

## CHAPTER 4

# *Child and Youth Well-Being*

## *The Social Indicators Field*

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### INTRODUCTION

Over the last decade, social indicators have become increasingly indispensable tools for policymakers, practitioners, and funders working to improve the well-being of children and youth. The social indicators field has blossomed at every level from the international arena to the local neighborhood, helping to do the following:

- Identify areas of need
- Monitor progress toward measurable social goals
- Coordinate activities across organizations
- Increase accountability for creating positive outcomes
- Assess policy and program effectiveness

The movement has been propelled forward by advances in the collection and dissemination of social indicators data, in the practical techniques and technical assistance available to promote their effective use, and in the underlying research base. The number of

regularly fielded surveys collecting data on children and youth at the international, national, state, and local levels has increased dramatically since 1990 (Brown, 2001; Brown, Smith, & Harper, 2001). The number of reports on the condition of children, youth, and their families has also increased (Bradshaw & Barnes, 1999; Brown & Corbett, 2002). Moreover, practitioners have banded together in peer support networks to share information and resources on the proper use of social indicators data, and a number of national intermediary organizations have developed to provide technical assistance to such groups (Corbett, 2001; National Research Council and Institute of Medicine, 2002).

Though social indicators are first and foremost practical tools, the role of research and the researcher in advancing the field has been pivotal:

- Helping to identify the most important dimensions of well-being at each developmental stage.

- Mapping out the consequences of child and youth outcomes for long-term well-being.
- Identifying key social influences within the family, peer group, neighborhood, and community affecting the lives of children and youth throughout the development process.
- Identifying social programs and policies that are most effective in increasing the well-being of children and youth.
- Developing high-quality measures and instruments that capture the indicators accurately for the population as a whole and across key social subgroups.
- Establishing, where appropriate, defensible “cut points” from continuous measures that represent desirable or undesirable levels of well-being that are meaningful to practitioners, policymakers, and the public. This is done regularly with measures of scholastic achievement, for example, identifying cutoff levels qualifying as *basic*, *proficient*, and *advanced*.<sup>1</sup>

This chapter provides a broad overview of the child and youth indicators field. It is written with the researcher in mind, though we intend it to be useful to all interested readers. We begin with a background discussion of the properties of good child and youth indicators and systems of indicators. The body of the chapter recounts major developments over the last decade in social indicators research, data collection, dissemination, and application. We conclude with what we believe are the major opportunities in each of these areas for the coming decade and the role of the research community in making them happen.

### CRITERIA FOR SOCIAL INDICATORS

Social indicators are quantitative measures of well-being that can be tracked over time and compared across social, economic, and other relevant social subgroups (Moore, 1997). Desirable properties include the following:

- *Intuitive and accessible.* Because they are predominantly tools to inform social action, social indicators must be easily understood by and meaningful to the nonscientific community, including policymakers, service providers, and citizens. So, for example, the National Education Goals Panel reported the percentage of youth who score high enough to be deemed *proficient* in math rather than reporting the average score on a scale from 0 to 800.

- *Measured on a regular basis.* Most of the uses of social indicators require that they be tracked over time. For this reason, most social indicators are taken from periodically administered cross-sectional surveys, such as the National Health Interview Survey, and regularly collected administrative data, such as birth registries.

- *Grounded in both science and social values.* When used in a policy context (which, broadly construed, is most often the case), the meaning of social indicators and the relative importance we assign to them are grounded both in science and in the values and goals of the social actors who make use of them.

- *Malleable.* Social indicators focus on aspects of well-being that are amenable to deliberate change through personal and/or social means.

- *Cost-efficient to collect.* Social indicators must be relatively economical to collect, because there is limited space on any survey instrument, and they must be collected on a regular basis. Measures based on intensive observation or long clinical diagnostic instruments are relatively expensive to collect and are for that reason impractical as social indicators. However, it is a common practice of social indicators researchers to begin with detailed indices or diagnostic batteries and create much shorter versions for administration in periodic surveys (see, for example, Moore, Halle, Vandivere, & Mariner, 2002).

- *Robust across population subgroups and over time.* Indicators should work well across gender, race/ethnicity, culture, and socioeconomic subgroups so that the experiences of children and youth in these key social cleavages can be compared. Likewise, their meaning should be consistent over time so that time trends can be followed. For example, with the development of the Internet, e-mail, and instant messaging, the meaning of “having a computer in the home” has changed dramatically in the last decade, even in the last several years.

- *Representative.* It is crucial that social indicators be based on data collection and sampling techniques that produce consistent estimates and are representative of the population of interest. Nonrigorous techniques (e.g., convenience samples, snowball samples) can provide misleading estimates and false trends. In practice, this can result in poor policy decisions that work against the interests of children and youth.

- *Based on high quality measures.* As in research, measures used for social indicators should be valid, accurately reflecting the construct they are intended to capture, and reliable, so that observed movement represents real change and not measurement volatility. When scales are used, they should have moderate-to-high internal reliability. The need for high-quality measurement sometimes conflicts with the need to be cost-efficient. In such cases, the challenge for the survey designer working in the social indicators field is to design measures that adequately capture a construct in the fewest number of questions possible.

Whole systems of child and youth indicators should have the following properties:

- *Comprehensive coverage.* Systems of indicators should provide a complete portrait covering all major life domains. A number of similar frameworks have been used to

identify the key domains (Land, 2000; U.S. Department of Health and Human Services, 2001). At a minimum, a framework would include social and emotional development, physical health and safety, and intellectual/skill development. The outcomes identified for each domain would be informed by scientific theory and current research, as well as commonly held social values.

- *Developmentally sensitive.* Indicators should cover all developmental periods with measures appropriate to the central tasks and risks faced in each developmental period. These periods are generally operationalized as infancy, early childhood (age 0-5), middle childhood (age 6-11), adolescence (age 12-17), and the transition to adulthood (age 18-24). These broader age categories are sometimes subdivided in half to reflect the reality that developmental change can be quite rapid during childhood. Each stage will have indicators peculiar to itself, and often the same indicators will be operationalized differently across developmental periods.

- *Reflect social context.* Indicators of the social context that shape child and youth outcomes should be included in any complete system of child and youth indicators. These include the material and social elements of the family, peer, neighborhood, and institutional environments.

- *Geographically detailed.* The planning of activities, policies, and programs affecting children and youth happens at all geographic levels, including the nation, the state, the community, and even the neighborhood. The devolution of governmental responsibilities from the federal to the state and local levels in recent years merely underscores the need for a strong system of indicators at each of these levels.

- *Population subgroup estimates.* Data systems used to produce social indicators should be able to track separately the

well-being of subgroups defined by key social cleavages such as gender (males and females), socioeconomic status (e.g., poor and nonpoor) race/ethnicity (white, black, Asian, Hispanic) and family structure (two parent, single parent).

- *Reflect well-being and well-becoming.*

The meaning and relative importance of social indicators indicate both the current well-being of youth and future well-being, sometimes referred to as *well-becoming*. (Ben-Arieh et al., 2001). For example, adolescent depression is important both because of the current misery it reflects and because of what it portends for future happiness and successful transition to adulthood.

- *Positive and negative outcomes.*

Because so many of our government programs have been set up to address social problems and social needs, the data systems developed to support their work tend to focus on negative behaviors, outcomes, and conditions. As a result, our systems of child and youth indicators and the research that helped to create them have focused overly on negative outcomes and risk factors. However, in the last decade, there has been a strong movement toward a *positive development* framework, particularly in youth programs and community-based programs of all sorts (Pittman, Irby, & Ferber, 2000). Karen Pittman, of the International Youth Foundation, summarizes the feelings of many program staff, parents, and youth when she says that “problem free is not fully prepared” (Pittman & Irby, 1996). This is an area in which there is much work to be done in measurement and data development.

- *Forward-looking.* To the extent possible, indicators systems should try to anticipate new social developments requiring new measures. This is important in order to provide baseline data for emerging trends. For example, children’s access to, time on, and activities on the Internet are quickly

becoming an important part of their daily lives in ways that may have important implications for parenting, education, the reproduction of poverty and privilege, and for social policy in general (Novak & Hoffman, 1998; Papert & Negroponte, 1996). Unfortunately, even now, the measures and data sources for tracking these activities are meager.

### A BRIEF HISTORY OF SOCIAL INDICATORS IN THE UNITED STATES

The use of social indicators as practical tools in the United States extends at least to the 1920s, with the development of a “community scorecard” by the U.S. Department of Interior’s Bureau of Education. The scorecard was intended to “direct the attention of communities to important factors in their organization and maintenance and to supply a measuring stick by which they can rate themselves with reference to other communities” (Federal Council of Citizenship Training, 1924). The scorecard covered the following dimensions of well-being: mental development, health and physical development, vocational development, patriotic development (citizenship), and social and moral development.<sup>2</sup> A short time later, *Recent Trends in the United States* was released (President’s Research Committee on Social Trends, 1933), a path-breaking national report created under the supervision of William Ogburn, chair of Herbert Hoover’s Research Committee on Social Trends (Land, 2000).

The collection and use of social indicators took another leap at the national level during the 1960s and 1970s, partly in response to the expansion of federal social programs (Kingsley, 1998). By the 1970s, social indicators had become sufficiently important that the Social Science Research Council established the Center for the Coordination of

Research on Social Indicators (CCSC). The goal of the CCSC was to establish a comprehensive system of child and family indicators and the means to track them. The CCSC understood the policy relevance of its work but was focused more on the scientific implications of such a system for increasing our understanding of social change.

By the early 1980s, however, support for child, youth, and family indicators had waned. The CCSC closed its doors. A few activities did continue during this period. A Congressional committee, the Select Committee on Children, Youth, and Families, released several comprehensive reports prepared by Child Trends on the condition of children and youth, which featured indicators data culled from across the federal data system (Select Committee on Children, Youth, and Families 1983, 1987, 1989). On the whole, however, there was little activity.

A decade later, the social indicators field began a revival and since that time has experienced strong and steady growth in all aspects of the field and at every geographic level. Reasons identified for that revival include the devolution of power from the federal to the state and local levels, and the ongoing information technology (IT) revolution (Brown & Corbett, 2002; Kingsley, 1998). Devolution created a need for more and better data at the state and local levels to support planning, goals tracking, and accountability. It also placed a greater emphasis on achieving measurable outcomes rather than carrying out particular federally designed programs. The IT revolution has made the collection, manipulation, and dissemination of all data, including social indicators data, much cheaper. It has also vastly expanded the audience of potential users as larger and larger segments of the population have direct access to powerful computers and the Internet.

## INDICATORS OF CHILD, YOUTH, AND FAMILY WELL-BEING: A DECADE OF PROGRESS

The 1990s was a decade of rejuvenation and development in the child and youth indicators field. In this section of the report, we highlight key developments and activities during that period in the areas of practice, data development, dissemination, and research.<sup>3</sup>

### *Child and Youth Indicators in Practice*

Social indicators of child, youth, and family well-being are being used for a number of different purposes. Most of the uses are applied, though they are used for purely scientific purposes as well. All of these uses are important to understand, because they put a somewhat different set of requirements on the indicators and the data systems used to track them.<sup>4</sup>

*Monitoring and Needs Assessment.* Indicators are commonly used to monitor well-being and assess social needs and social resources, often as a prelude to action. For example, the U.S. Centers for Disease Control and Prevention (CDC) has set up a variety of health and disease surveillance systems to identify emerging threats to the health of the nation, as well as to specific communities and population subgroups throughout the country. In addition to monitoring, which requires ongoing measurement, indicators are often used for one-time needs and assets assessments to guide program development and deployment. For example, hundreds of communities focusing on the needs of youth have fielded the Search Institute's Profiles of Student Life: Attitudes and Behaviors Survey (PSL-AB) to identify areas of need, as well as the personal and

social assets that can be mobilized to meet needs and improve outcomes for youth.

*Goals Tracking.* Social indicators are also commonly used to track progress toward measurable goals that have been adopted by whole communities, states, or the nation. These entities commonly begin with a benchmark measurement to establish the current level of the indicator (e.g., the percentage of youth who get regular exercise) and proceed to adopt an attainable goal to be achieved over, for example, a 5- to 10-year period. These are intended to focus participating government and civic organizations on a limited set of common goals. Participating groups often will adopt measurable goals of their own that are related to the larger goal but that will reflect the fruits of their own activities (e.g., for a community-wide goal of improving the physical health of youth, a local school system may focus on increasing the percentage of public high school students who take physical education classes). A variant on this approach is based on the notion of *continuous improvement*, in which indicators are used to track progress over time, though no specific targets are set.

The federal government has launched two major goal-driven initiatives affecting children and youth, one in health, and the other in education. The Healthy People initiative, developed by the U.S. Department of Health and Human Services, is a comprehensive effort to improve the health of all Americans. Healthy People 2010 (HP2010), the latest incarnation of the initiative, identifies 467 specific, measurable objectives for the coming decade, many of which are directly relevant for children and youth. The objectives were identified in concert with 250 state agencies and several hundred national organizations, most of which have planned activities that will be pivotal in achieving the goals. Nearly all states and many communities have their own HP2010 efforts, using the national objectives

as guidelines, while setting reachable goals for their own populations. Toward this end, there has been a great deal of data development at the national, state, and local levels over the last several decades, so that objectives can be benchmarked and progress can be tracked over time.

The Education Goals 2000 initiative, launched in 1989 and adopted into law in 1994, set eight national goals, including goals to increase early school readiness; to promote competency in reading, math, science, languages, civics, economics, the arts, history, and geography; and to increase high school graduation rates. The National Education Goals Panel (NEGP), a bipartisan, multilevel government effort, encouraged the voluntary adoption of specific education standards among the states (49 states now have them in some form) and worked to increase the supply of comparable state level data to measure educational progress, in part through encouraging state participation in the National Assessment of Educational Progress. Its flagship report, the annual *National Education Goals Report*, provided state level estimates on 34 indicators related to the national goals.<sup>5</sup>

States have been very active participants in both of these federally coordinated initiatives, but have also been quite active on their own. The Oregon Benchmarks initiative is the oldest and most developed comprehensive state initiative seeking to base state planning across agencies, at the state and local levels, inside and outside of government, on a limited set of achievable goals that are quantifiable and tracked over time. The initiative process was launched in a series of public meetings in 1989. The initiative is currently focusing on 90 benchmarks, with specific goals for 2005 and 2010. Goal areas include the economy, education, civic engagement, social support, public safety, community development, and the environment. State agencies must address all relevant



benchmark goals in their annual budget justifications. At the local level, local commissions in each county focusing on child and family benchmarks engage in comprehensive community planning to meet local goals.

*Results-Based Accountability.* Government and private funders are increasingly using social indicators to hold states, communities, agencies, and individual programs accountable for improving *outcomes* for children and youth. This represents a change from a period in which accountability was based on process (how well a program or policy was implemented) rather than outcome. The change to an outcomes focus is in part a result of the devolution of control over social policies and programs to lower levels of government, providing local actors with more program flexibility, while holding them accountable for the ultimate results. Which measures are used and the levels of improvement that must be met are commonly, though not always, negotiated. Failure to demonstrate improvement may result in additional technical assistance to overcome problems or, in some cases, may lead to reduced funding and loss of autonomy.

In the child and youth policy arena, this use of indicators has been most developed in public education, though private foundations and local governments are also beginning to adopt this approach for a variety of outcomes. The state of Virginia, for example, through its Standards of Learning (SOL) initiative, has a number of additional reporting and instructional requirements for poorly performing schools that fail to demonstrate improvement in student academic performance, and sanctions for schools that lose their accreditation.

Accountability can be based on reward as well as sanctions. As part of the SOL program, Virginia offers rewards to high-performing schools in the form of exemption from certain regulations and reporting

requirements. At the federal level, under the Temporary Assistance for Needy Families (TANF) welfare reform, states that reduce the nonmarital birth rate the most without increasing the abortion rate have been rewarded with bonus payments in the millions of dollars each.

*Reflective Practice.* Communities and individual programs are using a social indicators approach to inform their own practice on an ongoing basis. Many develop formal logic models that relate particular program activities to expected outcomes for participating children, youth, and their families using an explicit theory of change (Gambone, 1998; United Way of America, 1999; Weiss, 1995).<sup>6</sup> In the case of a community-wide initiative, such a model would include input from multiple participating programs (public and private) as well as measurable outcomes for the community's children and youth. If program measures indicate that programs are being effectively implemented and well-being indicators move in the expected direction, then the initiative is judged to be effective. If the child and youth indicators do not move in the expected direction, then the underlying assumptions of the logic model are called into question and one or more aspects of the service approach are changed. Alternatively, if the logic model is sound, it could point to deficiencies in the *implementation* of the program. The process is similar for individual programs, though outcomes are generally limited to program participants.

At a practical level, reflective practice functions like an internal program evaluation. It lacks the methodological rigor to produce scientific knowledge but is an increasingly popular management tool for initiatives focused on child and youth well-being (National Research Council and Institute of Medicine, 2002).

*Evaluation.* Generally speaking, social indicators make poor tools for formal scientific evaluations of programs and policies. Such evaluations have depended primarily on experimental and quasi-experimental methods (Hollister & Hill, 1995). Traditionally, the role of indicators in evaluations has been very limited, functioning as “miners’ canaries” identifying policies or programs that may be particularly promising (or dysfunctional) and deserving of formal evaluation using more rigorous techniques.

One area in which indicators have figured more prominently has been the evaluation of comprehensive community initiatives (CCIs). The intervention model of CCIs is complex, involving many programs, organizations, and services, and is intended to affect numerous outcomes at the community level. Their complexity and ubiquity makes standard evaluation techniques inapplicable, because no counterfactual comparison can be generated. Instead, evaluators have been working on an approach called *theory-driven evaluation*, which is based on the construction of complex logic models that relate changes in programs, services, and activities involved in the intervention to each other and to the final desired outcomes (e.g., improved early child development; see Connell & Kubisch, 1998). It looks similar to a path model. The evaluation is highly dependent on social indicators, including benchmark levels for each element in the model and monitoring changes in each indicator over time. This is a creative though controversial approach to evaluation, and it is still in its early stages of development.<sup>7</sup>

One such comprehensive community initiative is being carried out in Cleveland. The Cleveland Community-Building Initiative is focusing on four low-income neighborhoods in the city, using a comprehensive development approach that includes health, investment, education, family development, and human resource development. The evaluators,

in this case, the Center for Urban Poverty and Social Change (all researchers based at Case Western Reserve University), worked with a variety of stakeholder groups, including the initiative’s staff, board of trustees, and the village councils, to draw out and reconcile their respective *theories of change*: their concrete ideas on how this development would take place. Out of this came a detailed logic model to guide the projects and provide a framework for the evaluation. A series of indicators were chosen to reflect key elements of the logic model, and sources of data were identified for benchmarking and monitoring progress over time. The initiative is fortunate to have at its disposal one of the most advanced and comprehensive community Geographic Information System (GIS) databases in the country, the Cleveland Area Network for Data and Organizing (CANDO), developed by the evaluation team. Data from CANDO provide information for planning and provide feedback to stakeholders, who, in response, evaluate and modify their activities on an ongoing basis.

*Other Scientific Uses.* Social indicators are also used simply to inform and improve our understanding of social change. Social scientists are often inspired by the coincidence of change in several indicators (for example, decreases in youth employment rates and increases in crime) to develop hypotheses that they pursue using more rigorous methods. Macrolevel models using social indicators data, common in the field of economics, can be used to model the likely ripple effects of social change from one area to another. For example, on the basis of research (e.g., Maynard, 1997), one could develop a model to predict the effects of a 10% reduction in teen birth rates on a host of other outcomes, from high school completion to marriage rates, family income, infant health, and so on.



*Limitations.* Social indicators can be powerful tools for science and social policy, but they also have significant limitations and are subject to unintended and, occasionally, deliberate misuse, resulting in poor policy outcomes.<sup>8</sup> A major limitation is the well-documented lack of data for some important aspects of child and youth well-being, particularly at the state and community levels (Brown, 1997; Coulton & Hollister, 1998). Many aspects of well-being can only be tracked with surveys, which are relatively plentiful at the national level but not commonly available in communities. In addition, high-quality measures are simply lacking for many outcomes, including mental health, disability, and many aspects of positive youth development (Federal Interagency Forum on Child and Family Statistics, 2001; Hogan, Rogers, & Msall, 2000; Moore, Evans, Brooks-Gunn, & Roth, 2001).

The lack of adequate training by and technical assistance for practitioners and policymakers who would use social indicators leads to underuse and, on occasion, misuse of these important tools. Common problems include the use of poor-quality data, the use of inappropriate or weak measures, and the tendency to draw causal conclusions when they are not supported by the data or the methodology. In addition to lack of training, political pressures can produce a similar set of problems. This is particularly likely when indicators are used to enforce accountability or when proponents are motivated to use positive or negative trends for their political advantage.

These limitations can be addressed to some extent through basic research, data development, and the expansion of training and technical assistance. Indeed, the last decade has seen significant progress in all these areas (Child Trends, 2001). The remaining challenges are substantial, however, and their limitations should be kept firmly in mind.

### *Data Development*

The capacity to track change over time is the hallmark of a social indicators data system. Such a system relies on two sources: repeated, cross-sectional surveys and censuses (e.g., the Current Population Surveys), and administrative data (birth and death records, disease registries, child abuse and neglect reports, school graduation records, and program data).

There has been a substantial expansion in the amount and the variety of child and youth indicators data available at all geographic levels, from the international level to the local community. The national level clearly enjoys the richest resources, though the state level has seen the greatest expansion of data collected in the last decade (Brown, 2001).

#### *International Estimates*

The United States participates in a number of periodically fielded international surveys on children and youth, as well as others that may or may not be repeated in the future. International comparisons of well-being are important because they provide a larger policy context in which to evaluate the well-being of our children. In addition, such comparisons are of practical importance in an increasingly competitive global environment.<sup>9</sup>

Most of these surveys are education related. They include the Trends in Mathematics and Science Study (TIMSS, fielded in 1995, 1999, and 2003), the IEA Civics Study (1997-98), the Program for International Student Assessment (PISA), and the Progress in International Reading Study (PIRLS, 2001). TIMSS collects data on youth in the fourth and eighth grades; the IEA Civics Study, on 14-year-olds; and PIRLS, on youth in the fourth grade. All collect detailed information, including skill assessments, activities known to affect attainment (e.g.,

study and television habits), and detailed measures of the family and school context. These surveys allow for systematic comparisons of U.S. student achievement and social environments with dozens of developed and developing countries around the world.

In addition, the United States recently entered into two health-related international surveys of youth. The Health Behavior of School-Aged Children (HBSC) is a long-standing survey of 11-, 13-, and 15-year-olds focusing on health-related behaviors and their determinants. It has been fielded approximately every 4 years and currently includes more than 27 countries. The HBSC, developed with the support of the World Health Organization-Europe, includes countries in Eastern and Western Europe, as well as Canada, the United States, and Israel. The United States participated in the 1997 to 98 survey and is participating in the 2001 to 2002 survey. Data on a wide variety of positive and negative health behaviors and statuses are collected, as well as characteristics of the family, peer, and school environments. Another health survey, the Global Youth Tobacco Survey, has been collected in 40 countries, with another 38 countries in the process of fielding the survey. This survey, first fielded in the United States in 1999, includes detailed questions on tobacco use and attitudes about use among students in the 6th through 12th grades.

#### *National Estimates*

Despite some important gaps, the United States has perhaps the richest variety and depth of regularly collected child and youth indicators data of any country in the world. During the 1990s, there were important enhancements to the data system's ability to produce national level estimates of child well-being, but perhaps the most important development was the creation of the Federal Interagency Forum on Child and Family

Statistics (the Forum). The Forum, a consortium of 20 federal statistical agencies, was formally established in 1997 by executive order of the President of the United States with the mission to "foster coordination and collaboration in the collection and reporting of Federal data on children and families" (Federal Interagency Forum on Child and Family Statistics, 2001, inside cover page). The Forum has chosen to focus much of its initial efforts on the development and dissemination of child and youth indicators, as well as improving data collection in the areas of fatherhood and family structure. Their premier product is the annual *America's Children* report, described in the section on dissemination (next). In producing that collection of essential indicators measures, the Forum has also identified important dimensions of well-being for which high-quality national estimates are not currently available. These include indicators of disability, child mental health, child abuse and neglect, parent/child interactions, time use, neighborhood quality, early child development, homelessness, and positive development. Participating agencies are working alone and in concert with other member agencies to address many of these shortcomings. Current joint activities include research and measurement development on children's disabilities, fathering, marriage and family structure, and mental health. Despite these important gaps, the existing data system provides regular estimates on hundreds of important indicators of child, youth, and family well-being.

*National Health Indicators Data.* The amount of data on health status and disease prevalence among children and youth is very substantial. These include data from the birth and death records of the vital statistics system (collected continuously); health status, behaviors, and service receipt from the National Health Information Survey (NHIS,

annual); early child immunization data from the National Immunization Survey (annual); detailed medical data based on medical examination and interview from the National Health and Nutrition Examination Survey (NHANES, collected about every 6 years); detailed youth drug use from the National Household Survey of Drug Abuse (NHSDA, annual); and measures of drug use, sexual activity, violence, suicide ideation, physical activity, and nutrition among students in grades 9 to 12 from the Youth Risk Behavior Survey (YRBS, biennial). In addition, Monitoring the Future (MTF) has collected data on 12th-grade youth on an annual basis since 1976 and on 8th- and 10th-grade youth since 1991; it focuses on drug use but also asks questions on attitudes and values covering a wide variety of topics, as well as measures of religious, political, and volunteer activities; happiness, self-esteem, and locus of control; and risk behaviors, violence, and victimization.

*National Education Indicators Data.* In education, there are three primary sources of social indicators data. For assessments of academic achievement, the National Assessment of Educational Progress (NAEP) has been tracking performance with periodic assessments in math, science, reading, writing, history, civics, and the arts since 1969 (about every 2 to 6 years, depending on the topic). It also includes a number of activities known or believed to affect achievement, including hours of homework, television-watching habits, and access to a computer in the home. The NAEP focuses on youth in the 4th, 8th, and 12th grades.<sup>10</sup>

The National Household Education Survey (NHES) is a general-purpose education survey designed primarily to provide trend data on issues of importance to policymakers, researchers, and educators. Broad topic areas are covered in detail on a rotating

basis about every 4 years. These include parent and family involvement in education, early childhood program participation, before- and after-school programs and activities, and school readiness.

The third mainstay of education indicators is the annual October supplement to the Current Population Survey (CPS). The CPS is a monthly survey collecting data related to employment. The October supplement also collects data on a number of education-related topics, including enrollment and attainment, preschool attendance, language proficiency, disability, and computer access.

*National Social and Emotional Well-Being Indicators Data.* National indicators of the emotional well-being of children and youth are surprisingly limited. The YRBS asks teens if they have ever seriously contemplated or attempted to commit suicide, and the NHIS includes limited questions on behavioral and emotional problems for children and adolescents.

Indicators related to social well-being are much more numerous, though they tend to focus on negative behaviors of youth related to violence, drug use, and sexual activity. The sources for these data include the YRBS, the NHSDA, the MTF, and birth record data. Estimates of children and youth as victims of crime are limited to child abuse and neglect data gathered through the National Child Abuse and Neglect Data System (NCANDS, continuous) and to victimization of youth data on a wide variety of crimes through the National Crime Victimization Survey (NCVS, annual).

Some positive measures related to civic involvement, volunteering, and prosocial values are available from the MTF and the NHES. Repeated national estimates for any of these measures are not available for children below the age of 12.

*National Social Context Indicators Data.* The family is the most critical social environment affecting the development of children and youth and the best represented in the national statistical system. Detailed family structure and family economic characteristics are available annually from the March Current Population Survey (annual). This is the primary source for such indicators. The American Housing Survey provides data on children's housing quality, and the Survey of Income and Program Participation is a source for some detailed family and economic characteristics not covered by the March CPS. The social dynamics of families (e.g., parent and child time together, parenting styles, conflict resolution techniques, religious activities) are, unfortunately, not well represented in regularly fielded national surveys, though they are present in special surveys, such as the National Surveys of Families and Households, the National Longitudinal Survey of Adolescent Health (Add-Health), the Panel Study of Income Dynamics, the National Longitudinal Survey of Youth 1997 Cohort, and the Early Childhood Longitudinal Surveys.

Indicators of the community environment in national data sources are limited primarily to indicators of the school environment, which are present in several surveys sponsored by the National Center for Education Statistics, including the Common Core of Data (annual) the Schools and Staffing Survey (every 4 to 6 years), and the NHES. Sociodemographic indicators of children's neighborhoods (e.g., percent of neighbors who are poor, single-parent families, or in the labor force) have been generated from the U.S. Census, but these are available only once every 10 years.

Data on the friends and peers of children and youth are also scarce in regularly fielded national surveys. There are some questions about peer norms and beliefs in the MTF,

and the HBSC asks some questions about perceived peer support and number of close friends. National estimates for such measures prior to adolescence are nonexistent.

#### *State and Local Estimates*

The last decade has produced substantial increases in the amount and the breadth of child and youth indicators data available at the state and local levels through the federal statistical system, though they still lag far behind what is available at the national level. Indicators-driven national initiatives such as Healthy People 2000 (and now 2010), and National Education Goals 2000 were in no small part responsible for this increase, though it is also a response to the generally increased need for such data by state and local governments.<sup>11</sup>

In the education area, the NAEP was extended in 1990 on a voluntary basis to the state level in the areas of reading, writing, math, and science. In 2001, 41 states participated. In addition, in recent years, most states have adopted their own comprehensive systems of regular educational assessment for children and youth from the third grade and up, with results often available down to the individual school level (Archbald, 1998).

The Schools and Staffing Survey (SASS), first fielded in the late 1980s and repeated about every 4 years, provides state level estimates of student and staff characteristics, staffing patterns, programs and services offered, and graduation rates for both public and private schools. Some of these indicators are also available on an annual basis from the Common Core of Data (CCD), which is also capable of producing estimates for school districts. Data from the CCD are limited to public schools, however.

In the health area, the vital statistics system is the major source of community level data for a host of birth- and death-related indicators, including prenatal care receipt,

low birthweight, smoking and drinking during pregnancy, death rates by age, and for major causes of child and youth death. For many small communities, the incidence of these events is small enough that several years of data must be combined to produce stable estimates.

A number of disease surveillance systems provide child- and youth-based estimates for states and major metropolitan areas for diseases, including HIV/AIDS, tuberculosis, and sexually transmitted diseases.

The CDC has, since 1990, designed and implemented several surveys specifically to help states and large cities track youth health risk behaviors. The YRBS (see above for details), which began in 1990, was fielded in 42 states and 16 major metropolitan areas in 1999. A handful of states have used their own financial resources to expand the survey sample so that indicators can be generated for individual school districts.

More recently, the National Youth Tobacco Survey (NYTS) has been fielded to gather detailed information on youth behaviors and attitudes related to smoking and tobacco use. The survey was fielded in 27 states in 2000, up from 3 states in 1998. A national sample is also surveyed. Fresh data are collected every year or two, depending on the state. The NYTS is administered to youth in grades 6 through 12, focusing on seven topic areas: tobacco use, tobacco-related knowledge and attitudes, the role of the media and advertising in young people's tobacco use, access to tobacco, exposure to tobacco-related school curriculum, exposure to secondary smoke, and cessation of use. Data are also collected internationally through the Global Youth Tobacco Survey.

A third survey, the Student Survey of Risk and Protective Factors, and Prevalence of Alcohol, Tobacco, and other Drug Use (SSRP), focuses on risk and protective factors influencing drug use, violence, and other

behavior problems for youth age 12 to 18. Although direct measures of youth outcomes are focused on these negative behaviors, measures related to family, peer, and school influences are more well-rounded, with many positive measures such as close and supportive parent-child relationships and perceptions of the availability of useful roles for youth in the community. Most of the indicators are based on multi-item scales, with strong psychometric properties and strong grounding in the research literature. The survey, which was developed by the Social Development Research Group at the University of Washington,<sup>12</sup> is being field-tested in six states and is intended for use by states, communities, and youth programs.

In addition to these efforts, the National Institute for Drug Abuse (NIDA) recently expanded the sample size of the NHSDA so that annual state level estimates of drug abuse can be generated for youth age 12 to 17 and 18 to 25. Though less detailed than the other surveys discussed above, the survey includes youth who are out of school, which the others do not.

The CDC has also been active in developing state surveys for the other end of the child age spectrum. Since 1994, the National Immunization Survey (NIS) has provided detailed estimates of immunization among 2-year-olds on an annual basis for each of the 50 states and selected major metropolitan areas. Another survey, the Pregnancy Risk Assessment Monitoring System (PRAMS), provides data that include detailed information on prenatal care receipt; maternal attitudes about the pregnancy, illness, and other health-related problems during pregnancy; infant health care receipt; sleeping position; and breast-feeding practices. The survey, which began in 1987, is now fielded on an annual basis in 22 states and in New York City.

In the area of child welfare, two national reporting systems developed during the last



10 years provide state level estimates for child abuse, neglect, adoption, and foster care. These are the National Child Abuse and Neglect Data System (NCANDS) and the Adoption and Foster Care Analysis System (AFCARS) (U.S. Department of Health and Human Services, 2000). These systems are intended to provide a core set of indicators that are common across states, though differences in state definitions and practices limit the comparability that can be achieved.

For detailed demographic and socioeconomic data on children and their families at the state and local level, the decennial census is the major data source. Its strength is its capacity to provide data for very small geographic areas, down to the city block level for some measures. Its major weakness, from the standpoint of users, is the fact that data are collected only once every 10 years. That limitation is about to be overcome, however. Beginning in 2003, the American Community Survey (ACS) will provide annually updated estimates of virtually all measures now collected in the decennial census. The survey will produce independent annual estimates for states and large communities and 5-year rolling average estimates down to the census tract level. The importance of this survey for those who depend on social indicators at the state and local level can hardly be overestimated.

In addition to this, the Census Bureau recently started producing estimates of child poverty for every county in the country. Estimates have been generated for 1989, 1993, 1995, and 1997. In the future, state level estimates will be produced annually, and estimates for counties and school districts every other year.

A limited set of sociodemographic estimates of child well-being are also being produced using the CPS (see above). Federal agencies have put out a very limited number of such estimates. The Annie E. Casey Foundation has used this extensively to produce state

level estimates for its annual Kids Count report. Small-state sample sizes in the CPS mean that several years of data must be combined to produce stable estimates, and even then, estimates for smaller states have a wide margin of error. Beginning in 2001, however, the sample sizes for the CPS, especially the March CPS, were substantially expanded to increase the stability of state level estimates.

## DISSEMINATION

In the last decade, there has been an explosion in the dissemination of child, youth, and family well-being indicators data. The reasons for this include more available data, better technology for dissemination (i.e., the Internet), and more interested users. Publications include issue-specific and cross-cutting reports, in hard copy and on-line. Most are written for a broad audience.

Federal agencies have developed several cross-cutting compendia that include trend data on many domains of child and youth well-being. *Trends in the Well-Being of America's Children and Youth*, updated annually and disseminated by the Office of the Assistant Secretary for Planning and Evaluation of the U.S. Department of Health and Human Services, contains national estimates for more than 100 indicators of child and youth well-being. Each indicator includes a brief, research-based discussion of why the indicator is important, followed by a description of historical trends and salient population subgroup differences (e.g., by gender, race, and poverty status), plus accompanying figures and tables. The indicators initially chosen for the volume were based on recommendations from papers presented at a major national research conference on child and youth indicators held in 1994 (Hauser, Brown, & Prosser, 1997).

*America's Children: Key National Indicators of Well-Being* is an annual report



to the President of the United States. Initially released in 1997, it is the flagship document of the Federal Interagency Forum on Child and Family Statistics. The report contains trend data for a stable set of 24 indicators of child and youth well-being across four domains of well-being (economic security, health, behavior and social environment, and education) and one or more "special features" that change each year.

Finally, *Youth Indicators*, produced by the U.S. National Center for Education Statistics approximately every 3 years, contains trend data on more than 60 indicators for youth in the areas of family, education, work, health, behaviors, and attitudes.

In addition, many area-specific and survey-specific national publications contain child and youth indicators data disseminated by federal agencies in hard copy and over the Internet. *Health, United States*, produced by the CDC, is an annual report presenting trend data on more than 140 health and health-related indicators, many of which focus on or include estimates for children and youth. The report draws on a wide variety of data sources. Another annual report, *Child Health USA*, provides trend data for more than 40 indicators of child health on an annual basis.

The U.S. Department of Education produces two major annual compendia of education statistics: the *Digest of Education Statistics* and the *Condition of Education*. Both draw on a wide variety of data sources. The National Education Goals Panel, an independent agency no longer in existence, produced the annual *National Education Goals Report*.

In addition to these compendia, most of the data sources described in the previous section have their own regular publication series. Finding these publications can be a challenge for the uninitiated. Recently, however, the Federal Interagency Forum on Child

and Family Statistics has begun to list such publications by topic area on its Web site, with links to individual agency Web sites (see Appendix, end of this chapter). For a guide to federal reports containing state and local level indicators of child and youth well-being, see Brown (2001).

Kids Count, sponsored by the Annie E. Casey Foundation since 1990, is the most widely known and far-reaching effort by a nongovernmental organization to disseminate social indicators data on children and youth. The national Kids Count group produces an annual report featuring comparable indicators for each of the 50 states and the District of Columbia and produces occasional reports on specific topics, with data for both state and major metropolitan areas. In addition, Kids Count organizations within each state produce their own annual reports featuring social indicators data at the county level. Most of the state project reports are produced and used by child advocacy organizations to further the cause of children and youth, though state agencies are the main sponsors in a few states.

State governments and state agencies have also become increasingly active in the dissemination of social indicators data on child development and well-being. A number of states have multiagency projects devoted to the dissemination and active use of indicators data to inform planning and policy development at the state and community levels. The state of Vermont, for example, has developed a series called *Community Profiles*, which provides essential trend data on the well-being of children, youth, and families in each community, drawing on a variety of administrative and survey data resources. The state of Minnesota puts out a *Children's Report Card* series, which reports on 26 indicators of child and youth well-being for each county in the state. Massachusetts has developed the Massachusetts Community Health

Information Profile (MassCHIP) system, which provides access to community level data from more than 24 data sets, including many measures on children, youth, and their families.

Many states also produce and disseminate education "report cards" on a regular basis, drawing on their own assessment and school administrative data. The reports are commonly used to support education accountability initiatives and are often widely disseminated to parents as well. Similar reports focused on youth health data are also produced on a regular basis by state health or education departments.

Finally, there has been a strong movement at the state and community level to produce comprehensive indicators databases to support social planning and increase accountability. This development has only been made possible by the declining costs of collecting, storing, manipulating, and accessing data in an electronic format that have taken place in the last decade. At the state level, there has been a movement to develop data warehouses that provide one-stop access to social indicators and program data collected across many state agencies.

At the community level, it takes the form of GIS-based databases that allow communities to generate indicators down to the neighborhood level. Using these diverse data resources, it is possible to develop complex profiles of needs and resources for neighborhoods throughout the community and identify areas of need. They would also form the data backbone for any evaluation of a comprehensive community initiative (for details, see Coulton & Hollister, 1998).

Interestingly, many of the community databases are being developed by nonprofit organizations outside the government to support community development. Projects in 12 cities are sharing information and doing peer consulting through the National

Neighborhood Indicators Project (NNIP), coordinated by the Urban Institute and funded by the Annie E. Casey and Rockefeller Foundations. Perhaps the most advanced of these efforts is the CANDO, headed by Claudia Coulton at the Center on Urban Poverty and Social Change. An interactive on-line database allows users to examine and map data for individual neighborhoods in the areas of economics, birth and death, housing, crime, and maltreatment, drawing on locally available administrative data sources.

## *Research*

### *Theories and Frameworks*

Basic research plays an important role in the social indicators field, helping to identify key constructs of well-being, the implications of that construct for long-term well-being, as well as elements of the social environment (family, peer, community) that influence development.

Most of this research has been carried out within frameworks specific to one stage of development. Early-childhood researchers commonly use a developmental/ecological framework such as that developed by Bronfenbrenner (Bronfenbrenner & Morris, 1998). Youth researchers have used a number of frameworks including deficit and risk resilience models that focus on negative behaviors and outcomes (Garnezy, 1991; Rutter, 1984) and more recently, more comprehensive developmental models that include positive outcomes and behaviors (Moore et al., in press; Moore & Gleib, 1995; Seligman & Peterson, in press). Research on middle childhood (about age 6 to 11) has been sparse, though recent work has also adopted a developmental approach emphasizing outcomes that lay the foundation for adult competence (Ripke, Huston, & Eccles, 2001).

One of the contributions of the social indicators field has been to identify the need for a broader framework, one that encompasses every developmental period from infancy through the transition to adulthood and the links among those stages. Such a notion has not yet greatly penetrated basic research but is commonly used to identify holes in the existing system of social indicators measures that need attention from the research community (Federal Interagency Forum on Child and Family Statistics, 2001) and to organize comprehensive systems of data collection (Brooks-Gunn, Brown, Duncan, & Moore, 1995). Such a framework has three basic features:

- It is based on the whole child, covering all dimensions of well-being.
- It is developmental, focusing on essential developmental tasks (and risks) at each stage of development.
- It is ecological, incorporating key elements of the social environment affecting development at each stage.

*Social Indicators Research.* In 1994, a major national conference was held to assess the state of research on indicators of child and youth well-being and the measures and data available to track it. Papers were offered by national experts in the areas of health, education, social development, economic security, and social context (Hauser et al., 1997). Each paper identified key constructs of well-being for a particular domain and period of development (e.g., health indicators for preschool children), as well as areas in which further research was needed to carry the field forward. The results of this comprehensive review formed the scientific grounding for the U.S. Department of Health and Human Services annual report, *Trends in the Well-Being of America's Children and Youth*, containing trend data on more than 100 indicators, and *America's Children: Key*

*National Indicators of Well-Being*, previously mentioned.

The conference also identified major research gaps to be filled in the coming decade. These included the following:

- The need for better measures of positive outcomes for each developmental stage (Aber & Jones, 1997; Takanishi, Mortimer, & McGourthy, 1997)
- Measures of social development and health-related behaviors in early and middle childhood to match the considerable body of measures available for adolescents
- Strong measures of neighborhood quality, almost totally lacking at the time of the conference (Furstenberg & Hughes, 1997)
- Better measures for outcomes of particular social importance, including child abuse and neglect, mental health, school readiness, learning disabilities, parenting, and homelessness

In June 2001, 7 years later, a second conference was held to assess the progress that had been made, identify what remained to be accomplished and discuss new issues that had developed (for details, see Child Trends, 2001). Research advances and measurement development in the areas of school readiness, parent/child relationships, and neighborhood social context have been substantial (Eccles, Templeton, & Brown, 2001; Morenoff & Sampson, 2001; Ripke et al., 2001; Zaslow et al., 2001). Research on indicators of positive development had also started to progress, particularly in the youth development field (Roth, Borbely, & Brooks-Gunn, 2001). Work on indicators of psychological and social development in middle childhood had also advanced, as had appreciation for middle childhood as a distinct period of development. This has been made evident in the recent work of the MacArthur Research Network on Middle Childhood, whose representatives presented some of its findings at the conference (Ripke et al., 2001).

Authors have made the point, nevertheless, that positive indicators and indicators of early and middle childhood are areas in which a great deal of conceptual and measurement work remains to be done. In addition, work to explore the robustness of existing indicators across major socioeconomic and cultural subgroups is also needed. Finally, there is a clear need for researchers and practitioners in the social indicators field to work together more closely so that research can better reflect the needs of users.

Recent research to develop a single summary index of child well-being, similar in concept to the gross national product, was a central focus of discussion (Land, Lamb, & Mustillo, in press). A number of researchers have worked in recent years to develop such summary measures (Bennett, 2001; Land et al., in press; Miringoff, Miringoff, & Opdicke, 2001). The justification for the construction of such a measure is intuitively appealing, especially for journalists and those in the policy arena. With literally hundreds of indicators of child and youth well-being available, with some trends getting better while others are getting worse, there is a need for summary measures that let us know how children and youth are doing overall. Professor Kenneth Land has presented research in which he and colleagues thoroughly explore the potential for constructing such a measure as well as the limits to such an effort given currently available data.

#### CHALLENGES FOR THE COMING DECADE IN THE CHILD AND YOUTH INDICATORS FIELD

The child and youth indicators field has made great strides in the last decade in research, data development, data dissemination, and practical application. Indeed, the interdependent nature of these efforts requires advances

in each area for the field as a whole to move forward. Below, we identify what we see as the greatest opportunities for the coming decade in each of these areas, with a particular eye to the role of researchers.

#### *Research*

*A Single Theoretical Framework to Guide Child and Youth Indicators Research.* The frameworks that have defined the basic research used in the social indicators field have tended to be particular to each developmental period, from the developmental framework of early-childhood research to the risk/resilience frameworks for adolescence and the transition to adulthood framework for older youth. Each area has been dominated by different disciplines (child psychologists for early childhood, health and education researchers for adolescence, sociologists and economists for the transition to adulthood), each of which has their own terminology and disciplinary biases.

We believe that the social indicators field has encouraged more cross-disciplinary approaches for research on each developmental stage, with the result that key constructs are increasingly shared. The notion of positive development, for example, once concentrated in early-childhood research, increasingly includes research on middle childhood and adolescence. The field would benefit if this convergence were done in a more deliberate manner, with the development of a single, developmentally and ecologically focused framework covering infancy through early adulthood. Such a framework would have maximum consistency of constructs across stages of development and well-delineated links from one developmental period to the next; would enrich research on children and youth in general; and would help to create a common language for the social indicators field.

*A Focus on Indicators of Well-Being in Early and Middle Childhood.* There is a relative wealth of indicators at infancy and youth, but for the period between those ages, the world of social indicators is sparsely populated. Over the last several years, there has been a substantial amount of research to identify key elements of early and middle child development and the contextual factors that assist or retard that development. This work needs to continue if the field is to agree on a common set of key constructs and develop effective measures that can be built into the regularly fielded surveys that support our system of social indicators. The Early Childhood Longitudinal Study is a very promising data resource for future research and measurement development in early and middle childhood. Data for the kindergarten cohort (ECLS-K) are already available, and more will become available as they are followed up through at least the 5th grade. A separate birth cohort (ELCS-B) who will be followed through entry into school will provide a rich and unique data source for development in early childhood.

*More Research on Indicators of Positive Development and the Contextual Factors That Promote It.* Indicators of positive outcomes are lacking in general, though particularly in the area of youth development. Federal programs have tended to focus on the incidence and the prevention of negative outcomes rather than building positive strengths, and this has skewed federally sponsored data collection and research. Measures of drug use, violence, unsafe and promiscuous sexual activity, and delinquency are common, but indicators of kindness, tolerance, character, volunteering, social capacity, emotional strength, and other positive attributes are both underdeveloped conceptually and rarely available in any form in existing survey data (Moore & Halle, 2001).

However, many practitioners at the community level who work with children and youth prefer to focus on positive development even among at-risk populations and are frustrated by the lack of positive indicators at their disposal (Murphey, 2001).

Research activities that are needed in this area include (a) analyzing existing national and local longitudinal databases that contain positive outcome measures to identify the antecedents and long-term consequences of positive development; (b) developing new measures and indices of positive youth development suitable for large-scale surveys and self-administered youth surveys; and (c) promoting methodological research, including qualitative studies, that will allow for the development of indicators that link positive child and adolescent outcomes to positive outcomes later in life.

*Technical Work to Improve the Quality of New and Existing Indicators Measures.* Measurement development is often not the most glamorous of research activities, but it is extremely important scientific work. Important activities for the social indicators field include the following:

- *Developing shorter indexes that can be included in large-scale surveys.* Many measures related to emotional well-being, for example, are based on a long battery of questions that are not suitable for large-scale surveys. Shorter indices based on the lengthy Child Behavior Checklist, for example, have been developed for the National Health Interview Survey and the National Longitudinal Survey of Youth 1997 Cohort (Moore et al., 2001).
- *Research to establish defensible cut points to categorize continuous measures.* Many of the measures developed to track well-being are continuous, but users often want to know at what point they should



either swing into action or be satisfied with the results. Often, the answer to this question is subjective or political, but there are occasions when research can identify important nonlinearities that can be used to identify meaningful cut points. For example, cutoff points for depression based on continuous survey measures of mental health have been validated against clinical diagnoses (Devins & Orme, 1985).

- *Cross-cultural and cross-subgroup validation of existing indicators.* Many of the indicators of child and youth well-being have not been well tested on minority and low-income populations. In some cases, although constructs are valid across groups, the operationalization needs to be modified or broadened. Differences in cultural values may sometimes produce different indicators of positive development across groups (National Research Council and Institute of Medicine, 2002; Zaff, Blount, & Phillips, 1999). This need is especially urgent because many programs and policies focus on particular minority and low-income groups in which the use of existing indicators measures may be suboptimal or inappropriate.

*Longitudinal Analyses to Identify the Indicators of Child and Youth Well-Being (and Contextual Factors) That Predict Most Strongly to a Successful Transition to Adulthood.* The world of social policy is focused strongly on the long-term implications of child and youth development for productivity and well-being in adulthood. Yet the research that connects key markers of child and youth well-being to adult outcomes is surprisingly scant. This is particularly so at younger ages, but even critical aspects of youth well-being such as mental health and most aspects of positive development are not well understood as they relate to adult well-being. This is to some extent due to the lack of longitudinal data covering the appropriate

time span and the lack of a sufficiently broad set of measures in which longitudinal data are available. Several recent surveys, the National Longitudinal Survey of Adolescent Health (Add-Health), the National Longitudinal Survey of Youth 1997 Cohort (NLSY-97), and the National Education Longitudinal Survey 1988 (NELS88), contain many of the measures needed to substantially expand our understanding of the critical factors in adolescence leading to a healthy and successful transition to adulthood.

*Focus Research on Critical Outcomes That Currently Lack Adequate Measures.* Beyond the broad categories of indicators described above, a number of discrete indicators of particular importance to policy lack adequate measures. These include mental health, disability, child abuse and neglect, homelessness, and indicators of neighborhood quality. There are ongoing efforts to develop such measures in several of these areas. One effort, led by Dr. Dennis Hogan, of Brown University, and involving academic researchers and staff from major national statistical agencies is seeking to develop better measures of child and youth disability for use in future surveys (Hogan & Wells, 2001). This sort of active cooperation between researchers and the statistical agencies that design and field national surveys on children and youth can help to focus research where it is most needed and to quickly turn the fruits of that research into indicators data.

### *Dissemination*

People can make use of indicators data only if they can find it easily and quickly understand its importance for their work and their lives. In the last several years, there has been an explosion of child and youth indicator reports, data books, fact sheets, report cards, databases, and other data-carrying



vehicles, most of it available on the Internet. There are a number of practical and research-based steps that can be taken to improve effectiveness of these dissemination efforts.

*Effectiveness Assessments of Child and Youth Indicators Dissemination Products.* For all the publications out there, what little is known about their impact, who they reach, and how they are used is based largely on anecdote. Research to identify the most effective content, presentation, and marketing strategies for reaching key audiences (e.g., journalists, youth program staff, parents, etc.) could pay enormous dividends for the social indicators field.<sup>13</sup>

*Access to Existing Reports Featuring Child and Youth Indicators Data.* At the moment, there is no organized access to what are probably hundreds of relevant reports containing youth indicators data at the state and local levels. For the most part, they sit on individual agency Web sites, often unknown even to staff from other agencies in the same state. This produces a lot of “reinventing the wheel” by groups in other states seeking to develop similar publications and limits access to end users as well. An Internet porthole that provides organized access to these products could substantially expand their audiences and promote more efficient, rapid development of similar reports across the country.

*Research to Determine Key Dimensions of Well-Being and Social Supports That Children and Youth Identify as Being Most Important to Them.* We believe that children and youth are pivotal and poorly understood audiences for social indicators data about themselves and their social environment. Identifying measures that reflect and connect with the ways they think about their own lives and developing dissemination strategies that bring insights back to this audience is a

worthwhile and underdeveloped area in the indicators field.

### *Data Development*

A number of concrete steps can be taken to improve the quality, breadth, and availability of child and youth indicators data collected in the coming decade.

*Greater Coordination of Measures Between Longitudinal Surveys (In Which Research Critical to Indicators Development Usually Takes Place) and Cross-Sectional Surveys (In Which Indicators Are Tracked Over Time).*<sup>14</sup> Longitudinal surveys cover many important dimensions of child and youth well-being, but rarely, if ever, is the construction of better social indicators measures a criterion in their design. As a result, they do not always cover issues of substantial importance to the indicators field. And when they do, the measures used in such surveys may be significantly different from those used to represent the same constructs in cross-sectional surveys. A more deliberate effort on the part of federal statistical agencies to coordinate the measures across these types of surveys could lead to what has been called a “system of continuous improvement” in our stock of child and youth indicators (Stagner & Zweig, 2001). For example, measures of early child development from the longitudinal ECLS-K could be analyzed specifically to identify key measures, which could then be added to the periodically fielded NHES survey.<sup>15</sup>

*More Measures of Positive Child and Youth Development in Major Surveys.* The development of strong measures of positive development is still in its infancy. Promising measures should be added whenever possible to major longitudinal surveys to support in-depth research that can lead to the identification

of strong positive indicators. As they are identified, systematic efforts are needed to add them to the cross-sectional surveys that are the major source of indicators data.

*Greater Availability of Data to Support State and Local Level Indicators Estimates.* This is an area in which great progress has been made with the advent of community GIS databases and increases in the amount of survey and assessment data collected at the state and local levels. The need for such data, particularly data that can be collected only in surveys, far outstrips what is currently available in most states and communities. The YRBS offers an excellent model for the development and funding of surveys supporting indicators data collection at the state and local levels. In fact, the YRBS itself could be expanded with optional topical modules on positive development and other neglected areas.

*Collection of Indicators Data on Out-Of-School Youth.* The paucity of indicators data on out-of-school youth is largely a matter of economics; it is far cheaper to collect survey data on youth in school. Most of the major youth surveys, including Monitoring the Future, the Youth Risk Behavior Survey, the National Assessment of Educational Progress, the Youth Tobacco Survey, and the Profiles of Student Life: Attitudes and Behaviors Survey, are limited to youth attending school. There are ways to improve this situation, at least at the national level, by attaching special youth modules to household-based surveys. This was done in 1992, when the questions in the YRBS were fielded to youth in the NHIS. It should be done more systematically by federal data collection agencies. These youth are, after all, more likely to be at risk in many dimensions of well-being.

### *Practical Application*

The use of social indicators to inform policy and practice is the driving force behind the growth in the child and youth indicators field. The continued development of the field will depend in no small part on the ability of the research community to provide the tools and technical assistance that practitioners need to carry out their work.

There are several notable examples of such work. Professor Clara Pratt, of Oregon State University, has been working for several years with the Oregon Office of Children and Families to overcome a significant limitation of the benchmark approach adopted throughout the state, namely, that such broad, goal-oriented indicators tend to change slowly and in response to the work of multiple influences. She and her colleagues have been working to identify *interim indicators* that are sensitive to short-term change and that can be tied to the activities of particular agencies or groups. "We are trying to help agencies figure out what their part of the elephant is" (Child Trends, 2000, p. 2; for details, see Pratt, Katzev, Henderson, & Ozretich 1997; Pratt, Katzev, Ozretich, Henderson, & McGuigan, 1998).

The Chapin Hall Center for Children, a nonprofit research organization located on the campus of the University of Chicago, has undertaken a number of practice-oriented indicators projects. For example, for the last several years, staff have been providing technical assistance to a consortium of agencies in 14 states that are working to institutionalize the use of child and youth indicators in their state planning processes. Chapin Hall researchers provide valuable expert advice on the choice, measurement, and application of social indicators and assist the states in developing a peer assistance network.

The National Neighborhood Indicators Project, located at the Urban Institute, in Washington, D.C., has been working for a number of years with community groups who are developing and employing their own indicators databases. In the process, it has developed a number of useful handbooks and guides for building community-based data systems and is using them effectively in local planning efforts.

The sort of research work just described is important to the future development of the child and youth indicators field. At present, the need far outstrips the amount of work being done, in part because the academic community does not tend to actively reward such practice-oriented research. To promote such work, we make the following recommendations:

- *Increase the involvement of top-flight social scientists in the development of practical tools for practitioners in the field.* The development of interim indicators and production of practical toolkits and guidebooks such as those described above are sorely needed, and more must be done to expand the pool of competent scientists involved in such activities. Although it can be difficult to change academic culture, it is possible to change the flow of funds to support this sort of work. If government agencies and private foundations that are interested in social indicators work increase the funding to support such research, more academics will be attracted to the field.

- *Increase new training opportunities for interested researchers.* This sort of research requires an understanding of research and measurement issues combined with a thorough grasp of the challenges of designing and executing child and youth programs and policies, a relatively rare combination. Training opportunities will be needed if we are to significantly expand the pool of researchers

working on these practice-focused activities. Supplementary funding to support such training would be usefully directed to the groups that are already the most active in this area, such as Chapin Hall, the NNIP, and Dr. Pratt's research group at the University of Oregon.

## CONCLUSIONS

Indicators of child and youth well-being have become important everyday tools of social policy and practice, supporting activities ranging from planning and needs assessment to goals tracking, accountability, reflective practice, and in some circumstances, program evaluation. They are used at every level, from international planning bodies such as the World Health Organization down to local community planning boards and individual child and youth programs.

Over the last decade, the use of social indicators has expanded dramatically and with it, supporting data resources, research, and dissemination activities. This progress needs to continue in all these areas for the child and youth indicators field as a whole to move forward. In this chapter, we have attempted to highlight the recent accomplishments of the field and to identify the key challenges for the coming decade in each area.

Future progress will require a sustained and coordinated effort among researchers, policymakers, service staff, and data developers. Social scientists have important roles to play in this process. The social indicators field provides researchers with a unique opportunity to produce research that can directly affect the well-being of children, youth, and their families. To fully realize this opportunity may require some change in academic culture and its supporting system of rewards, a culture that is more appreciative of and sensitive to the research and information needs of the

practice world. We believe it is well worth the effort and will produce substantial dividends for the practice community, for children's research, and ultimately, for children.

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## NOTES

1. See National Assessment of Educational Progress (2001) for details.
2. Information on the Community Score Card taken from *On the Plus Side: Key Indicators of Community Investment in Youth Development*, a proposal to the William T. Grant Foundation, submitted by the Center for Youth Development and Policy Research/AED, June 2000.
3. Resources described throughout the rest of the chapter are listed in the Appendix with Web site addresses, when available, for those who desire further information.
4. The following discussion is based primarily on a typology of uses for social indicators developed by Brown and Corbett (2002).
5. The NEGP was disbanded in 2001.
6. This theory of change is based on science, where it is available, as well as the beliefs and expectations of those who are participating in the initiative.
7. For a critical review of the theory-driven methodology, see Cook (2000).
8. For a detailed discussion, see Brown and Corbett (2002).
9. For a review of these and other international surveys, see Brown, Smith, and Harper (2001).
10. A separate sample is used to follow long-term trends and focuses on children and youth age 9, 13, and 17.
11. For a detailed review of federal sources of state and local level indicators of child and youth well-being, see Brown (2001).
12. This survey is being developed with federal funding from the Center for Substance Abuse Prevention within the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services.
13. For example, see O'Hare and Reynolds (2001).
14. This recommendation also appears in National Research Council and Institute of Medicine (2002).
15. Some work of this sort is already under way.

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## APPENDIX

### Summary Listing of Web Sites for Child and Youth Indicators Projects and Data Sources Mentioned in the Chapter

#### Adoption and Foster Care Analysis System (AFCARS)

<http://www.acf.dhhs.gov/programs/cb/dis/afcars/index.html>

#### American Community Survey

<http://factfinder.census.gov/home/en/acldata.html>

#### America's Children: Key National Indicators of Well-Being

<http://childstats.gov/americaschildren>

#### Child Health USA

<http://www.mchirc.net/CH-USA.htm>

#### Cleveland Area Network for Data and Organizing (CANDO)

<http://povertycenter.cwru.edu/cando.htm>

Common Core of Data

<http://nces.ed.gov/ccd>

Condition of Education

<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2001072>

Current Population Survey (CPS)

<http://www.bls.gov/cps/home.htm>

Digest of Education Statistics

<http://nces.ed.gov/pubs2001/digest/>

Early Childhood Longitudinal Surveys

<http://nces.ed.gov/ecls/>

Education Goals 2000 Initiative

<http://www.ed.gov/G2K/>

Federal Interagency Forum on Child and Family Statistics (the Forum)

<http://childstats.gov/>

Global Youth Tobacco Survey

[http://www.cdc.gov/tobacco/research\\_data/youth/gytsfactsheets.pdf](http://www.cdc.gov/tobacco/research_data/youth/gytsfactsheets.pdf)

Health Behavior of School-Aged Children (HBSC)

<http://www.ruhbc.ed.ac.uk/hbsc/>

Health, United States

<http://www.cdc.gov/nchs/products/pubs/pubd/hus/hus.htm>

Healthy People 2010

<http://www.health.gov/healthypeople/>

IEA Civics Study

<http://nces.ed.gov/surveys/cived/>

Kids Count

<http://www.aecf.org/kidscount/>

Massachusetts Community Health Information Profile (MassCHIP)

<http://masschip.state.ma.us/>

Minnesota Children's Report Card

<http://www.mnplan.state.mn.us/datanetweb/chi.html>

Monitoring the Future (MTF)

<http://www.monitoringthefuture.org/>

National Assessment of Educational Progress (NAEP)

<http://nces.ed.gov/nationsreportcard/>

National Child Abuse and Neglect Data System (NCANDS)

<http://www.acf.dhhs.gov/programs/cb/dis/index.htm>

National Crime Victimization Survey (NCVS)

<http://www.ojp.usdoj.gov/bjs/cvict.htm#ncvs>

National Education Goals Report

<http://www.negp.gov/>

National Education Longitudinal Survey 1988 (NELS88)

<http://nces.ed.gov/surveys/nels88/>

National Health and Nutrition Examination Survey (NHANES)

<http://www.cdc.gov/nchs/nhanes.htm>

National Health Interview Survey (NHIS)

<http://www.cdc.gov/nchs/nhis.htm>

National Household Education Survey (NHES)

<http://nces.ed.gov/nhes/>

National Household Survey of Drug Abuse (NHSDA)

<http://www.samhsa.gov/oas/nhsda.htm>

National Immunization Survey (NIS)

<http://www.cdc.gov/nis/>

National Longitudinal Survey of Adolescent Health (Add-Health)

<http://www.cpc.unc.edu/addhealth/>

National Longitudinal Survey of Youth 1997 Cohort (NLSY-97)

<http://www.bls.gov/nls/>

National Neighborhood Indicators Project (NNIP)

<http://www.urban.org/nnip/>

National Surveys of Families and Households

[http://www.nichd.nih.gov/about/cpr/dbs/res\\_national4.htm](http://www.nichd.nih.gov/about/cpr/dbs/res_national4.htm)

National Youth Tobacco Survey (NYTS)

[http://www.cdc.gov/tobacco/research\\_data/youth/ss50.04.intro.htm](http://www.cdc.gov/tobacco/research_data/youth/ss50.04.intro.htm)

Panel Study of Income Dynamics

<http://www.isr.umich.edu/src/psid/>

Pregnancy Risk Assessment Monitoring System (PRAMS)

[http://www.cdc.gov/nccdphp/drh/srv\\_prams.htm](http://www.cdc.gov/nccdphp/drh/srv_prams.htm)

Profiles of Student Life: Attitudes and Behaviors Survey

<http://www.search-institute.org/surveys/>

Program for International Student Assessment (PISA)

<http://nces.ed.gov/surveys/pisa/>

Progress in International Reading Study (PIRLS)

<http://www.timss.org/pirls2001.html>

Schools and Staffing Survey (SASS)

<http://nces.ed.gov/surveys/sass/index.asp>

Small Area Income and Poverty Estimates

<http://www.census.gov/hhes/www/saie.html>

Trends in Mathematics and Science Study (TIMSS)

<http://www.timss.org/>

Trends in the Well-being of America's Children and Youth

<http://aspe.hhs.gov/hsp/01trends/>

Vermont "Community Profiles"

<http://www.ahs.state.vt.us/publs.htm#compro>

Vital Statistics

<http://www.cdc.gov/nchs/nvss.htm>

Youth Indicators (1996)

<http://nces.ed.gov/pubs/yi/>

Youth Risk Behavior Survey (YRBS)

<http://www.cdc.gov/nccdphp/dash/yrbs/index.htm>



