

Bridging science and practice in child welfare and children's mental health service systems through a two-decade research center trajectory

John Landsverk

Child and Adolescent Services Research Center, San Diego, CA, USA

Ann Garland

Child and Adolescent Services Research Center, San Diego, CA and University of California at San Diego, USA

Jennifer Rolls Reutz

Child and Adolescent Services Research Center, San Diego, CA, USA

Inger Davis

Child and Adolescent Services Research Center, San Diego, CA, USA

Abstract

• *Summary:* Over the past two decades, research on social work practice has experienced substantial growth in the United States, indicated by both the establishment of the Society for Social Work Research in 1994 and increased funding from the National Institutes of Health (NIH). Recently, this growth has carried an increasing emphasis on research to establish the evidence base for social work practice and an emphasis on understanding dissemination and implementation of evidence-based interventions or practice models in usual care settings within service systems that have historic and

Journal of Social Work

11(1) 80-98

© The Author(s) 2010

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/1468017310381816

jsw.sagepub.com



Corresponding author:

John Landsverk, Child and Adolescent Services Research Center (CASRC), Rady Children's Hospital San Diego, 3020 Children's Way, MC 5033 (Mailing), 3665 Kearny Villa Rd. Ste 200 (Physical), San Diego, CA 92123, USA

Email: jlandsverk@aol.com

professional linkages to the social work discipline, such as child welfare and mental health.

- *Findings*: This article illustrates this growth and emphasizes on evidence-based practice in the social work research areas, child abuse and neglect, child welfare and child mental health through the two-decade experience of a large-scale and multi-disciplinary research center in San Diego County, California, the Child and Adolescent Services Research Center (CASRC). Evidence for understanding and improving care in these two service systems served by social work practice has been developed through center studies of clinical epidemiology, mental health services, effectiveness of evidence-based interventions, and the dissemination and implementation of these interventions in usual care settings.

- *Applications*: This evolving research agenda was shown to be well linked to the NIH Roadmap initiative and highly competitive for NIH funding.

Keywords

child abuse and neglect, child mental health, child welfare, evidence-based practice, implementation research

Introduction

Over the past two decades, research on social work practice has experienced substantial growth in the United States, indicated by both the establishment of the Society for Social Work Research (www.sswr.org) in 1994 and increased funding from the National Institutes of Health (NIH). The NIH funding was jump-started by the targeted funding for Social Work Research Development Centers in the early 1990s, first by the National Institute of Mental Health (NIMH) and subsequently by the National Institute on Drug Abuse (NIDA). Recently, this growth has carried an increasing emphasis on research to establish the evidence base for social work practice and an emphasis on understanding dissemination and implementation of evidence-based interventions or practice models in usual care settings within service systems that have historic and professional linkages to the social work discipline, such as child welfare and mental health.

The emphases on evidence-based social work in the United States can be placed within the context of the comprehensive NIH Roadmap initiative for re-engineering the clinical research enterprise (Culliton, 2006; Zerhouni, 2003, 2005) (for a detailed overview of the Roadmap initiative, see <http://nihroadmap.nih.gov>). The Roadmap initiative identified three types of research leading to improvements in national public health (including social health), namely: basic research that informs the development of clinical interventions (e.g. biochemistry, neurosciences); treatment development that crafts the interventions and tests them in carefully controlled efficacy trials; and what has come to be known as service system and implementation research, where treatments and interventions are brought into

and tested in usual care settings (Westfall, Mold, & Fagnan, 2007). Based on this tripartite division, the Roadmap further identified two translation steps for moving from the findings of basic science to improvements in the quality of health care delivered in community clinical and other delivery settings. The first translation step brings together interdisciplinary teams that cross and integrate the science being done in the basic sciences and treatment development sciences (e.g. translating neuroscience and basic behavior research findings into new treatments). The focus of the second translation step is to translate evidence-based treatments into service delivery settings and sectors in local communities. While the second step has received far less emphasis and support at the NIH, it requires interdisciplinary teams of treatment developers and researchers skilled in understanding service delivery systems, such as social workers, economists, sociologists, anthropologists and clinical psychologists.

This article illustrates this growth and emphases on evidence-based practice in the selected social work research areas of child welfare and child mental through the two-decade experience of a large-scale and multi-disciplinary research center in San Diego County, California, the Child and Adolescent Services Research Center (CASRC, www.casrc.org). While CASRC is physically located at Rady Children's Hospital, it is a consortium of over 100 multi-disciplinary investigators and staff from multiple universities and service agencies, including the schools of social work at San Diego State University and the University of Southern California (through the Hamovitch Center for Science in the Human Services), that has evolved a dynamic research agenda over the past 20 years with a unifying theme of bridging science and practice.

The development of the research agenda was initiated when the first author was recruited in 1988 to develop a research program in child abuse and neglect at the Center for Child Protection (renamed the Chadwick Center for Children and Families in 2002) at Children's Hospital – San Diego (renamed Rady Children's Hospital in 2006). From the beginning, the research program was multi-disciplinary, including social work (Inger Davis: Davis, Landsverk, & Newton, 1997; Landsverk, Davis, Ganger, Newton, & Johnson, 1996), clinical psychology (Alan Litrownik: Newton, Litrownik, & Landsverk, 2000), developmental psychology (Joseph Price: Price et al., 2008) and sociology (Richard Hough: Hough et al., 1987, 2002; and John Landsverk, two sociologists with research emphasis in psychiatric epidemiology and mental health services research). During the next 22 years, the five founding investigators have been joined by numerous additional investigators and disciplines (including pediatrics, epidemiology, statistics, and anthropology) for a robust program of research on child abuse and neglect primarily within the context of child welfare and mental health service systems. The program of research initiated in 1988 with a \$250,000 foundation grant has received well over 100 million dollars in grant and contract funding, of which two-thirds has been awarded by the NIH, including funding for one developmental and two advanced centers from the NIMH. This underscores the ability of CASRC investigators, working within a translational and multidisciplinary perspective, to

capture funding from the NIH to address practice issues in child welfare and children's mental health care, two service systems with strong historic and professional ties to social work.

Three phases in the maturation of the research agenda

The growth of the CASRC research agenda can be organized into three phases, as depicted in Figure 1. Early work conducted under the rubric of the Child and Family Research Group (1989–1994) focused primarily on the mental health needs of children in child welfare and examined child, family and system factors affecting access to and use of mental health care provided primarily by the public child mental health system. From 1994 to 2005, first as an NIMH funded developing center and then as an NIMH funded advanced center, CASRC grew to be a nationally recognized center on pediatric mental health services, expanding the portfolio of studies to include children cared for across multiple public sector service systems, with research expertise that includes clinical epidemiology, practice research (including an examination of components of usual care), implementation research, both observational and intervention studies designed to address racial/ethnic disparities in mental health service use, and quantitative and mixed methods (quantitative and qualitative).

During the second phase, CASRC grew from a group of mental health services investigators with studies located in San Diego County to a large network of senior and junior investigators representing multiple disciplines involved with both intervention and services research studies located at multiple sites around the United

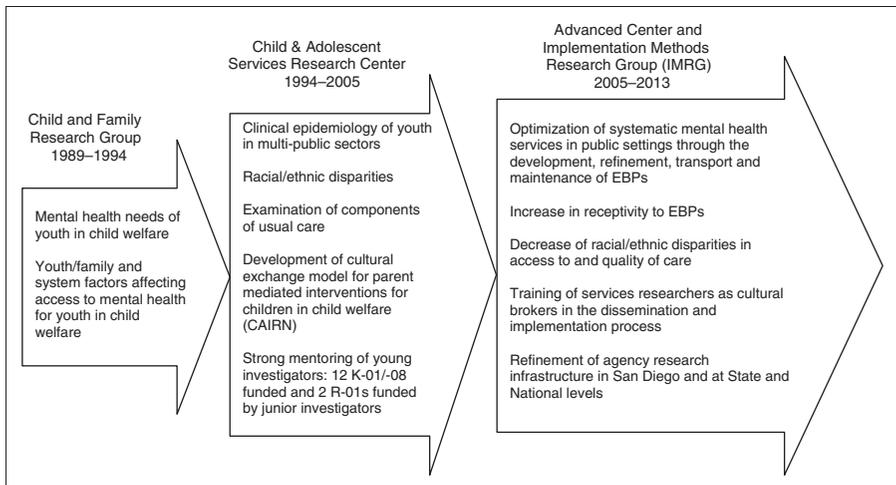


Figure 1. Maturation of scientific research agenda.

States. The third stage evolved from this joining of intervention and services researchers into a robust program of research on the dissemination and implementation (D&I) of evidence-based interventions, again with a strong focus on child welfare and children's mental health settings. This current work is anchored in a second NIMH funded advanced center under the title of Implementation Research Methods Group (IMRG, funded 2008–2013) with a targeted focus on developing innovative design and measurement strategies and technology to address the formidable challenges of the emerging science of D&I. In this current phase is included a collaborative project in Oregon and California linked to research by H. Ward on the Cost Calculator being conducted in England (Ward & Soper, 2008).

CASRC also has committed to training new research scientists from a variety of disciplines (social work, pediatrics, anthropology, nursing, and clinical, developmental, and school psychology) and the portfolio includes individualized post-doctoral and mentored research scientist awards from NIH institutes. CASRC researchers also have been prolific in disseminating research through traditional peer-reviewed publication, research and practice oriented conferences, and a variety of other dissemination methods such as websites and CASRC research briefs. The center website (www.casrc.org) has a complete listing of projects and publications and a comprehensive and continually refreshed portfolio of all funded studies from the beginning in 1989 to the present is available from the first author.

Development of research – Practice collaborative environments

The research agenda has been carried out in collaboration between CASRC investigators and service system managers and providers. This extensive and ongoing experience working collaboratively with community service systems at the local, state and national level are summarized briefly here, as an example of community based work so richly valued in the social work tradition. Locally, CASRC has a 22-year history of partnering with administrators and providers from multiple public agencies (e.g. child welfare, mental health, Medicaid physical health, drug and alcohol, education) and with community organizations (for example, the Foster Parent Association, Exceptional Family Resource Centers, Learning Disabilities Association, local mental health advocacy groups). Two examples from California illustrate collaborative work at the state level (other studies are being carried out with Oregon, Oklahoma, and Ohio). The 'Caring for California Initiative' provides an example of work conducted at the state level. Supported by the State of California Department of Mental Health, investigators from four NIMH funded services research centers in California (University of California Davis, University of California, San Francisco and Berkeley, University of California, Los Angeles, and CASRC) developed methods and tools to assess multiple dimensions of quality of outpatient care for three prevalent childhood

conditions: ADHD, conduct disorder, and major depression (Zima et al., 2005). The California Evidence-Based Clearinghouse for Child Welfare (CEBC, www.cebc4cw.org) is an ongoing project to provide evidence reviews for interventions related to child welfare services and practice, and is collaboratively carried out by the Chadwick Center for Children and Families, CASRC, and the Office of Child Abuse Prevention for the State of California (Soydan, Mullen, Alexandra, Rehnman, & Li, in review). Finally, national studies have included two linked child welfare-based studies, the National Survey on Child and Adolescent Well-Being (NSCAW) and the NIMH-funded Caring for Children in Child Welfare (CCCW) (Landsverk, Hurlburt, & Leslie, 2007, Webb, Dowd, Harden, Landsverk, & Testa, 2010), and a national study of children's mental health funded by the MacArthur Foundation (Chorpita, Bernstein, & Daleiden, 2008; Glisson et al., 2008a, 2008b; Hoagwood et al., 2008; Schoenwald et al., 2008a; Schoenwald, Kelleher, & Weisz, 2008b). Investigators have built on these studies to investigate national variation in linkages between child welfare and mental health and the impact on efficiency of service use provision and on decreases in racial/ethnic disparities in service use.

These relationships have permitted long-term longitudinal studies, randomized effectiveness studies, as well as efforts to bring better services into the community. They have also provided multiple opportunities for affiliated investigators to share current research findings that influence policy-making at the local, state and national levels. In San Diego and Eugene, Oregon, research findings are consistently fed back to agencies for program planning and for agency advocacy efforts with city and county officials. In the State of California, research has been used by both the California Institute of Mental Health and the Department of Mental Health in presentations to the state legislature and data are being incorporated in state efforts to implement an evidence-based practice clearinghouse for the child welfare field.

These three geographic levels (local, state and national) also provide the environments for potential new pilot, developmental, and project studies, providing a structure and process to systematically reflect on collaborative relationships between researchers and usual care agency stakeholders across these laboratory communities, to use mixed methods strategies to systematically gather information about bridging evidence-based practice (EBP) and usual practice in public sector service systems, and specifically to foster in-depth partnership and analyses across multiple public sectors in San Diego County.

Studies, findings, and evidence-based practice

Prior sections provide a broad overview of CASRC history and evolving research agenda research. In the following sections, a more detailed discussion of selected studies and findings is provided to illustrate the potential of a large-scale, multi-disciplinary center to generate research evidence related to understanding and improvement in child welfare and child mental health services.

Studies in clinical epidemiology and mental health services research

CASRC investigators have a 22-year history of clinical epidemiological research on publicly funded mental health service systems for children and identifying important targets for improvement (e.g. racial/ethnic disparities, linkage between agencies, and divergence between EBP and usual care). These observational studies have laid the groundwork for more recent intervention studies of effectiveness and implementation by providing rich descriptive data about the populations and the array of services, as well as predictors of service use in the public sectors. Three major studies are highlighted here: the Patterns of Care study (POC), and the paired National Survey of Child and Adolescent Well-Being (NSCAW) and Caring for Children in Child Welfare (CCCW) studies.

Our studies have demonstrated the prevalence of psychiatric disorders and other risk factors, and patterns of use of mental health services, including disparities in use, for children in public service sectors (Garland et al., 2001, 2005; Hurlburt et al., 2004; Leslie, Hurlburt, Landsverk, Barth, & Slymen, 2004a). The earliest studies followed children entering foster care in San Diego (SD) County and were the first large-scale studies in the country to provide estimates of service need, mental health service use, and predictors of service use, based on standardized instrumentation (Garland, Landsverk, Hough, & Ellis-Macleod, 1996; Leslie et al., 2000; Litrownik, Newton, & Landsverk, 2005; Runyan et al., 1998). A second-generation study extended clinical epidemiological methods by assessing DSM-IV (American Psychiatric Association, 1994) diagnoses, MH service use, and associated risk factors at baseline and two-year follow-up for a random sample of 1715 youth ages 6–17 drawn from a complete enumeration of over 22,000 children involved in five public sectors of care in SD County (CW, MH, juvenile justice, school SED programs, and substance use services) (Patterns of Care – Aarons, Brown, Hough, Garland, & Wood, 2001; Garland et al., 2001; Garland, Aarons, Brown, Wood, & Hough, 2003). Over 50 papers have been published from this study, with many still underway. Key findings include the following. 1) Youth often receive services simultaneously from different sectors – one-fifth of all enumerated youth served in child welfare, juvenile justice, mental health, special education, or alcohol and drug public sectors in San Diego County in 1996–1997 were active to two or more sectors within a six-month point in time (Hurlburt, Landsverk, Hough, Culver, & Reynolds, 1997). 2) Mental health disorders are common in youth served in public sectors – over half of children ages 6–18 sampled from five sectors met criteria for a mental health disorder and one quarter of those ages 13–18 met criteria for a substance use disorder in the past year; disruptive behavior disorders and ADHD were the most common diagnoses (Aarons et al., 2001; Garland et al., 2001). 3) A variety of complex factors, beyond clinical indicators determine what services or sector(s) a particular child with mental health problems may enter – factors associated with service entry include the child’s age, placement setting, and race/ethnicity, as well as service system characteristics such as organizational culture and climate, linkages between

sectors and actions of key gatekeepers such as court judges and social workers (Garland & Besinger, 1997; Hurlburt et al., 1997, 2004; Leslie, Gordon, Ganger, & Gist, 2002; Leslie et al., 2004a). 4) Robust race/ethnicity disparities in service involvement exist – with respect to overall mental health service use (Garland et al., 2005; McCabe, Yeh, Garland, Lau, & Chavez, 1999; Yeh et al., 2002), access to mental health outpatient visits (Hough et al., 2002) and use of psychotropic medications (Leslie, Weckerly, Plemmons, Landsverk, & Eastman, 2004b). These disparities persist even when the effects of potentially confounding variables such as income, insurance coverage, and clinical severity are taken into account (Garland et al., 2005).

NSCAW is a landmark longitudinal study of a nationally representative sample of population of children and families coming into contact with child welfare systems in the United States. The NSCAW cohort includes 6231 children, age birth to 14, who had contact with the child welfare system within a 15-month period beginning in October 1999 and sampled from 92 Primary Sampling Units (PSUs) in 97 counties nationwide. A linked study funded by NIMH, Caring for Children In Child Welfare (CCCW), is using contextual data collected from child welfare, mental health, and Medicaid regarding policies related to use of mental health and developmental services at the child welfare and agency level to predict use of mental health and developmental services as indicated by the child and parent level data being collected in the NSCAW study. These studies establish the rates of need for services (Burns et al., 2004; Leslie et al., 2004a) and the services context and utilization patterns that characterize service systems into which EBP might be transported. Analyses of NSCAW and CCCW data have highlighted how system-level variables (linkages between child welfare and mental health agencies) are associated with race/ethnic disparities in mental health service use (Hurlburt et al., 2004).

CASRC investigators are also conducting innovative clinical epidemiology studies examining clinical care processes in usual care settings, utilizing methods drawn from clinical intervention research. With NIMH funding, A. Garland has completed the ‘Integrating Evidence and Practice of Youth Psychotherapy’ (also known as Practice and Research: Advancing Collaboration [PRAC] study). The aims of the PRAC study are to characterize usual care psychotherapy for youth ages 4–13 with conduct problems, to examine the extent to which usual care practice is consistent with EBP of care for this population, and to examine how delivery of care that is consistent and inconsistent with EBP is associated with changes in selected child and family outcomes. These studies have garnered national attention in that they represent rare efforts to employ rigorous methods in characterizing usual care clinical practice, linking to EBPs (Brookman-Frazee, Haine, Baker-Ericzén, Zoffness, & Garland, 2010; Garland, Bickman, & Chorpita, 2010a; Garland, Hurlburt, Brookman-Frazee, Taylor, & Accurso, 2010b; Hurlburt, Garland, Nguyen, & Brookman-Frazee, 2010).

CASRC investigators have also published seminal research on racial/ethnic disparities in mental health status and mental health service use for children and

adolescents (Hough et al., 2002; Leslie et al., 2003; McCabe et al., 1999), as well as the mechanisms by which race/ethnicity and culture may affect services use (Lau et al., 2004; McCabe, Yeh, Lau, Garland, & Hough, 2003; Yeh et al., 2002; Yeh, McCabe, Hough, Dupuis, & Hazen, 2003; Yeh, Hough, McCabe, Lau, & Garland, 2004b). For example, CASRC investigators originally documented race/ethnic disparities in mental health service use among children in the child welfare sector (Garland et al., 2000) and these local findings have now been replicated at the national level in the NSCAW/CCCW study (Hurlburt et al., 2004). Additional analyses documented system-level factors driving disparities in utilization suggesting biases in court-referral patterns (Garland & Besinger, 1997). Using data obtained from the large and diverse POC sample, we have documented significant racial/ethnic disparities in use of formal mental health services for children across multiple service sectors with Caucasian children more likely to utilize services even when multiple potential confounding factors are taken into account (e.g. income, education, clinical severity, caregiver strain, etc.) (Garland et al., 2005; Hough et al., 2002).

In our effort to move beyond documenting disparities to actually understanding the mechanisms that drive them and intervening to reduce the disparities, additional analyses have documented racial/ethnic differences in factors that may facilitate or inhibit service use such as perceived barriers to care (Yeh et al., 2003), parental etiological beliefs (Yeh, Forness, Ho, & McCabe, 2004a; Yeh et al., 2004b, 2005), therapy attitudes and expectations (McCabe, 2002), and perceived caregiver strain (McCabe et al., 2003). In addition, Lau and colleagues utilized POC data to report racial/ethnic differences in inter-informant agreement on children's symptom severity, relations between inter-generational acculturation gaps and symptoms, and self-reports of child maltreatment (Lau et al., 2003, 2004, 2005). CASRC research also includes projects designed to tailor EBPs for use with minority populations (McCabe et al., 2005). Another significant development in our research on cross-cultural service delivery is the recently NIMH-funded study led by Yeh to examine the impact cognitive consensus on explanatory models in youth school based mental health services and how these may differ by race-ethnicity. The goal of this research program is to identify specific culture-linked cognitive processes that can be targeted in future intervention development to increase engagement and effectiveness of services.

In addition, the CASRC structure supports investigators in a number of other networked studies, such as the Youth Mental Health Network recently funded by the MacArthur Foundation under the leadership of John Weisz (Weisz, Huey, & Weersing, 1998), a multi-disciplinary (clinical psychology, child psychiatry, pediatrics, anthropology, sociology, social work) effort to examine the evidence base for psychosocial treatments for children, and to design studies leading to greater use of these treatments in community based settings. CASRC investigators have used this network experience to focus on practice research studies that have significant potential to inform improvements in public mental health care for children.

Finally, research is being conducted at CASRC on Autism Spectrum Disorders (ASD), with a focus on services in community settings. Researchers are examining

ways to more accurately diagnose children with these disorders, as well as how to intervene early and effectively, through partnerships with local developmental services providers (Akshoomoff & Stahmer, 2006; Akshoomoff, Corsello, & Schmidt, 2006; Brookman-Frazee, Stahmer, Baker, & Tsai, 2006; Stahmer & Mandell, 2006). Variation in public policies related to services for ASD have also been examined (Akshoomoff & Stahmer, 2006; Stahmer & Mandell, 2006).

Studies of effectiveness and quality of care

Effectiveness research at CASRC has been enhanced by partnering with clinical intervention researchers, namely Chamberlain, Reid, Fisher, Eyberg (Eyberg, Boggs, & Algina, 1995), and Webster-Stratton. This partnering provides an ideal complement for effectiveness research in that CASRC services researchers are very knowledgeable about the 'real world' service sectors and have well-developed relationships with provider agencies which serve as the natural 'laboratories' in which to test and refine interventions. Project KEEP, a NIMH-funded effectiveness trial titled Cascading Dissemination of a Foster Parent Intervention, is a good example of this successful partnering. This randomized effectiveness trial (Chamberlain, Price, Reid, & Landsverk, 2008) tested the impact of Multidimensional Treatment Foster Care (MTFC) for 750 foster parents of 5–11-year-olds entering a new foster care placement. The team from the Oregon Social Learning Center (OSLC) supervised the first cohort of interventionists, but there was no direct contact between OSLC staff and Cohort 2 interventionists. The study compared the effects on outcomes of these two stages of the intervention implementation. Findings include high rates of participation for both foster parents and kinship parents (85–90%) from ethnically diverse communities, and benefit in child-level outcomes in significantly reduced behavior problems and significantly better placement outcomes (Price et al., 2008). The second phase of this study was recently funded by NIMH to examine three objectives: 1) do the effects of the KEEP parent training generalize (concurrently) to other children currently in foster and kin intervention homes and lead to reductions in overall levels of behavior problems?; 2) does the KEEP intervention continue to have effects after the completion of the intervention and generalize (temporally) to new children who enter the homes of these families at a later point in time?; and 3) can the KEEP intervention be delivered and maintained in a manner that preserves the goals and quality of the intervention when it is being implemented by a community agency in a real-world system of care?

CASRC investigators Hurlburt and Landsverk have partnered with Webster-Stratton on an effectiveness trial of the Incredible Years intervention for children ages 3–8 years in the Child Welfare system. This study has experimentally examined the impact of an organizational intervention to increase support for therapists and fidelity monitoring on implementation effectiveness.

Additional effectiveness studies are being conducted by CASRC affiliated investigators. In partnership with the Oklahoma child welfare system, Chaffin conducted a randomized trial to test Parent Child Interaction Therapy (PCIT) (Eyberg et al.,

1995) within a child welfare population of physically abusive parents, with excellent outcomes (Chaffin et al., 2004). He recently completed a randomized effectiveness trial with combined funding from NIMH and CDC of Lutzker's Project SafeCare intervention for families involved in child welfare because of neglectful parenting behaviors. That study has been linked to an implementation study noted below (Organizational Readiness for Innovation, ORIN) that was originally supported through CASRC pilot funding, and has been continued through funding from NIMH (Aarons, Sommerfeld, Hecht, Silovsky, & Chaffin, 2009).

Effectiveness research within CASRC also includes smaller scale studies addressing the adaptation of evidence-based treatment for diverse cultural groups. For example, with funding from NIMH, McCabe conducted a trial of PCIT adapted for use with Mexican American families compared to standard PCIT and usual care. Preliminary work for the trial included qualitative research guiding the necessary cultural adaptations and the steps in this process have been presented as a model for other cultural adaptations (McCabe et al., 2005).

With California State Department of Mental Health funding, CASRC investigators (Hurlburt and Landsverk) partnered with other investigators from NIMH funded centers in California to conduct a quality of care study ('Caring for California Initiative', CCI). The team developed methods and tools to assess multiple dimensions of quality of outpatient care for three prevalent childhood conditions: ADHD, conduct disorder, and major depression. The major paper from that study reports on adherence to quality indicators for a statewide cohort of 813 children ages 6–19 with at least three months of outpatient care drawn from 4958 patients in 62 California mental health clinics (Zima et al., 2005). Relatively high adherence was recorded for clinical assessment (78%–95%) but moderate to poor adherence was recorded for quality indicators related to service linkage, parental involvement, use of evidence-based psychosocial treatment, and patient protection.

In addition, a series of focus groups with a diverse array of stakeholders (county administrators, program managers, therapists, and family representatives) was conducted, examining three specific evidence-based practices applicable to outpatient clinic settings. The study uncovered influences at multiple levels that likely affect the success of practice implementation efforts. Specifically, stakeholders reported that incentives or supports (e.g. reimbursement, social support, technical support) are uncommon at the therapist, service site, and service system levels to encourage change in direct care practice patterns (Hurlburt & Knapp, 2003). At all stakeholder levels, incorporation of evidence-based practices was considered a relatively low priority relative to many other competing priorities within the service delivery settings. Furthermore, therapists and their supervisors expressed strong skepticism about the potential of the EBPs discussed to achieve positive outcomes for children and families served in public settings, who often experience multiple concerns across life domains and come from diverse racial/ethnic backgrounds. Although it may not be universal, this study identified a broad disconnect in communication and perspectives between those involved in research and practice.

Studies of dissemination and implementation

Very few empirical studies have addressed the processes of implementation of EBPs. CASRC has several studies in this area. CASRC affiliated investigator Schoenwald is a leader in this area with the Multisystemic Therapy (MST) transportability study (Schoenwald & Henggeler, 2003), examining factors at multiple levels within practice settings that affect adherence to and outcomes of MST. Additional CASRC affiliated investigators with particular expertise in this area include Burns (Burns, 2003; Burns et al., 1999) and Hoagwood (Hoagwood, 2004; Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Schoenwald & Hoagwood, 2001).

The Child and Adolescent Interdisciplinary Research Network (CAIRN), funded by NIMH, has supported CASRC research related to the challenges of implementing EBP in child welfare settings. The network has published a review paper on parent training in child welfare services that examined the evidence-based parent training models that are currently available for use with biological parents and the fit between these models and the characteristics of child welfare systems (Barth et al., 2005). CAIRN also initiated the ORIN pilot study, a mixed quantitative and qualitative methods study to examine the state-wide implementation of a new evidence-based intervention (SafeCare; Lutzker & Rice, 1984) in the Oklahoma Children's Services (OCS) agency and their contracted provider agencies. The design of the pilot study capitalizes on the larger SafeCare Effectiveness Study led by Chaffin to examine bi-directional effects: 1) the effect of EBP implementation on organizations and staff, and 2) the effect of organizational context and staff attitudes and behaviors on the implementation process and outcomes. The quantitative data collection, a web-based organizational survey, was conducted with case managers and supervisors involved in the SCES with a response rate of 94–100 percent across seven waves of data collection.

Implementation research has also been supported by the MacArthur Foundation-funded Youth Mental Health Network. This project is testing two alternative methods of implementing EBPs within six community-based mental health clinics and also is investigating the organizational, system, and payment issues that influence the ability of providers and clinics to use EBPs. Dr Palinkas from CASRC and his colleagues are conducting a qualitative study of the implementation process, utilizing site visits to the clinics participating in the study and in-person interviews with participating clinicians (Palinkas et al., 2009). In addition, CASRC investigators conducted an organizational assessment using the 92 community sample established in the NSCAW and CCCW studies. The three largest mental health clinics serving children in each community were identified by the public mental health authority and telephone interviews are being done with each clinic's director to provide an overview of the site's structure and practices. The clinicians in each clinic completed a culture and climate assessment that was developed by Charles Glisson (Glisson, 2002). Data collection on both of these

components provides a snapshot of the children's mental health system in the United States (Glisson et al., 2008a).

Finally, CASRC's currently funded NIMH Advanced Center, the Implementation Research Methods Group (IMRG), is focused on developing innovative design and measurement strategies and technology to address the formidable challenges of the emerging science of D&I. The work currently being conducted through IMRG includes the development of a multi-level, four-phase implementation model that is applicable to public sector service settings, an examination of the use of mixed method designs in implementation research, a systematic review of the methods used to assess intervention fidelity in evidence-based psychosocial interventions for children and adults, and a structured review of design elements in implementation research in child mental health studies.

An additional IMRG study area of interest is the joint work between Harriet Ward at Loughborough University and several IMRG investigators (Landsverk, Chamberlain) on the adaptation of the Cost Calculator for Children's Services (www.ccfcs.org.uk), currently being used in approximately 20 local child welfare authorities in England, for use in US child welfare systems. The adaption involves detailed focus groups with child welfare supervisors and staff to map the child welfare processes, as well as questionnaires and time event logs to determine the time spent on each activity. Ultimately, the Cost Calculator will be modified for use in Oregon and California as a way to examine the cost implications of the implementation of evidence-based practices. The recent application of the Cost Calculator to the use of Multidimensional Treatment Foster Care (MTFC) in England has demonstrated a reduction in costs when children are placed in MTFC (Holmes, Westlake, & Ward, 2009).

Conclusion

The 22-year history of CASRC illustrates the strength of a large-scale and multidisciplinary research center in terms of the scope of studies that can be accomplished and the scientific rigor of methodology that can be deployed when significant funding can be captured from the National Institutes of Health grant programs. The CASRC history of studies and evolving research agenda demonstrates that both observational and intervention studies can be successfully mounted that address critical issues of practice in service settings with historic and professional ties to social work such as child welfare and children's mental health. The two-decade experience makes clear that areas of practice such as child abuse and neglect and child welfare services, once thought to be outside of the funding framework of the NIH, actually can be readily conceptualized as related to the public health of the nation and worthy of funding focus. The experience also suggests that these issues of much concern to social work practice can be framed within the NIH Roadmap initiative. Especially noteworthy are the strategies that can be successfully used to move these issues along the continuum from the first to the second translation step where social work perspective and expertise has so

much to contribute. Finally, the research program has demonstrated great skill in examining issues of equity and disparities in access to mental health care, mirroring the strong social work emphasis on racial and ethnically based disparities and disproportionality.

Acknowledgments

Support for this manuscript was provided by the following grant: P30 MH074678.

References

- Aarons, G. A., Brown, S. A., Hough, R. L., Garland, A. F., & Wood, P. A. (2001). Prevalence of adolescent substance use disorders across five sectors of care. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(4), 419–426.
- Aarons, G. A., Sommerfeld, D. H., Hecht, D. B., Silovsky, J. F., & Chaffin, M. J. (2009). The impact of evidence-based practice implementation and fidelity monitoring on staff turnover: Evidence for a protective effect. *Journal of Consulting Clinical Psychology, 77*(2), 270–280.
- Akshoomoff, N. A., & Stahmer, A. (2006). Early intervention programs and policies for children with autistic spectrum disorders. In B. M. Lester & B. Zuckerman (Eds.), *The crisis in youth mental health: Critical issues and effective programs. Vol. 1. Childhood disorders* (pp. 109–131). Westport, CT: Praeger.
- Akshoomoff, N., Corsello, C., & Schmidt, H. (2006). The role of the Autism Diagnostic Observation Schedule in the assessment of autism spectrum disorders in school and community settings. *The California School Psychologist, 11*, 7–19.
- American Psychiatric Association. (1994). *DSM-IV: Diagnostic and statistical manual of mental disorders* (4th edn). Washington, DC: American Psychiatric Association.
- Barth, R. P., Landsverk, J., Chamberlain, P., Reid, J., Rolls, J., Hurlburt, M., Farmer, B., James, S., McCabe, K., Kohl, P., & Wood, P. (2005). Parent training programs in child welfare services: Planning for a more evidence-based approach to serving biological parents. *Research on Social Work Practice, 15*(5), 353–371.
- Brookman-Frazee, L., Haine, R., Baker-Ericzén, M., Zoffness, R., & Garland, A. (2010). Factors associated with use of evidence-based practice strategies in usual care youth psychotherapy. *Administration and Policy in Mental Health and Mental Health Services Research, 37*(3), 254–269.
- Brookman-Frazee, L., Stahmer, A., Baker, M., & Tsai, K. (2006). Parenting interventions for children with autism spectrum and disruptive behavior disorders: Opportunities for cross-fertilization. *Clinical Child and Family Psychology Review, 9*(3–4), 181–200.
- Burns, B. J. (2003). Children and evidence-based practice. *Psychiatric Clinics of North America, 26*(4), 955–970.
- Burns, B. J., Hoagwood, K., & Mrazek, P. J. (1999). Effective treatment for mental disorders in children and adolescents. *Clinical Child and Family Psychology Review, 2*(4), 199–254.
- Burns, B. J., Phillips, S. D., Wagner, H. R., Barth, R. P., Kolko, D. J., Campbell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*(8), 960–970.
- Chaffin, M., Silovsky, J. F., Funderburk, B., Valle, L. A., Brestan, E. V., Balachova, T., Jackson, S., Lensgraf, J., & Bonner, B. L. (2004). Parent-child interaction therapy with

- physically abusive parents: Efficacy for reducing future abuse reports. *Journal of Consulting and Clinical Psychology*, 72(3), 500–510.
- Chamberlain, P., Price, J., Reid, J., & Landsverk, J. (2008). Cascading implementation of a foster and kinship parent intervention. *Child Welfare*, 87(5), 27–48.
- Chorpita, B., Bernstein, A., & Daleiden, E. (2008). Driving with roadmaps and dashboards: Using information resources to structure the decision models in service organizations. *Administration and Policy in Mental Health and Mental Health Services Research*, 35(1), 114–123.
- Culliton, B. (2006). Extracting knowledge from science: A conversation with Elias Zerhouni. *Health Affairs*, 25(3), w94.
- Davis, I. P., Landsverk, J. A., & Newton, R. (1997). Duration of foster care for children reunified within the first year of care. In R. P. Barth, J. Duerr Berrick & N. Gilbert (Eds.), *Child welfare research review: Foster care* (pp. 272–293). New York: Columbia University Press.
- Eyberg, S. M., Boggs, S. R., & Algina, J. (1995). Parent-child interaction therapy: A psychosocial model for the treatment of young children with conduct problem behavior and their families. *Psychopharmacology Bulletin*, 31(1), 83–91.
- Garland, A., Bickman, L., & Chorpita, B. (2010a). Change what? Identifying quality improvement targets by investigating usual mental health care. *Administration and Policy in Mental Health and Mental Health Services Research*, 37(1), 15–26.
- Garland, A., Hurlburt, M., Brookman-Frazee, L., Taylor, R., & Accurso, E. (2010b). Methodological challenges of characterizing usual care psychotherapeutic practice. *Administration and Policy in Mental Health and Mental Health Services Research*, 37(3), 208–220.
- Garland, A. F., Aarons, G. A., Brown, S. A., Wood, P. A., & Hough, R. L. (2003). Diagnostic profiles associated with use of mental health and substance abuse services among high-risk youths. *Psychiatric Services*, 54(4), 562–564.
- Garland, A. F., & Besinger, B. A. (1997). Racial/ethnic differences in court referred pathways to mental health services for children in foster care. *Children and Youth Services Review*, 19(8), 651–666.
- Garland, A. F., Hough, R. L., Landsverk, J. A., McCabe, K. M., Yeh, M., Ganger, W. C., & Reynolds, B. J. (2000). Racial and ethnic variations in mental health care utilization among children in foster care. *Children's Services: Social Policy, Research, and Practice*, 3(3), 133–146.
- Garland, A. F., Hough, R. L., McCabe, K. M., Yeh, M., Wood, P. A., & Aarons, G. A. (2001). Prevalence of psychiatric disorders in youth across five sectors of care. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(4), 409–418.
- Garland, A. F., Landsverk, J. L., Hough, R. L., & Ellis-Macleod, E. (1996). Type of maltreatment as a predictor of mental health service use for children in foster care. *Child Abuse & Neglect*, 20(8), 675–688.
- Garland, A. F., Lau, A. S., Yeh, M., McCabe, K. M., Hough, R. L., & Landsverk, J. A. (2005). Racial and ethnic differences in utilization of mental health services among high-risk youths. *American Journal of Psychiatry*, 162(7), 1336–1343.
- Glisson, C. (2002). The organizational context of children's mental health services. *Clinical Child and Family Psychology Review*, 5(4), 233–253.
- Glisson, C., Landsverk, J., Schoenwald, S., Kelleher, K., Hoagwood, K., Mayberg, S., & Green, P. (2008a). Assessing the organizational social context (OSC) of mental health

- services: Implications for research and practice. *Administration and Policy in Mental Health and Mental Health Services Research*, 35(1), 98–113.
- Glisson, C., Schoenwald, S., Kelleher, K., Landsverk, J., Hoagwood, K., Mayberg, S., & Green, P. (2008b). Therapist turnover and new program sustainability in mental health clinics as a function of organizational culture, climate, and service structure. *Administration and Policy in Mental Health and Mental Health Services Research*, 35(1), 124–133.
- Hoagwood, K. (2004). Evidence-based practice in child and adolescent mental health: Its meaning, application, and limitations. *Emotional and Behavioral Disorders in Youth*, 7–8, 24–26.
- Hoagwood, K., Burns, B. J., Kiser, L., Ringeisen, H., & Schoenwald, S. K. (2001). Evidence-based practice in child and adolescent mental health services. *Psychiatric Services*, 52(9), 1179–1189.
- Hoagwood, K., Green, E., Kelleher, K., Schoenwald, S., Rolls-Reutz, J., Landsverk, J., Glisson, C., & Mayberg, S. (2008). Family advocacy, support and education in children's mental health: Results of a national survey. *Administration and Policy in Mental Health and Mental Health Services Research*, 35(1), 73–83.
- Holmes, L., Westlake, D., & Ward, H. (2009). Calculating and comparing the costs of Multidimensional Treatment Foster Care, England (MTFCE). Report to the Department of Children, Schools and Families, Centre for Child and Family Research (CCFR), Loughborough.
- Hough, R. L., Hazen, A. L., Soriano, F. I., Wood, P., McCabe, K., & Yeh, M. (2002). Mental health services for Latino adolescents with psychiatric disorders. *Psychiatric Services*, 53(12), 1556–1562.
- Hough, R. L., Landsverk, J. A., Karno, M., Burnam, Audrey, Timbers, D. M., Escobar, J. I., & Regier, D. A. (1987). Utilization of health and mental health services by Los Angeles Mexican Americans and non-Hispanic whites. *Archives of General Psychiatry*, 44, 702–709.
- Hurlburt, M., & Knapp, P. (2003). The new consumers of evidence-based practices: Reflections of providers and families. *Data Matters*, Special Issue #6, 21–23.
- Hurlburt, M., Garland, A., Nguyen, K., & Brookman-Frazee, L. (2010). Child and family therapy process: Concordance of therapist and observational perspectives. *Administration and Policy in Mental Health and Mental Health Services Research*, 37(3), 230–244.
- Hurlburt, M.S., Landsverk, J.A., Hough, R.L., Culver, S., & Reynolds, B. (1997). Patterns of youth mental health care in public service systems: Results from an enumeration. Paper presented at the Annual Meeting of the American Public Health Association, Indianapolis, IN.
- Hurlburt, M. S., Leslie, L. K., Landsverk, J., Barth, R. P., Burns, B. J., Gibbons, R. D., Slymen, D. J., & Zhang, J. (2004). Contextual predictors of mental health service use among children open to child welfare. *Archives of General Psychiatry*, 61(12), 1217–1224.
- Landsverk, J., Davis, I., Ganger, W., Newton, R., & Johnson, I. (1996). Impact of child psychosocial functioning on reunification from out-of-home placement. *Children & Youth Services Review*, 18(4–5), 447–462.
- Landsverk, J., Hurlburt, M. S., & Leslie, L. K. (2007). Systems integration and access to mental health care. In R. Haskins, F. Wulczyn, & M. Webb (Eds.), *Child protection: Using research to improve policy and practice* (pp. 140–154). Washington, DC: Brookings Institution Press.
- Lau, A. S., Garland, A. F., Yeh, M., McCabe, K. M., Wood, P. A., & Hough, R. L. (2004). Race/ethnicity and informant agreement in assessing adolescent psychopathology. *Journal of Emotional and Behavioral Disorders*, 12, 145–156.

- Lau, A. S., McCabe, K. M., Yeh, M., Garland, A. F., Hough, R. L., & Landsverk, J. (2003). Race/ethnicity and rates of self-reported maltreatment among high-risk youth in public sectors of care. *Child Maltreatment, 8*(3), 183–194.
- Lau, A. S., McCabe, K. M., Yeh, M., Garland, A. F., Wood, P. A., & Hough, R. L. (2005). The acculturation gap-distress hypothesis among high-risk Mexican American families. *Journal of Family Psychology, 19*(3), 367–375.
- Leslie, L., Gordon, J., Ganger, W., & Gist, K. (2002). Developmental delay in young children in child welfare by initial placement type. *Infant Mental Health Journal, 23*(5), 496–516.
- Leslie, L. K., Hurlburt, M. S., Landsverk, J., Barth, R., & Slymen, D. J. (2004a). Outpatient mental health services for children in foster care: A national perspective. *Child Abuse and Neglect, 28*(6), 699–714.
- Leslie, L. K., Landsverk, J., Ezzet-Lofstrom, R., Tschann, J. M., Slymen, D. J., & Garland, A. F. (2000). Children in foster care: Factors influencing outpatient mental health service use. *Child Abuse and Neglect, 24*(4), 465–476.
- Leslie, L. K., Weckerly, J., Landsverk, J., Hough, R. L., Hurlburt, M. S., & Wood, P. A. (2003). Racial/ethnic differences in the use of psychotropic medication in high-risk children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*(12), 1433–1442.
- Leslie, L. K., Weckerly, J., Plemmons, D., Landsverk, J., & Eastman, S. (2004b). Implementing the American Academy of Pediatrics attention-deficit/hyperactivity disorder diagnostic guidelines in primary care settings. *Pediatrics, 114*(1), 129–140.
- Litrownik, A. J., Newton, R. R., & Landsverk, J. A. (2005). Assessment of depressive symptomatology in young maltreated children. *Journal of Human Behavior in the Social Environment, 11*(3–4), 135–156.
- Lutzker, J. R., & Rice, J. M. (1984). Project 12-ways: Measuring outcome of a large in-home service for treatment and prevention of child abuse and neglect. *Child Abuse and Neglect, 8*, 519–524.
- Mccabe, K., Yeh, M., Garland, A. F., Lau, A. S., & Chavez, G. (2005). The GANA Program: A tailoring approach to adapting Parent Child Interaction Therapy for Mexican Americans. *Education and Treatment of Children, 28*, 111–129.
- Mccabe, K., Yeh, M., Hough, R. L., Landsverk, J., Hurlburt, M. S., Culver, S. W., & Reynolds, B. (1999). Racial/ethnic representation across five public sectors of care for youth. *Journal of Emotional & Behavioral Disorders, 7*(2), 72–82.
- Mccabe, K. M. (2002). Factors that predict premature termination among Mexican-American children in outpatient psychotherapy. *Journal of Child & Family Studies, 11*(3), 347–359.
- Mccabe, K. M., Yeh, M., Lau, A., Garland, A., & Hough, R. (2003). Racial/ethnic differences in caregiver strain and perceived social support among parents of youth with emotional and behavioral problems. *Mental Health Services Research, 5*(3), 137–147.
- Newton, R. R., Litrownik, A. J., & Landsverk, J. A. (2000). Children and youth in foster care: Disentangling the relationship between problem behaviors and number of placements. *Child Abuse and Neglect, 24*(10), 1363–1374.
- Palinkas, L. A., Aarons, G. A., Chorpita, B. F., Hoagwood, K., Landsverk, J., & Weisz, J. R. (2009). Cultural exchange and the implementation of evidence-based practices: Two case studies. *Research on Social Work Practice, 19*(5), 602–612.

- Price, J., Chamberlain, P., Landsverk, J., Reid, J., Leve, L., & Laurent, H. (2008). Effects of a foster parent training intervention on placement changes of children in foster care. *Child Maltreatment, 13*(1), 64–75.
- Runyan, D., Curtis, P., Hunter, W., Black, M., Kotch, J., Bangdiwala, S., Dubowitz, H., English, D., Everson, M., & Landsverk, J. (1998). Longscan A consortium for longitudinal studies of maltreatment and the life course of children. *Aggression and Violent Behavior, 3*(3), 275–285.
- Schoenwald, S., Chapman, J., Kelleher, K., Hoagwood, K., Landsverk, J., Stevens, J., Glisson, C., & Rolls-Reutz, J. (2008a). A survey of the infrastructure for children's mental health services: Implications for the implementation of empirically supported treatments (ESTs). *Administration and Policy in Mental Health and Mental Health Services Research, 35*(1), 84–97.
- Schoenwald, S. K., & Henggeler, S. W. (2003). Current strategies for moving evidence-based interventions into clinical practice: Introductory comments. *Cognitive & Behavioral Practice, 10*(4), 275–277.
- Schoenwald, S. K., & Hoagwood, K. (2001). Effectiveness, transportability, and dissemination of interventions: What matters when? *Psychiatric Services, 52*(9), 1190–1197.
- Schoenwald, S. K., Kelleher, K., & Weisz, J. R. (2008b). Building bridges to evidence-based practice: The MacArthur Foundation Child System and Treatment Enhancement Projects (Child STEPs). *Administrative Policy Mental Health, 35*(1–2), 66–72.
- Soydan, H., Mullen, E.J., Alexandra, L., Rehnman, J., & Li, Y.-P. (in review). The idea and making of evidence-based clearinghouses.
- Stahmer, A. C., & Mandell, D. S. (2006). State infant/toddler program policies for eligibility and services provision for young children with autism. *Administration and Policy in Mental Health and Mental Health Services Research, 34*(1), 29–37.
- Ward, H., & Soper, J. (2008). *Costs and consequences of placing children in care*. London: Jessica Kingsley Publishers.
- Webb, M. B., Dowd, K., Harden, B. J., Landsverk, J., & Testa, M. F. (2010). *Child welfare and child well-being: New perspectives from the national survey of child and adolescent well-being*. New York: Oxford University Press.
- Weisz, J. R., Huey, S. J., & Weersing, V. R. (1998). Psychotherapy outcome research with children and adolescents: The state of the art. *Advances in Clinical Child Psychology, 20*, 49–91.
- Westfall, J. M., Mold, J., & Fagnan, L. (2007). Practice-based research: 'Blue Highways' on the NIH Roadmap. *Journal of the American Medical Association, 297*, 403–406.
- Yeh, M., Forness, S., Ho, J., & McCabe, K. (2004a). Parental etiological explanations and disproportionate racial/ethnic representation in special education services for youths with emotional disturbance. *Behavioral Disorders, 29*(4), 11.
- Yeh, M., Hough, R. L., McCabe, K., Lau, A., & Garland, A. (2004b). Parental beliefs about the causes of child problems: Exploring racial/ethnic patterns. *Journal of American Academy of Child and Adolescent Psychiatry, 43*(5), 605–612.
- Yeh, M., McCabe, K., Hough, R. L., Dupuis, D., & Hazen, A. (2003). Racial/ethnic differences in parental endorsement of barriers to mental health services for youth. *Mental Health Services Research, 5*(2), 65–77.
- Yeh, M., McCabe, K., Hough, R. L., Lau, A., Fakhry, F., & Garland, A. (2005). Why bother with beliefs? Examining relationships between race/ethnicity, parental beliefs about causes of child problems, and mental health service use. *Journal of Consulting Clinical Psychology, 73*(5), 800–807.

- Yeh, M., McCabe, K., Hurlburt, M., Hough, R., Hazen, A., Culver, S., Garland, A., & Landsverk, J. (2002). Referral sources, diagnoses, and service types of youth in public outpatient mental health care: A focus on ethnic minorities. *Journal of Behavioral Health Service Research, 29*(1), 45–60.
- Zerhouni, E. (2003). The NIH roadmap. *Science (Washington), 302*(5642), 63–72.
- Zerhouni, E. (2005). Translational and clinical science – Time for a new vision. *New England Journal of Medicine, 353*(15), 1621.
- Zima, B. T., Hurlburt, M. S., Knapp, P., Ladd, H., Tang, L., Duan, N., Wallace, P., Rosenblatt, A., Landsverk, J., & Wells, K. B. (2005). Quality of publicly-funded outpatient specialty mental health care for common childhood psychiatric disorders in California. *Journal of American Academy of Child and Adolescent Psychiatry, 44*(2), 130–144.