician: translating developmental science into lifelong health. *Pediatrics*. 2012;129(1):e224–e231. http://dx.doi.org/10.1542/peds.2011-2662.
- Committee on Psychosocial Aspects of Child and Family Health and Task Force on Mental Health. Policy statement—the future of pediatrics: mental health competencies for pediatric primary care. *Pediatrics*. 2009;124(1):410–421. http://dx.doi.org/10.1542/peds.2009-1061.
- Flaherty EG, Stirling J, American Academy of Pediatrics, Committee on Child Abuse and Neglect. Clinical report—the pediatrician's role in child maltreatment prevention. *Pediatrics*. 2010;126(4):833–841. http: //dx.doi.org/10.1542/peds.2010-2087.
- 24. Earls MF, Hay SS. Setting the stage for success: implementation of developmental and behavioral screening and surveillance in primary

- care practice—the North Carolina Assuring Better Child Health and Development (ABCD) Project. *Pediatrics*. 2006;118(1):e183–e188. http://dx.doi.org/10.1542/peds.2006-0475.
- Sanders M, Murphy-Brennan M, McAuliffe C. The development, evaluation and dissemination of a training programme for general practitioners in evidence-based parent consultation skills. *Int J Ment Health Promot.* 2003;5(4):13–20. http://dx.doi.org/10.1080/14623730. 2003.9721914.
- Kolko DJ, Perrin E. The integration of behavioral health interventions in children's health care: services, science, and suggestions. *J Clin Child Adolesc Psychol.* 2014;43(2):216–228. http://dx.doi.org/10.1080/15374 416.2013.862804.
- Lavigne JV, Cicchetti C, Gibbons RD, et al. Oppositional defiant disorder with onset in preschool years: longitudinal stability and pathways to other disorders. J Am Acad Child Adolesc Psychiatry. 2001;40(12):1393–1400. http://dx.doi.org/10.1097/00004583-200112 000-00009.
- Perrin EC, Sheldrick RC, McMenamy JM, Henson BS, Carter AS. Improving parenting skills for families of young children in pediatric settings: a randomized clinical trial. *JAMA Pediatr*. 2014;168(1):16–24. http://dx.doi.org/10.1001/jamapediatrics.2013.2919.
- Reedtz C, Handegård BH, Morch WT. Promoting positive parenting practices in primary pare: outcomes and mechanisms of change in a randomized controlled risk reduction trial. *Scand J Psychol.* 2011;52 (2):131–137. http://dx.doi.org/10.1111/j.1467-9450.2010.00854.x.
- de Graaf I, Onrust S, Haverman M, Janssens J. Helping families improve: an evaluation of two primary care approaches to parenting support in the Netherlands. *Infant Child Dev.* 2009;18(6):481–501. http://dx.doi.org/10.1002/icd.634.
- McConnell D, Breitkreuz R, Savage A. Independent evaluation of the Triple P Positive Parenting Program in family support service settings. Child Fam Soc Work. 2012;17(1):43–54. http://dx.doi.org/10.1111/j.1365-2206.2011.00771.x.
- McCormick E, Kerns SE, McPhillips H, et al. Training pediatric residents to provide parent education: a randomized controlled trial. *Acad Pediatr.* 2014;14(4):353–360. http://dx.doi.org/10.1016/j.acap. 2014.03.009.
- Spijkers W, Jansen DE, Reijneveld SA. Effectiveness of Primary Care Triple P on child psychosocial problems in preventive child healthcare: a randomized controlled trial. *BMC Med.* 2013;11:240. http://dx.doi. org/10.1186/1741-7015-11-240.
- Turner KM, Sanders MR. Help when it's needed first: a controlled evaluation of brief, preventive behavioral family intervention in a primary care setting. *Behav Ther*. 2006;37(2):131–142. http://dx.doi. org/10.1016/j.beth.2005.05.004.
- Berkovits MD, O'Brien KA, Carter CG, Eyberg SM. Early identification and intervention for behavior problems in primary care: a comparison of two abbreviated versions of parent-child interaction therapy. *Behav Ther*. 2010;41(3):375–387. http://dx.doi.org/10.1016/j.beth.2009.11.002.
- Borowsky IW, Mozayeny S, Stuenkel K, Ireland M. Effects of a primary carebased intervention on violent behavior and injury in children. *Pediatrics*. 2004;114(4):e392–e399. http://dx.doi.org/10.1542/peds.2004-0693.
- Hiscock H, Bayer JK, Price A, et al. Universal parenting programme to prevent early childhood behavioural problems: cluster randomised trial. *BMJ*. 2008;336(7639):318–321. http://dx.doi.org/10.1136/bmj.39 451.609676. AE.
- 38. Kjobli J, Ogden T. A randomized effectiveness trial of brief parent training in primary care settings. *Prev Sci.* 2012;13(6):616–626. http://dx.doi.org/10.1007/s11121-012-0289-y.
- McMenamy J, Sheldrick RC, Perrin EC. Early intervention in pediatrics offices for emerging disruptive behavior in toddlers. J Pediatr Health Care. 2011;25(2):77–86. http://dx.doi.org/10.1016/j.pedhc.2009.08.008.
- 40. Berge JM, Law DD, Johnson J, Wells MG. Effectiveness of a psychoeducational parenting group on child, parent, and family behavior: a

- pilot study in a family practice clinic with an underserved population. *Fam Syst Health*. 2010;28(3):224–235. http://dx.doi.org/10.1037/a0020907.
- Masten AS, Roisman GI, Long JD, et al. Developmental cascades: linking academic achievement and externalizing and internalizing symptoms over 20 years. *Dev Psychol.* 2005;41(5):733–746. http://dx. doi.org/10.1037/0012-1649.41.5.733.
- Nock MK, Kazdin AE, Hiripi E, Kessler RC. Lifetime prevalence, correlates, and persistence of oppositional defiant disorder: results from the National Comorbidity Survey Replication. *J Child Psychol Psychiatry*. 2007;48(7):703–713. http://dx.doi.org/10.1111/j.1469-7610. 2007.01733.x.
- Piotrowski CC, Talavera GA, Mayer JA. Healthy Steps: a systematic review of a preventive practice-based model of pediatric care. *J Dev Behav Pediatr.* 2009;30(1):91–103. http://dx.doi.org/10.1097/DBP. 0b013e3181976a95.
- Briggs RD, Silver EJ, Krug LM, et al. Healthy Steps as a moderator: the impact of maternal trauma on child social-emotional development. Clin Pract Pediatr Psychol. 2014;2(2):166–175. http://dx.doi.org/ 10.1037/cpp0000060.
- Patterson GR, Forgatch MS, Degarmo DS. Cascading effects following intervention. *Dev Psychopathol*. 2010;22(4):949–970. http://dx.doi.org/ 10.1017/S0954579410000568.
- Redmond C, Spoth RL, Shin C, et al. Long-term protective factor outcomes of evidence-based interventions implemented by community teams through a community-university partnership. *J Prim Prev.* 2009;30(5):513–530. http://dx.doi.org/10.1007/s10935-009-0189-5.
- Rulison KL, Feinberg M, Gest SD, Osgood DW. Diffusion of intervention effects: the impact of a family-based substance use prevention program on friends of participant. *J Adolesc Health*. 2015;57(4):433–440. http://dx.doi.org/10.1016/j.jadohealth.2015.06.
- 48. Brown EC, Hawkins JD, Rhew IC, et al. Prevention system mediation of Communities That Care effects on youth outcomes. *Prev Sci.* 2014;15(5):623–632. http://dx.doi.org/10.1007/s11121-013-0413-7.
- Perrin E. Developmental-behavioral interventions in primary care settings. Paper presented at the Annual meeting of the Society for Prevention Research, 2015; Washington, DC.
- Kaplan-Sanoff M. Extending and disseminating family-focused interventions in pediatric primary care. Paper presented at the Annual meeting of the Society for Prevention Research, 2015; Washington, DC.
- Centering Healthcare Institute. www.centeringhealthcare.org/whatwe-do/centering-parenting. Accessed May 9, 2016.
- 52. Ahn R, Waller S, McCormick E. Bringing Triple P to scale: primary care Triple P in the State of Washington. Paper presented at the Third Annual CiMH Evidence-Based Practices Symposium. www.cimharchive.trilogyir.com/LinkClick.aspx?fileticket=3C9KEUBQ2L4% 3D&tabid=305. Published 2013.
- Cohen RA, Martinez ME. Health insurance coverage: early release of estimates from the National Health Interview Survey, 2014. www.cdc.gov/nchs/data/nhis/earlyrelease/insur201506.pdf. Published 2015
- Agency for Healthcare Research and Quality. Patient Centered Medical Home resource center: defining the PCMH. https://pcmh.ahrq.gov/ page/defining-pcmh. Published 2013.
- 55. Rosenthal MB, Abrams MK, Bitton A, Patient-Centered Medical Home Evaluators' Collaborative. Recommended core measures for evaluating the patient-centered medical home: cost, utilization, and clinical quality. www.commonwealthfund.org/Publications/Data-Briefs/2012/May/Measures-Medical-Home.aspx. Published 2012. Accessed January 2, 2013.
- Campo JV, Bridge JA, Fontanella CA. Access to mental health services: implementing an integrated solution. *JAMA Pediatr.* 2015;169(4):299–300. http://dx.doi.org/10.1001/jamapediatrics.2014.3558.

#### Leslie et al / Am J Prev Med 2016; I(I): IIII - IIII

- Asarnow JR, Rozenman M, Wiblin J, Zeltzer L. Integrated medicalbehavioral care compared with usual primary care for child and adolescent behavioral health: a meta-analysis. *JAMA Pediatr*. 2015;169 (10):929–937. http://dx.doi.org/10.1001/jamapediatrics.2015.1141.
- McKay MM, Bannon WM Jr. Engaging families in child mental health services. *Child Adolesc Psychiatr Clin N Am.* 2004;13(4):905–921. http://dx.doi.org/10.1016/j.chc.2004.04.001.
- Owens PL, Hoagwood K, Horwitz SM, et al. Barriers to children's mental health services. J Am Acad Child Adolesc Psychiatry. 2002;41 (6):731–738. http://dx.doi.org/10.1097/00004583-200206000-00013.
- Pantin H, Coatsworth JD, Feaster DJ, et al. Familias Unidas: the efficacy of an intervention to promote parental investment in Hispanic immigrant families. *Prev Sci.* 2003;4(3):189–201. http://dx.doi.org/ 10.1023/A:1024601906942.
- 61. Myers HF, Alvy KT, Arlington A, et al. The impact of a parent training program on inner-city African-American families. *J Community Psychol.* 1992;20(2):132–147. http://dx.doi.org/10.1002/1520-6629 (199204)20:2 < 132::AID-JCOP2290200204 > 3.0.CO;2-Z.
- Comer JS, Furr JM, Cooper-Vince C, et al. Rationale and considerations for the Internet-based delivery of parent-child interaction therapy. Cogn Behav Pract. 2015;22(3):302–316. http://dx.doi.org/10.1016/j.cbpra.2014.07.003.
- Breitenstein SM, Gross D, Christophersen R. Digital delivery methods of parenting training interventions: a systematic review. Worldviews Evid Based Nurs. 2014;11(3):168–176. http://dx.doi.org/10.1111/wvn. 12040.
- Prado G, Pantin H, Estrada Y. Integrating evidence-based interventions for adolescents into primary care. Am J Prev Med. 2015;48
   (4):488–490. http://dx.doi.org/10.1016/j.amepre.2014.11.014.

- Berwick DM. Disseminating innovations in health care. JAMA. 2003;289(15):1969–1975. http://dx.doi.org/10.1001/jama.289.15.1969.
- Fisher ES, Shortell SM, Savitz LA. Implementation science: a potential catalyst for delivery system reform. *JAMA*. 2016;315(4):339–340. http://dx.doi.org/10.1001/jama.2015.17949.
- Damschroder LJ, Aron DC, Keith RE, et al. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation* Sci. 2009;4(50):http://dx.doi.org/10.1186/1748-5908-4-50.
- American Academy of Pediatrics. American Academy of Pediatrics Mental Health Initiatives. www.aap.org/en-us/advocacy-and-policy/ aap-health-initiatives/Mental-Health/Pages/default.aspx. Accessed November 24, 2015.
- Patient-Centered Primary Care Collaborative. www.pcpcc.org/about. Published 2015.
- Agency for Healthcare Research and Quality. EvidenceNOW: advancing heart health in primary care. www.ahrq.gov/professionals/systems/primary-care/evidencenow.html. Published 2016.
- Centers for Disease Control and Prevention (CDC). Program Collaboration and Service Integration (PCSI) at NCHHSTP. www.cdc.gov/nchhstp/programintegration/ResourceCenter.htm. Published 2014.
- American Board of Pediatrics. Basics of MOC. www.abp.org/content/basics-moc. Published 2015. Accessed September 26, 2015.
- American Board of Family Medicine. www.theabfm.org/moc/part4. aspx. Published 2015. Accessed September 26, 2015.
- 74. Cuff PA. Interprofessional Education for Collaboration: Learning How to Improve Health From Interprofessional Models Across the Continuum of Education to Practice—Workshop summary. Washington, DC: National Research Council of the National Academies; 2013.