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TAKING THE RISKS OUT OF CHILD PROTECTION RISK ANALYSIS

*Marsha Garrison**

Every year, more than three million reports of child maltreatment are investigated by state child protection workers.[1] Just as police officers investigate alleged crimes and make decisions whether or not to make an arrest, child protection workers investigate maltreatment complaints and determine whether a case should be "substantiated," whether children should be removed from their homes, and whether formal charges should be instituted. Whether the case proceeds to trial or the charges are resolved through a plea bargain, parents, just like probationers and parolees, are typically required to meet state-prescribed goals or risk losing their children, perhaps permanently.

Over the past half century, researcher after researcher has reported that this "blame and cure" system simply does not work.[2] All too often, the services provided to children and parents are inadequate either to cure existing problems or prevent future harm. These failures destroy lives and families. They impose long-term costs on the child victims of maltreatment and on the public; economists estimate these costs at about $80 billion annually.[3]

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[1] *See* U.S. DEP'T OF HEALTH & HUMAN SERVS., CHILD MALTREATMENT 2010, at viii (2011), http://archive.acf.hhs.gov/programs/cb/pubs/cm10/cm10.pdf.

[2] *See* Marsha Garrison, *Reforming Child Protection: A Public Health Perspective*, 12 VA. J. SOC. POL'Y & L. 590, 595–99 (2005) (summarizing literature).

[3] *See* RICHARD J. GELLES & STACI PERLMAN, PREVENT CHILD ABUSE AMERICA, ESTIMATED ANNUAL COST OF CHILD ABUSE AND NEGLECT 4–5 (2012), *available at* http://www.preventchildabuse.org/downloads/PCAA_

During the same period that evidence of the child protection system's failures has mounted, epidemiologists have also changed our understanding of maltreatment. Today, we know that maltreatment is strongly linked to identifiable risk factors such as poverty and stress. The U.S. Centers for Disease Control thus has defined child maltreatment as an important public health problem.[4]

This new, epidemiological understanding of child maltreatment has the potential to dramatically improve child protection methods and outcomes. This is so for several reasons. First, the field of public health offers a robust methodology developed over many decades. In contrast to child protection policymakers, public health officials rely on well-established, scientific methods that have achieved dramatic successes. Second, because of its historic emphasis on empirical investigation, a public health perspective encourages research- and evidence-based approaches, both of which have been sorely lacking in child protection work. Third, public health focuses on prevention. Instead of blaming the victims of stresses that lead to child maltreatment, public health workers seek ways to break the chain that leads to it. Not only does this approach offer the opportunity to avert the enormous harms and costs produced by maltreatment, but it appropriately focuses the attention of policymakers on the context in which maltreatment flourishes. It is no wonder that public health methods have captured the attention of child protection specialists and systems: they offer the possibility of reinventing child protection work and of vastly improving its capacity to succeed.

However, the public health approach presents hazards as well as benefits. Like any type of expertise, its insights can be misapplied. The risks of misapplication are particularly acute given the vastly different procedures and goals of child protection and public health work. Child protection workers

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Cost_Report_2012_Gelles_Perlman_final.pdf; Ruth Gilbert et al., *Burden and Consequences of Child Maltreatment in High-Income Countries*, 373 LANCET 68, 74–77 (2009).

[4] *See* W. Rodney Hammond, *Public Health and Child Maltreatment Prevention: The Role of the Centers for Disease Control and Prevention*, 8 CHILD MALTREATMENT 81 (2003).

behave like police officers because the structure of child protection law logically leads to—indeed, almost requires—such an approach. Child protection law demands that local agencies investigate cases of suspected child maltreatment, take children away from parents when those children are found to be at risk of immediate harm, and initiate legal proceedings against parents who have seriously harmed their children or who pose a serious risk of such harm. Public health workers also investigate risks. But they do so with a focus on populations and conditions instead of individuals; their aim is not to categorize or prosecute, but instead to identify the circumstances associated with adverse health consequences so that those circumstances can be altered. Both groups are interested in and investigate risk, but with vastly different goals in mind.

I offer the example of risk investigation not just because it is an important aspect of both public health and child welfare work but because all the available evidence shows that child protection policymakers have been zealously introducing—and misapplying—public health risk analysis in child protection decision making. This misapplication of public health methods presents the prospect of *worse* outcomes for children, their parents, and the public. Part I of this article describes the field of epidemiology and its methods as well as current epidemiological evidence on child maltreatment. Part II describes the introduction of epidemiological risk analysis into child protection decision making. Part III explains the problems posed by current forms of epidemiological risk analysis and the need for reform.

I. RISK: EPIDEMIOLOGY AND PREDICTION

A. The Methods of Epidemiology and Their Development

The field of public health emerged during the nineteenth century as scientists began to uncover environmental vectors—contaminated drinking water, germs, and insects—that promoted disease. Experts in this new field aimed to promote health by altering these disease-inducing conditions. They concentrated on

populations instead of individuals, and they offered prevention programs instead of treatment.[5]

Public health research, typically conducted by epidemiologists, begins with an examination of the conditions in which adverse health consequences flourish. The first task of the epidemiologist is to examine a disease or health condition in context by gathering data on the time and place of its occurrence as well as the characteristics and habits of the individuals affected. The second is to formulate hypotheses about disease incidence and onset based on associations with studied variables. The third is to test those hypotheses, typically by comparing populations in which variables thought to promote the health condition in question have been eliminated or reduced.[6]

Epidemiologists do not need to understand how a particular variable promotes disease in order to design an effective prevention strategy. Consider the example of smoking and lung cancer. In the early 1950s, epidemiologists determined that smokers who consumed twenty cigarettes per day had a twenty-six-fold increased risk of lung cancer over individuals who did not smoke.[7] It was not necessary to determine why some smokers succumb to the disease and others do not to mount an effective prevention effort; a campaign that targets all smokers will be just as effective as one which targets only those smokers at particularly high risk. Epidemiologists are thus satisfied with identifying group risk and rarely seek to identify the likelihood that a given individual will develop a particular health condition.

Individual risk prediction is much more difficult than population-based prediction. Even today, although epidemiologists

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[5] *See generally* COMM. FOR THE STUDY OF THE FUTURE OF PUB. HEALTH, INST. OF MED., THE FUTURE OF PUBLIC HEALTH 63–65 (1988) (recounting the history of bacteriology and disease control in the late nineteenth century); F. DOUGLAS SCUTCHFIELD & C. WILLIAM KECK, PRINCIPLES OF PUBLIC HEALTH PRACTICE 12–31 (3d ed. 2009) (describing the historical origins of public health practice in the United States).

[6] *See* Markku Nurminen et al., *Methodologic Issues in Epidemiologic Risk Assessment*, 10 EPIDEMIOLOGY 585, 585–93 (1999); SCUTCHFIELD & KECK, *supra* note 5, at 268–73.

[7] *See* Richard Doll & A. Bradford Hill, *Smoking and Carcinoma of the Lung: Preliminary Report*, [1950] 2 BRIT. MED. J. 739, 746.

have determined that more smoking over a longer period produces higher cancer risk, they remain unable to tell us which two-pack-a-day smokers will ultimately develop the disease.[8] This is unsurprising. The mechanisms by which cancer develops are still poorly understood, as are the immunological and other factors that make one individual more prone to illness than another.

B. The Epidemiology of Child Maltreatment

Our current epidemiological understanding of child-maltreatment risk is much like our understanding of lung-cancer risk. However, epidemiologists have charted, over the last several decades, a number of interlocking conditions associated with maltreatment instead of one. The most important of these conditions appears to be poverty. All forms of child maltreatment are strongly associated with poverty,[9] and neglect—the most common form of maltreatment[10]—is linked with poverty to a startling extent. A U.S. national incidence study of maltreatment found that children from families with annual incomes below $15,000 were *sixty times* more likely to

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[8] *See, e.g.*, Suminori Akiba, *Analysis of Cancer Risk Related to Longitudinal Information on Smoking Habits*, 102 ENVTL. HEALTH PERSP. (SUPP. 8) 15, 15–19 (1994).

[9] *See* Maria Cancian et al., *The Effect of Family Income on Risk of Child Maltreatment* 2–4 (Inst. for Research on Poverty, Discussion Paper No. 1385-10, 2010) (reviewing literature); Amie M. Schuck, *Explaining Black-White Disparity in Maltreatment: Poverty, Female-Headed Families, and Urbanization*, 67 J. MARRIAGE & FAM. 543, 544 (2005) (reviewing literature).

[10] *See* DIANE DEPANFILIS, U.S. DEP'T OF HEALTH & HUM. SERVS., CHILD NEGLECT: A GUIDE FOR PREVENTION, ASSESSMENT, AND INTERVENTION 16–17 (2006), *available at* http://www.childwelfare.gov/pubs/usermanuals/neglect/neglect.pdf (finding, based on 2004 national survey, that 64.5% of maltreatment victims were neglected); KIRSTEN JOHNSON & ANDREA BOGIE, N.C. DEP'T OF HEALTH & HUMAN SERVS. DIV. OF SOC. SERVS., RISK ASSESSMENT VALIDATION: A PROSPECTIVE STUDY 9 (2009), *available at* http://www.nccdglobal.org/sites/default/files/publication_pdf/nc_risk_asst_validation_final2009_2.pdf (finding that eighty-five percent of referrals to North Carolina child protection agencies were due to alleged neglect).

die from maltreatment and *twenty-two times* more likely to be seriously harmed by it than were children from families with annual incomes above $30,000.[11] Extreme poverty also tends to be associated with more extreme abuse and neglect.[12] As a result of these patterns, children removed from parental care by child protection agencies are overwhelmingly from our poorest families.[13] In 1998, fifty-three percent of U.S. foster children were eligible for federal funding—funding derived from eligibility rules for the defunct Aid to Families with Dependent Children ("AFDC") program without adjustments for inflation.[14]

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[11] *See* ANDREA J. SEDLAK & DIANE D. BROADHURST, U.S. DEP'T OF HEALTH & HUMAN SERVS., THIRD NATIONAL INCIDENCE STUDY OF CHILD ABUSE AND NEGLECT (NIS-3) 5-50–51, 8-10–11 (1996) [hereinafter NIS-3] (reporting that children in these low-income families were eighteen times more likely to be sexually abused, almost fifty-six times more likely to be educationally neglected, and over twenty-two times more likely to be seriously injured). The most recent national study of child abuse and neglect, conducted in 2005–06, reported that rates of abuse and neglect were, respectively, three and seven times higher among low-income families than in the general population. This recent study does not provide incidence data on serious injuries and death in relationship to family income. ANDREA J. SEDLAK ET AL., U.S. DEP'T OF HEALTH & HUMAN SERVS., FOURTH NATIONAL INCIDENCE STUDY OF CHILD ABUSE AND NEGLECT (NIS-4) 12 (2010).

[12] *See* PANEL ON HIGH-RISK YOUTH, COMM'N ON BEHAVIORAL & SOC. SCIS. & EDUC., LOSING GENERATIONS: ADOLESCENTS IN HIGH-RISK SETTINGS 19 (1993) (summarizing studies).

[13] PANEL ON RESEARCH ON CHILD ABUSE & NEGLECT, NAT'L RESEARCH COUNCIL, UNDERSTANDING CHILD ABUSE AND NEGLECT 9 (1993); *see also* KATHY BARBELL & MADELYN FREUNDLICH, FOSTER CARE TODAY 9 (2001) ("In 1999, more than one-half of the children in foster care qualified for federally assisted foster care, which is tied to eligibility for welfare benefits."); DERMOT J. HURLEY ET AL., INTERGENERATIONAL CONTINUITY AND LIFE COURSE TRAJECTORY IN A CHILD PROTECTION SAMPLE: IMPLICATIONS FOR SOCIAL WORK PRACTICE 15 tbl.4 (2003), *available at* http://www.edu.uwo.ca/CAS/pdf/Intergenerational%20Continuity%20september182003.pdf (reporting significant association between receipt of social assistance and unemployment on child maltreatment).

[14] By 2005, in part due to lack of inflation adjustment, the percentage had dropped to forty-six percent. *Child Welfare Financing*, N. AM. COUNCIL ON ADOPTABLE CHILDREN, http://www.nacac.org/policy/financing.html (last visited Oct. 26, 2012).

The association between maltreatment and poverty also seems to be universal,[15] a reminder that the earliest forms of child protection were nothing more than public assistance schemes.[16]

Unsurprisingly, parental substance abuse,[17] mental health problems,[18] and intimate-partner violence[19] are also significantly

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[15] *See* ETIENNE J. KRUG ET AL., WORLD HEALTH ORGANIZATION, WORLD REPORT ON VIOLENCE AND HEALTH 68 (2002), *available at* http://whqlibdoc.who.int/publications/2002/9241545615_chap3_eng.pdf (summarizing research).

[16] *See* Marsha Garrison, *Why Terminate Parental Rights?*, 35 STAN. L. REV. 423, 431–42 (1983); Jacobus tenBroek, *California's Dual System of Family Law: Its Origin, Development, and Present Status*, 16 STAN. L. REV. 257 *passim* (1964).

[17] The statistics vary, but studies have generally shown that between one-third and two-thirds of child maltreatment cases involve substance abuse. *See* JILL GOLDMAN ET AL., U.S. DEP'T OF HEALTH & HUMAN SERVS., A COORDINATED RESPONSE TO CHILD ABUSE AND NEGLECT: THE FOUNDATION FOR PRACTICE 28 (2003), *available at* http://www.childwelfare.gov/pubs/usermanuals/foundation/foundation.pdf; U.S. DEP'T OF HEALTH & HUMAN SERVS., BLENDING PERSPECTIVES AND BUILDING COMMON GROUND: A REPORT TO CONGRESS ON SUBSTANCE ABUSE AND CHILD PROTECTION 41 (1999), *available at* http://www.ncsacw.samhsa.gov/files/Blending Perspectives.pdf; *see also* NICO TROCME ET AL., CANADIAN INCIDENCE STUDY OF CHILD ABUSE AND NEGLECT, at xxvii fig.S-14 (2001), *available at* http://www.phac-aspc.gc.ca/publicat/cisfr-ecirf/pdf/cis_e.pdf (showing that of surveyed Canadian maltreatment cases, thirty-four percent involved alcohol or drug abuse).

[18] From twenty percent to seventy percent of maltreating parents have mental health problems. Kathleen Coulborn Faller & Chryell D. Bellamy, *Mental Health Problems and Child Maltreatment*, UNIV. OF MICH. SCH. OF SOC. WORK 1, http://ssw.umich.edu/public/currentprojects/icwtp/mentalhealth/d-mhpar.pdf (last visited Sept. 25, 2012); *see also* TROCME ET AL., *supra* note 17, at xxviii fig.S-14 (showing that, of surveyed Canadian maltreatment cases, twenty-four percent involved a parent with a mental health problem).

[19] *See* DEPANFILIS, *supra* note 10, at 34–35 (summarizing studies that showed, in thirty to sixty percent of homes where either child maltreatment or domestic violence was identified, the other form of violence was also identified); Jeffrey L. Edleson, *The Overlap Between Child Maltreatment and Woman Battering*, 5 VIOLENCE AGAINST WOMEN 134, 134–35 (1999); *see also* TROCME ET AL., *supra* note 17, at xxvii fig.S-14 (showing that, of surveyed Canadian maltreatment cases, twenty-three percent involved a parent who was a victim of domestic violence).

correlated with child maltreatment. So are single parenting,[20] adolescent parenting,[21] lack of social support,[22] and various child characteristics.[23]

The risk factors associated with child maltreatment are highly correlated with each other.[24] For example, researchers have reported that more than a third of women with problem drug use report having experienced a major depressive episode

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[20] *See* NIS-3, *supra* note 11, at xviii (reporting that "children [living with] single parents . . . had an 87[%] greater risk of being harmed by physical neglect, and an 80[%] greater risk of suffering serious injury or harm from abuse [and] neglect than children living with [two] parents."). *See also* DEPANFILIS, *supra* note 10, at 34; GOLDMAN ET AL., *supra* note 17 at 29–30. Canadian studies show a similar pattern. *See* TROCME ET AL., *supra* note 17, at xxv fig.S-12 (finding that forty-six percent of Canadian child maltreatment investigations involved single-parent families, eighteen percent involved blended families, and twenty-nine percent involved families containing both biological parents).

[21] *See, e.g.*, Bong Joo Lee & Robert M. Goerge, *Poverty, Early Childbearing, and Child Maltreatment: A Multinomial Analysis*, 21 CHILD. & YOUTH SERVS. REV. 755, 768, 772 (1999).

[22] *See* DEPANFILIS, *supra* note 10, at 34; Diane DePanfilis & Susan J. Zuravin, *Predicting Child Maltreatment Recurrences During Treatment*, 23 CHILD ABUSE & NEGLECT 729, 739 (1999) (finding that "social support deficits had the strongest relationship to the time until [maltreatment] recurrence."); *see also* TROCME ET AL., *supra* note 17, at xxvii fig.S-14 (reporting that, of surveyed Canadian maltreatment cases, twenty-nine percent involved a parent with few social supports).

[23] Younger children, children with irritable temperaments, and children with special needs are all more likely to experience maltreatment. *See* DEPANFILIS, *supra* note 10, at 39–41 (summarizing literature).

[24] In one often-cited survey, 33% of the children's main caretakers suffered from "severe" mental or emotional problems, 60% of families included an adult member who used alcohol excessively, 20% had at least one member who had been a heroin user, 53% of main caretakers had a severe physical illness or condition, and 76% of families had at least one child with a serious health problem. *See* Bernard Horowitz & Isabel Wolock, *Material Deprivation, Child Maltreatment and Agency Interventions Among Poor Families, in* THE SOCIAL CONTEXT OF CHILD ABUSE AND NEGLECT 137, 146 (Leonard Pelton ed., 1981); *see also* TROCME ET AL., *supra* note 17, at xxvii fig.S-14 (finding that, among Canadian child maltreatment investigations, 34% of caregivers had an alcohol or drug abuse problem, 31% had a history of childhood abuse, 29% lacked social supports, 24% had a mental health problem, and 23% involved spousal violence).

during the past year,[25] and eighty-eight percent of women in one drug treatment program reported having experienced severe partner violence at some point, while twenty-six percent reported that such violence had occurred in the past six months.[26]

Child maltreatment risks also tend to be geographically concentrated.[27] Thus, a judge in British Columbia charted, between western and eastern Vancouver, a six-fold difference in income to basic needs, a five-fold difference in the proportion of children under twelve living with a single parent, a ten-fold difference in adult education levels and access to child care, and a nine-fold difference in crime.[28] These differences translated into a western Vancouver maltreatment rate fully *eighty-three times* higher than that of eastern Vancouver.

High rates of child maltreatment are also associated with other risks to child well-being. For example, between West and East Vancouver, there was a fifty-fold difference in children's language and cognitive development, a seventeen-fold difference

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[25] SUBSTANCE ABUSE & MENTAL HEALTH SERVS. ADMIN., U.S. DEP'T OF HEALTH & HUMAN SERVS., SUBSTANCE ABUSE AMONG WOMEN IN THE UNITED STATES (1997) (stating that forty-five percent reported having at some point experienced at least one of several mental health problems, including panic attacks and anxiety disorders); *see also* Wendy Chavkin et al., *Reframing the Debate: Toward Effective Treatment for Inner City Drug-Abusing Mothers*, 70 BULL. N.Y. ACAD. MED. 50, 61 (1993) (finding that most crack cocaine–using women reported psychiatric symptoms, nearly a third had histories of psychiatric medication or hospitalization, and half reported having been sexually abused as children).

[26] U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 17, at 59.

[27] *See, e.g.,* Claudia J. Coulton et al., *Neighborhoods and Child Maltreatment: A Multilevel Study*, 23 CHILD ABUSE & NEGLECT 1019 (1999); James L. Spearly & Michael Lauderdale, *Community Characteristics and Ethnicity in the Prediction of Child Maltreatment Rates*, 7 CHILD ABUSE & NEGLECT 91, 97–98 (1983) (finding that the greater the proportions of single mothers and working mothers in a community, the greater its rate of maltreatment; and the greater the proportion of families with annual incomes over $15,000, the lower the county maltreatment rate).

[28] Ruth Annis, Exec. Dir., Pac. Cmty. Res., "Think Locally, Act Globally" Revisited: Finding Better Ways to Protect Children and Youth in B.C. 25 (Nov. 21, 2002) (transcript available at http://dev.cwrp.ca/sites/default/files/publications/en/RuthAnnisSpeechToBCPCJA.pdf).

in social development, an eight-fold difference in emotional maturity, and a sixty-fold difference in nursing bottle tooth decay.[29]

In sum, the environmental conditions that promote child maltreatment are strongly linked with each other and with an extraordinarily broad spectrum of other serious risks to childhood development and adult well-being. The stresses of poverty appear to be particularly important in promoting both maltreatment and the risks associated with maltreatment; indeed, childhood poverty, without maltreatment, is highly correlated with the same kind (but lower levels) of childhood and adult harms that are associated with maltreatment itself.[30]

However, as in the case of lung cancer, the mechanisms by which poverty and other risk factors play a role in child maltreatment remain obscure.[31] Child maltreatment occurs in

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[29] *Id.*

[30] Both child maltreatment and child poverty are associated with worse physical health, mental health, cognitive development, educational attainment, and a variety of measurements of adult well-being. *See* DEPANFILIS, *supra* note 10, at 21–27 (summarizing the impact of child neglect in multiple areas, such as health, physical development, psychological development, and social behavior); HARRY J. HOLZER ET AL., THE ECONOMIC COSTS OF POVERTY IN THE UNITED STATES: SUBSEQUENT EFFECTS OF CHILDREN GROWING UP POOR 14–15 (2007), *available at* http://www.americanprogress.org/issues/2007/01/pdf/poverty_report.pdf (summarizing the impact of child poverty on poor health and the associated costs); ROBERT LEE WAGMILLER & ROBERT M. ADELMAN, CHILDHOOD AND INTERGENERATIONAL POVERTY: THE LONG-TERM CONSEQUENCES OF GROWING UP POOR 4–5 (2009), *available at* http://www.nccp.org/publications/pdf/text_909.pdf (concluding that adults who experienced poverty in childhood are more likely to be poor in adulthood as compared to those who were not poor in childhood); Garrison, *supra* note 2, at 601–06 (noting the "profound and long-lasting" consequences associated with child maltreatment).

[31] *See, e.g.*, Mary Keegan Eamon & Rachel M. Zuehl, *Maternal Depression and Physical Punishment as Mediators of the Effect of Poverty on Socioemotional Problems of Children in Single-Mother Families*, 71 AM. J. ORTHOPSYCHIATRY 218, 218–26 (2001) ("Data from a national sample of 878 four- to nine-year-old children in single-mother families were used to test a structural model of the effect of poverty on children's socioemotional problems. Results show that the effect of poverty is mediated by maternal depression and mothers' use of physical punishment. Maternal depression influenced children's socioemotional problems directly, and indirectly through

families that are not poor and, among poor families, maltreatment is an extremely rare behavior. It is not even obvious in which direction causation runs; some experts believe that most of the childhood risks associated with family poverty result from parental characteristics that produce poverty, rather than poverty itself.[32] For example, even with respect to cognitive development and school success, where the evidence linking poverty and socioeconomic disadvantage is probably strongest, the evidence suggests that parental income is a weaker outcome predictor than parental occupation; moreover, the only age at which parental income is a significant predictor of school completion is early childhood.[33]

Epidemiological data thus amply demonstrate the need for further research on the association between poverty and maltreatment. They also show that maltreatment prevention will be much more complex and difficult than lung cancer prevention: there is no single disease vector that can be targeted; the environmental risks and parental behaviors that contribute to maltreatment are complex and difficult to alter.

But the research data do not tell us which of the parents subject to various child maltreatment risks will actually maltreat their children. Nor, among the maltreating group, does the evidence currently available tell us anything about which parents will improve without coercion or which children require removal from parental care in order to ensure that they are not seriously harmed.

In sum, while the epidemiological evidence produced thus far is helpful to policymakers developing research programs and

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physical punishment.").

[32] *See, e.g.*, SUSAN E. MAYER, WHAT MONEY CAN'T BUY: FAMILY INCOME AND CHILDREN'S LIFE CHANCES 79 (1997) (supporting the idea that parental characteristics are a major factor). However, a recent study found that, in a low-income population eligible for public assistance, a relatively small increase in income due to child support payments was associated with a significantly reduced incidence of substantiated child maltreatment. *See* Cancian et al., *supra* note 9, at 10.

[33] *See* Greg J. Duncan & Jeanne Brooks-Gunn, *Income Effects Across the Life Span: Integration and Interpretation, in* CONSEQUENCES OF GROWING UP POOR 596, 596–97 (1997) (supporting the idea that parental occupation is more influential than income).

prevention experiments, it is not helpful to a child protection case worker assigned the task of determining whether a parent who is the subject of a maltreatment investigation has actually maltreated his or her child. Nor does it offer the worker any assistance in determining whether maltreating parents can make effective use of voluntary service referrals or whether their child can safely be left at home; these inquiries, even though they deal with risk, must focus on a *particular* family, not the general population.

Again, consider the case of lung cancer. A 2006 study determined that the risk of developing lung cancer was, among men, 0.2% for those who never smoked, 5.5% for former smokers, 15.9% for smokers, and 24.4% for "heavy smokers" who use more than five cigarettes per day.[34] The study tells us that the lung cancer risk of the heavy smoker is about 100 times higher than that of the nonsmoker—a vastly increased risk. But it also tells us that only one of four heavy smokers will get lung cancer, and it gives us no basis for choosing which of the four it will be. This prediction difficulty is magnified in the case of a disorder like child maltreatment where incidence rates are much lower. Even among poor children whose families present multiple additional risks, the vast majority are not maltreated.[35] The worker investigating a family beset with multiple risks thus cannot assume that the children have been, or will be, maltreated any more than a doctor, examining a patient who has

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[34] Paul Brennan et al., *High Cumulative Risk of Lung Cancer Death among Smokers and Nonsmokers in Central and Eastern Europe,* 164 AM. J. EPIDEMIOLOGY 1233, 1237 (2006); *see also* Paul J. Villeneuve & Yang Mao, *Lifetime Probability of Developing Lung Cancer, by Smoking Status, Canada*, 85 CAN. J. PUB. HEALTH 385 (1994) (supporting the premise that smoking status is directly related to risk of developing lung cancer).

[35] *See* Rutledge Q. Hutson, *The Intersection of Abuse and Neglect and Poverty,* SPOTLIGHT ON POVERTY AND OPPORTUNITY (May 26, 2010), http://www.spotlightonpoverty.org/ExclusiveCommentary.aspx?id=df7e1f56-d065-4783-9a93-8c0110d30349 ("In 2008, there were nearly 14 million poor children and about three quarters of a million children were found to be abused or neglected after an investigation by authorities. The true incidence of maltreatment is as high as three million children annually—but even that number shows that most poor parents are not abusing or neglecting their children.").

smoked heavily for many years, can assume that his patient has lung cancer or will contract the disease. If the patient complains of symptoms that might be due to lung cancer, the doctor must investigate and determine the facts, just as he would with any other patient.[36]

II. CHILD PROTECTION RISK ASSESSMENT

A. The Advantages of Structured Decision Making

The differences between epidemiological risk assessment and individual investigation are so large that it is not, at first blush, obvious why I would feel obliged to point out that epidemiology is not a useful tool in traditional, case-based child protection work. But while it may not make any sense, child protection agencies have in fact embraced population-based risk assessment in recent years. Today, a majority of U.S. child protection agencies employ one or more risk-assessment tools,[37] and the same trend is evident internationally.[38]

The popularity of standardized risk-assessment tools derives, in large part, from perceived deficiencies in traditional child protection decision making. As the organization responsible for one of the most widely used sets of assessment tools put it:

> Child protection workers are asked to make extremely difficult decisions, yet in many agencies, workers have

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[36] The lure of population-based risk assessment is not unique to child protection. *See, e.g.*, BERNARD E. HARCOURT, AGAINST PREDICTION: PROFILING, POLICING, AND PUNISHING IN AN ACTUARIAL AGE 7–38 (2007) (describing use of risk assessment in policing and corrections); Stephen D. Hart, et al., *Precision of Actuarial Risk Assessment Instruments: Evaluating the "Margins of Error" of Group v. Individual Predictions of Violence,* 190 BRIT. J. PSYCHIATRY S60 (2007) (describing use of risk assessment for classification of sex offenders).

[37] *See* JUDITH S. RYCUS & RONALD C. HUGHES, N. AM. RES. CTR. FOR CHILD WELFARE, ISSUES IN RISK ASSESSMENT IN CHILD PROTECTIVE SERVICES 6 (2003), *available at* http://www.ihs-trainet.com/assets/RApdf.pdf.

[38] *See, e.g.*, Rhys Price-Robertson & Leah Bromfield, *Risk Assessment in Child Protection*, NAT'L CHILD PROTECTION CLEARINGHOUSE RESOURCE SHEET (Austl. Inst. of Family Studies, Melbourne, Austl.), Mar. 2011, at 1, *available at* http://www.aifs.gov.au/nch/pubs/sheets/rs24/rs24.pdf.

> widely different levels of training and experience. Consequently, decisions regarding case openings, child removal and reunification, and other service-related issues have long been criticized as inappropriate, inconsistent, or both. In fact, research has clearly demonstrated that decisions regarding the safety of children vary significantly from worker to worker, even among those considered to be child welfare experts.[39]

The claim that unstructured child protection decision making is often inappropriate and inconsistent is undeniably well founded. Report after report has reached identical conclusions.[40] The unstructured decisions of child protection workers are not only inconsistent, but they often reflect a range of cognitive biases, including framing effects (i.e., being affected by the person or manner in which information is presented), skepticism about new information that conflicts with an initial impression, and overconfidence in information that supports an initial impression.[41] These problems are magnified by lack of training and high job turnover.[42]

Child protection workers are not, of course, alone in demonstrating poor decision-making skills. Over the past several

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[39] CHILDREN'S RESEARCH CTR., NAT'L COUNCIL ON CRIME & DELINQUENCY, THE IMPROVEMENT OF CHILD PROTECTIVE SERVICES WITH STRUCTURED DECISION MAKING: THE CRC MODEL 1 (1999) [hereinafter CRC] (citing PETER H. ROSSI ET AL., UNDERSTANDING CHILD MALTREATMENT DECISIONS AND THOSE WHO MAKE THEM 4 (1996)).

[40] BAY AREA SOC. SERVS. CONSORTIUM, RISK AND SAFETY ASSESSMENT IN CHILD WELFARE: INSTRUMENT COMPARISONS 1–2 (2005), *available at* http://cssr.berkeley.edu/bassc/public/risk_summ.pdf (summarizing literature).

[41] *See* ANGELA WHITE & PETER WALSH, RISK ASSESSMENT IN CHILD WELFARE 4–5 (2006) (summarizing literature relevant to child welfare decision making).

[42] *See* U.S. GEN. ACCOUNTING OFFICE, GAO-03-357, HHS COULD PLAY A GREATER ROLE IN HELPING CHILD WELFARE AGENCIES RECRUIT AND RETAIN STAFF 5–19 (2003), *available at* http://www.gao.gov/new.items/d03357.pdf (reporting that thirty to forty percent of child welfare positions are estimated to turn over annually, finding that average job tenure of a U.S. child welfare worker is less than two years, and describing pervasive problems with low pay, violence, high caseloads, and administrative burdens that make child welfare work unattractive).

decades, behavioral psychologists have shown that the vast majority of "experts"—from stock brokers to job recruiters—make similarly poor and inconsistent judgments.[43] Experts are particularly bad at prediction; the evidence suggests that only when they have frequent and immediate access to information about the outcomes generated by their decisions do their professional judgments improve on random selection.[44]

As our understanding of the flaws in expert judgment has improved, the use of structured decision-making tools, or algorithms, has increased. These decision-making aids reduce the likelihood that cognitive biases will determine choice by requiring the decision maker to follow a standardized procedure in which variables are assessed in a predetermined, mandatory sequence. Because algorithms require a consistent process, they improve the consistency of decision making.[45] Algorithms also have the capacity to improve the quality of predictive judgments, and they are particularly valuable in taming the biases that can flow from interview situations, where first impressions often overpower other important data.[46]

Indeed, even back-of-the-envelope algorithms that lack any scientific basis can often improve upon intuitive judgments. Consider the Apgar test, a simple algorithm widely used to assess the health of newborn infants. The Apgar test is named for its developer, pediatrician Virginia Apgar. Dr. Apgar first developed the test when a medical resident asked her, over breakfast, how to make a systematic assessment of a newborn. "That's easy," Apgar replied. She jotted down five variables (heart rate, respiration, reflex, muscle tone, and color) and three scores (0, 1, 2). It then dawned on Apgar that she might have made an important breakthrough in medical decision making, and one that could quickly and easily be implemented in any delivery room.[47] Apgar thus began testing her algorithm to

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[43] *See* DANIEL KAHNEMAN, THINKING, FAST AND SLOW 209–44 (2011) (summarizing literature).

[44] *See id*. at 239–41.

[45] *See id*. at 224–27, 240–41.

[46] *See id*. at 231–32.

[47] *Id*. at 226–27; *see also* Mieczyslaw Finster & Margaret Wood, *The Apgar Score Has Survived the Test of Time*, 102 ANESTHESIOLOGY 855, 855 (2005).

determine its validity; not only did her research validate the algorithm, but it also provided evidence that the use of general anesthesia during delivery was associated with worse scores.[48] As a result of this finding and the improved decision making that it induced, infant mortality declined significantly.[49]

Child protection workers could certainly use Apgar tests. It is understandable, indeed laudable, that policymakers have recognized the low quality of intuitive child protection decision making and attempted to improve upon intuitive judgments.

B. The Move Toward Structured Decision Making in Child Protection

In developing algorithms to guide workers' decisions, child protection policymakers have relied on a range of models and sources. Some decision-making aids, like Dr. Apgar's back-of-the-envelope list, rely largely on professional judgment. Consider the decision-making tool reprinted below,[50] devised to prioritize workers' responses to child protection complaints.

This decision-making aid, no longer in use today, was based on a consensus process in which experienced professionals gathered to distill from their collective experience and the relevant literature a prototype decision tool. And who could doubt that the variables selected are relevant and appropriate? Undoubtedly, follow-up research like that performed by Dr. Apgar would produce improvements in the way variables are scored; current versions of this prioritization model do indeed vary from this early prototype based on ongoing research.[51]

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[48] Finster & Wood, *supra* note 47, at 855.

[49] *Id.*

[50] CRC, *supra* note 39, at 8 fig.4.

[51] The Minnesota Priority Response Tool was developed with the Children's Research Center, which has developed a wide range of decision-making tools as part of its Structured Decision Making System (SDM). SDM tools are actuarial, i.e., based on research using actual child protection cases. *See infra* text accompanying notes 55–57. Typically, they are periodically reviewed and updated, if necessary, to reflect new research findings. For a recent priority response tool still in use, see CAL. DEP'T OF SOC. SERVS., THE STRUCTURED DECISION MAKING SYSTEM POLICY AND PROCEDURES

Figure 1.

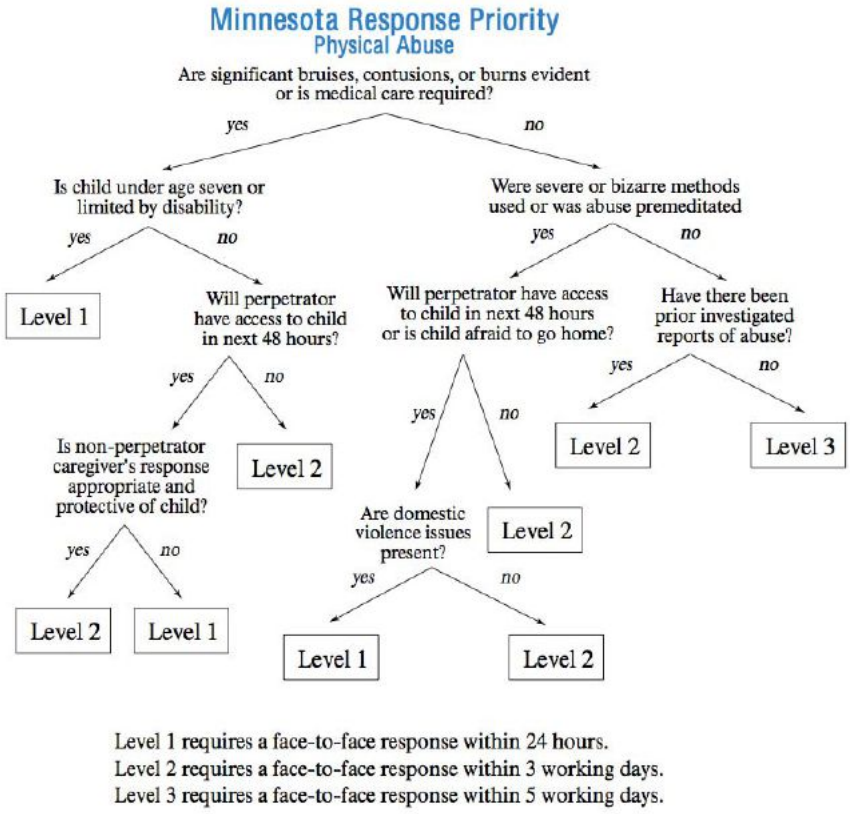

Image courtesy of National Council on Crime & Delinquency.

However, there is no obvious reason why policymakers should not introduce this particular decision-making aid immediately after its development. The purpose of prioritized response is to make sure that cases presenting the highest immediate risks are investigated first; factors like injury severity, access of the alleged perpetrator, and age of the child are certainly relevant to risk severity and immediacy.

For decisions involving whether a family should be offered, or coerced into accepting, protective services and whether a

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MANUAL 7–10 (2010) (showing priority response decision trees and override criteria for abuse and neglect cases). *See also* Kristen Johnson et al., *Structuring the Decision to Accept a Child Protection Report*, 6 J. PUB. CHILD WELFARE 191 (2012) (describing the development and testing (qualitative pre- and post-review of screening decisions, and a worker survey) of the Maryland SDM Intake Assessment).

child should be removed from and returned home, child protection policymakers have tried to do better than back-of-the-envelope lists. These decisions are all far more difficult than investigation prioritization. And, while researchers have found that workers' intuitive decisions on these issues are poor,[52] the content of a useful decision-making tool is much less obvious here than it is for investigation prioritization.

In developing algorithms to assist workers in making these substantive decisions, child protection agencies have utilized two different approaches. One relies on consensus among experts. Current decision-making tools reliant on this approach tend to be fairly lengthy and to require inquiry into a broad range of topics. They typically demand subjective judgments on some questions and grant the user a fair amount of scoring flexibility.[53] For example, the Washington Risk Assessment Matrix ("WRAM"), a well-known example of such a tool, requires inquiry into thirty-seven different issues, some of which (e.g., caregiver-child relationship) are difficult to measure objectively.[54] The second type of decision-making algorithm, generally described as actuarial, is derived from empirical research about the characteristics of families that are referred to child protection services.[55] Probably the best known is the set of Structured Decision Making ("SDM") tools developed by the Children's Research Center ("CRC"); by 2007, SDM decision-making tools had been, or were being, implemented in sixteen states and at least one foreign jurisdiction.[56] Actuarial tools

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[52] *See* WHITE & WALSH, *supra* note 41, at 4 (studying the tendency to favor intuitive, as opposed to analytical, reasoning in child protective cases).

[53] *See* Price-Robinson & Bromfield, *supra* note 38, at 2–3; *see also* WHITE & WALSH, *supra* note 41, at 6–7.

[54] *See* WHITE & WALSH, *supra* note 41, at 6.

[55] *See id.*; *see also* Aron Shlonsky & Dennis Wagner, *The Next Step: Integrating Actuarial Risk Assessment and Clinical Judgment into an Evidence-Based Practice Framework in CPS Case Management*, 27 CHILD & YOUTH SERVICES REV. 409, 410 (2005).

[56] *See* Cal. Dep't of Social Services, *Structured Decision Making* (2007), http://www.childsworld.ca.gov/pg1332.htm; CRC, *supra* note 39, at 2 fig.1 (showing Alaska, California, Colorado, Georgia, Indiana, Michigan, New Mexico, Oklahoma, South Australia, and portions of some other states as using SDM).

employ the methods of epidemiology; using samples of actual cases in which, after an initial investigation, a subsequent maltreatment report has been either filed or substantiated, researchers determine which case characteristics are significant predictors of filing and substantiation recurrence. These variables are then used to construct a decision-making algorithm and score sheet.[57] Figure 2 shows such a risk-assessment tool, based on SDM methodology.

Whether actuarial or consensus-based, risk-assessment tools are designed "to classify families into risk groups that have high, medium, or low probabilities of continuing to abuse or neglect their children."[58] Classification is based on scoring the various items included in the instrument; the total determines the family's risk classification. The family's resulting risk classification is used to determine "whether to close a report or open a case for CPS [Child Protective Services] In-Home or Out-of-Home Services"[59] and to determine the frequency of a worker's contact with a family.[60]

Research has shown actuarial tools to be superior to consensus-based instruments in improving the consistency of decision making.[61] This is unsurprising given the comparatively small number of categories in which assessment is required and the higher proportion of objective inquiries. An assessment of both instrument types conducted under the auspices of the federal

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[57] *See* CRC, *supra* note 39, at 10–11 (showing an example of a SDM form with an explanation of how the data is interpreted); *see also* WHITE & WALSH, *supra* note 41, at 6.

[58] CRC, *supra* note 39, at 11.

[59] CHILD WELFARE SERVS., N. C. DEP'T OF SOC. SERVS., SDM FAMILY RISK ASSESSMENT OF ABUSE/NEGLECT 10 (2009) [hereinafter FAMILY RISK ASSESSMENT], *available at* http://info.dhhs.state.nc.us/olm/forms/dss/DSS-5230-ia.pdf.

[60] *See* JOHNSON & BOGIE, *supra* note 10, at 13–14 tbl.5.

[61] *See* SALLY HOLLAND, CHILD AND FAMILY ASSESSMENT IN SOCIAL WORK PRACTICE 22 (2d ed. 2010) (summarizing literature). This is also true in other types of risk prediction. *See* Jay P. Singh & Seena Fazel, *Forensic Risk Assessment: A Metareview*, 37 CRIM. JUST. & BEHAV. 965, 981 (2010) (finding actuarial measures produced "higher rates of predictive validity" than clinical judgments in five of six meta-analyses, with no efficacy distinction in the sixth review).

Figure 2

MICHIGAN ASSESSMENT FOR SUBSTANTIATED CASES
FAMILY RISK ASSESSMENT OF ABUSE/NEGLECT

3/1/95

PS Case Name _____ PS Case # _____
Load # _____ Date ___/___/___

Neglect		Score
N1.	Current Complaint is for Neglect	
	a. No ... 0	
	b. Yes ... 1	___
N2.	Number of Prior Assigned Complaints	
	a. None ... 0	
	b. One ... 1	
	c. Two or more ... 2	___
N3.	Number of Children in the Home	
	a. Two or fewer ... 0	
	b. Three or more ... 1	___
N4.	Number of Adults in Home at Time of Complaint	
	a. Two or more ... 0	
	b. One/none ... 1	___
N5.	Age of Primary Caretaker	
	a. 30 or older ... 0	
	b. 29 or younger ... 1	___
N6.	Characteristics of Primary Caretaker **(check & add for score)**	
	a. Not applicable ... 0	
	b. ___ Lacks parenting skills ... 1	
	c. ___ Lacks self-esteem ... 1	
	d. ___ Apathetic or hopeless ... 1	___
N7.	Primary Caretaker Involved in Harmful Relationships	
	a. No ... 0	
	b. Yes, but not a victim of domestic violence ... 1	
	c. Yes, as a victim of domestic violence ... 2	___
N8.	Primary Caretaker Has a Current Substance Abuse Problem	
	a. No ... 0	
	b. Alcohol **only** ... 1	
	c. Other drug(s) (with or without alcohol) ... 3	___
N9.	Household is Experiencing Severe Financial Difficulty	
	a. No ... 0	
	b. Yes ... 1	___
N10.	Primary Caretaker's Motivation to Improve Parenting Skills	
	a. Motivated and realistic ... 0	
	b. Unmotivated ... 1	
	c. Motivated but unrealistic ... 2	___
N11.	Caretaker(s) Response to Investigation	
	a. Viewed situation as seriously as investigator and cooperated satisfactorily ... 0	
	b. Viewed situation less seriously than investigator ... 1	
	c. Failed to cooperate satisfactorily ... 2	
	d. Both b and c ... 3	___
	TOTAL NEGLECT RISK SCORE	___

Abuse		Score
A1.	Current Complaint is for Abuse	
	a. No ... 0	
	b. Yes ... 1	___
A2.	Prior Assigned Abuse Complaints	
	a. None ... 0	
	b. Abuse complaint(s) ... 1	
	c. Sexual abuse complaint(s) ... 2	
	d. Both b and c ... 3	___
A3.	Prior CPS Service History	
	a. No ... 0	
	b. Yes ... 1	___
A4.	Number of Children in the Home	
	a. One ... 0	
	b. Two or more ... 1	___
A5.	Caretaker(s) Abused as Child(ren)	
	a. No ... 0	
	b. Yes ... 1	___
A6.	Secondary Caretaker has a Current Substance Abuse Problem	
	a. No, or no secondary caretaker ... 0	
	b. Yes **(check all that apply)**	
	___ Alcohol abuse problem	
	___ Drug abuse problem ... 1	___
A7.	Primary or Secondary Caretaker Employs Excessive and/or Inappropriate Discipline	
	a. No ... 0	
	b. Yes ... 2	___
A8.	Caretaker(s) has a History of Domestic Violence	
	a. No ... 0	
	b. Yes ... 1	___
A9.	Caretaker(s) is a Domineering Parent	
	a. No ... 0	
	b. Yes ... 1	___
A10.	Child in the Home has a Developmental Disability **or** History of Delinquency	
	a. No ... 0	
	b. Yes **(check all that apply)**	
	___ Developmental disability including emotionally impaired	
	___ History of delinquency ... 1	___
A11.	Secondary Caretaker Motivated to Improve Parenting Skills	
	a. Yes, or no secondary caretaker in home ... 0	
	b. No ... 2	___
A12.	Primary Caretaker Views Incident Less Seriously than Agency	
	a. No ... 0	
	b. Yes ... 1	___
	TOTAL ABUSE RISK SCORE	___

RISK LEVEL
Assign the family's risk level based on the highest score on either scale, using the following chart:

Neglect Score	Abuse Score	Risk Level
___ 0 - 4	___ 0 - 2	___ Low
___ 5 - 7	___ 3 - 5	___ Moderate
___ 8 - 12	___ 6 - 9	___ High
___ 13 - 20	___ 10 - 16	___ Intensive

OVERRIDES
Policy: Override to Intensive. Check appropriate reason.
___ 1. Sexual Abuse cases where the perpetrator is likely to have access to the child victim.
___ 2. Cases with non-accidental physical injury to an infant.
___ 3. Serious non-accidental physical injury requiring hospital or medical treatment.
___ 4. Death (previous or current) of a sibling as a result of abuse or neglect.
Discretionary: ___ 5. Reason _____

OVERRIDE RISK LEVEL _____ Low _____ Moderate _____ High _____ Intensive

Supervisor's Review/Approval of Discretionary Override _____ Date ___/___/___

Note: In practice, comprehensive definitions accompany each item.

Image courtesy of National Council on Crime & Delinquency.

Office of Child Abuse and Neglect ("OCAN") (conducted, perhaps surprisingly, by CRC, the developer of SDM) found that SDM also did a significantly better job in predicting subsequent investigation and substantiation of maltreatment.[62] Earlier research (again conducted by CRC itself) determined that counties using the SDM system were more likely to close cases classified as low-risk and more likely to involve families classified as high-risk in services than comparison counties that continued to use traditional, intuitive decision-making methods. Even better, high-risk cases in SDM counties had significantly fewer subsequent substantiated cases as well as lower rates of subsequent foster care placement.[63] As a result of these and other studies reaching similar conclusions, actuarial risk assessment has, over time, come to dominate the field.[64]

III. THE RISKS IN ACTUARIAL RISK ANALYSIS

While the appeal of actuarial risk assessment is understandable, its use involves several serious risks.[65] The first, very large problem is the failure of actuarial model makers to rely on standardized definitions of abuse and neglect. Risk-assessment instruments are constructed based on unsubstantiated maltreatment allegations and caseworker determinations that maltreatment has occurred (substantiation). But while substantiation at least follows some kind of investigation, it remains the province of intuitive worker judgments. And, unsurprisingly, researchers have found that worker judgments about what constitutes maltreatment are subject to all the same

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[62] *See* JOHNSON & BOGIE, *supra* note 10, at 44–46 (discussing a higher rate of "Investigative Assessment" and "Maltreatment Substantiation" under the SDM method compared with the traditional investigative approach).

[63] *See* CRC, *supra* note 39, at 26.

[64] *See* WHITE & WALSH, *supra* note 41, at 7.

[65] *See* RYCUS & HUGHES, *supra* note 37, at 7; WHITE & WALSH, *supra* note 41, at 7; Eileen Gambrill & Aron Shlonsky, *Risk Assessment in Context,* 22 CHILD. & YOUTH SERVICES REV. 813, 813 (2000); Shlonsky & Wagner, *supra* note 54, at 411; Michael S. Wald & Maria Woolverton, *Risk Assessment: The Emperor's New Clothes?*, 69 CHILD WELFARE 483, 487–96 (1990).

cognitive biases as other professional judgments. Researchers have found that workers do not agree on what constitutes good parenting, and statutory definitions of maltreatment are often too vague to ensure consistency.[66] Cultural variation in child supervision and discipline complicate these already large problems.[67] So does the fact that neglect—the largest category of maltreatment—may apply both to situations in which a child has been harmed and to those in which harm is only risked. Thus, in a national survey of maltreatment cases, only about twenty percent of children who had been classified as maltreated were injured enough to require medical or psychological treatment.[68] Nor are either harm or risk a matter of a binary, yes/no selection; each is measured incrementally, but without any obvious, empirically based scale—let alone a cutoff point—for determining how much harm or risk is too much. For all these reasons, a National Academy of Science report on child maltreatment concluded both that "little progress has been made in constructing clear, reliable, valid, and useful definitions of child abuse and neglect" and that the paucity of "authoritative, valid and operational measures" of maltreatment were serious impediments to progress in maltreatment research and the development of effective prevention and treatment programs.[69]

Decision-making tools reliant on intuitive maltreatment determinations can be analogized to instruments designed to measure lung cancer risk without a standard description of lung cancer. We simply can't be sure what researchers are measuring. Reliance on such imprecise measurements also

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[66] *See* Penelope Welbourne, *Culture, Children's Rights and Child Protection*, 11 CHILD ABUSE REV. 345, 346, 352 (2002) (describing variation in workers' perceptions of good parenting); *see also* Susan J. Rose & William Meezan, *Variations in Perceptions of Child Neglect*, 75 CHILD WELFARE 139, 140–41 (1996).

[67] *See* Murray A. Straus & Glenda K. Kantor, *Definition and Measurement of Neglectful Behavior: Some Principles and Guidelines*, 29 CHILD ABUSE & NEGLECT 19, 21 (2005) (summarizing literature on cultural variation in concepts of neglect).

[68] *See id.* at 27 (citing NIS-3, *supra* note 11).

[69] PANEL ON RESEARCH ON CHILD ABUSE & NEGLECT, *supra* note 13, at 5, 70; *see also id.* at 344–45; Straus & Kantor, *supra* note 67, at 19.

creates the very real chance that instruments so derived will serve to reinforce existing decision-making patterns, flaws, and biases intact. This is not simply a hypothetical possibility: in New York City, hundreds of parents have been classified as neglectful by child protection workers based on possession of marijuana, even when the amounts in question were so small that prosecutors declined to press charges; in California, by contrast, child protection workers may not base neglect charges on marijuana possession unless there is evidence that marijuana use has actually resulted in harm to the child.[70] If definitional variation is substantial, it will necessarily affect which cases are reported and substantiated for neglect. It will also affect an algorithm based on these reports and substantiations.

Reconsider the risk-assessment tool shown in Figure 2, originally developed in Michigan using Michigan cases. North Carolina adopted this algorithm in 2002.[71] But after a North Carolina case survey revealed that the Michigan assessment tool's "moderate" and "high" risk categories did not meaningfully distinguish propensity toward a new maltreatment report or case opening,[72] CRC researchers revised the tool by identifying, from North Carolina case files, "[r]isk factors that demonstrated a significant statistical association with subsequent CPS involvement" in North Carolina and thereafter using regression analysis to identify the combination of risk factors that best predicted subsequent CPS involvement in North Carolina.[73] As a result of this process, prior case involvement was recoded (reflecting North Carolina's adoption of a case-entry model that diverts some cases from the traditional investigative track), three items (caregiver history of childhood

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[70] *See* Mosi Secret, *No Cause for Marijuana Case, but Enough for Child Neglect*, N.Y. TIMES (Aug. 17, 2011), http://www.nytimes.com/2011/08/18/nyregion/parents-minor-marijuana-arrests-lead-to-child-neglect-cases.html.

[71] *See* JOHNSON & BOGIE, *supra* note 10, at i (detailing the processes of the "Structured Decision Making" case management system).

[72] *See id.* at 20, tbls.8, 9 & figs.1 & 2 ("The current risk assessment performed well when distinguishing low risk from higher risk families, but did not distinguish as well between moderate and high/intensive risk families.").

[73] *Id.* at 29.

maltreatment, housing needs, and caregiver mental health) were added to the neglect index, several items were removed (N6(c)(d) [whether the primary caretaker lacks self-esteem or is apathetic], N10 [caregiver's motivation to improve parenting skills], and N11 [caregiver response to assessment]), and one (N9 [substance abuse]) was rescored. Under the Michigan algorithm, alcohol abuse merits one point while abuse of other drugs merits three; under the new North Carolina model, both drug and alcohol abuse merit one point.[74]

So, is caregiver mental health really relevant to the likelihood of subsequent child maltreatment in North Carolina but not in Michigan? Is parental motivation really relevant to maltreatment risk in Michigan but not in North Carolina? Is it possible that drug abuse is three times more powerful a predictor of subsequent neglect in Michigan than in North Carolina? There is no obvious reason for such divergent patterns *if* neglect is defined and measured the same way in both jurisdictions. Were researchers to find that smoking is predictive of lung cancer (or three times more predictive) in one state but not the other, a search for the environmental variable that ameliorates the impact of smoking in the low- or no-association state would almost certainly be undertaken; in the absence of such a variable, scientific experts would likely conclude that something was wrong with the study. In comparing the risk-assessment algorithms developed in Michigan and North Carolina, there is no obvious environmental variable capable of explaining variation in predictive variables. Thus, it seems likely that researchers are capturing what local child protection culture views as relevant to maltreatment instead of genuinely different risk climates.

A second problem with actuarial assessment tools is their frequent reliance on subjective judgments. Consider again the Michigan assessment tool in Figure 2. Although it is considerably less subjective than the typical consensus-based instrument, a parent can still wind up in the "moderate risk" category simply because the scoring caseworker feels that she "viewed the situation less seriously than the investigator,"

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[74] *See id.* at 15, 28, 30–33.

"failed to cooperate satisfactorily," and showed lack of motivation "to improve parenting skills." Subjective judgments about motivation and cooperation reintroduce all the problems with intuitive judgments that decision-making algorithms were designed to avoid; an algorithm in which a case worker's personal impressions play as large a role as they do in the Michigan algorithm may become nothing more than a method by which a case worker justifies a snap judgment.

Although highly objective algorithms like the revised North Carolina model avoid the problems of subjective judgment, they, too, pose serious problems. First, their heavy reliance on situational, invariably negative variables can at times lead to absurd results. Thus, a social worker supervisor in Ontario complained that, under the new actuarial risk-assessment tool policymakers had adopted,

> if a foster family had one previous investigation which was not verified and they were fully assessed to be a safe foster home, using the Ontario Safe Homes Criteria, if they had a foster child placed in their care who had special developmental and behavioral needs then they would rate as high risk. A foster family . . . assessed to be a safe home for special needs children would be considered high risk to maltreat the children in their care, just by virtue of the child's needs![75]

While the Ontario example may be extreme, the typical instrument's exclusive focus on negative risk factors will invariably result in identical scores for families that in fact present wildly different risks. For example, under the revised North Carolina model, any single mother with three children who is a victim of domestic violence and is experiencing serious financial difficulty scores seven points, the highest "moderate" risk score. Parent A, the college-educated mother of three high-achieving teenagers whose large family stands ready to help her

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[75] Mary E. McVeigh Palmer, Actuarial Risk Assessment and Ontario Child Welfare Transformation: A Parodox of Purpose 6 (Oct. 1, 2011) (unpublished M.S.W. thesis, McMaster University) (footnote omitted), *available at* http://digitalcommons.mcmaster.ca/cgi/viewcontent.cgi?article=7398&context=opendissertations.

gets exactly the same score as Parent B, a high school dropout whose three toddlers are the product of a series of abusive relationships and who lacks any family or social support. Most of the variables are also static and situational, making it difficult to chart progress toward higher or lower risk. A single parent of three children will likely remain a parent of three children no matter how much her children's circumstances improve.

The prevalence of static, situational variables in actuarial risk-assessment tools is not, of course, accidental. It reflects both the fact that this information is readily available from case files and that it can be easily coded. The content of the variables also tracks, to a large extent, what we know from epidemiological surveys. Of course, parents experiencing more stresses that have been linked to maltreatment again and again are at greater risk of new maltreatment complaints and substantiation than those experiencing fewer stresses. No one needed to do a case survey to figure this out. And to the extent that surveys and risk-assessment instruments derived from them deviate from standard epidemiological findings, then we have to question why. Lack of social support, for example, is included in every list of maltreatment risk factors: why isn't it included in the North Carolina and Michigan tools? (My guess is that this variable was not measured or recorded by case workers.) Why is poverty measured only indirectly through variables like housing needs? (My guess is that either workers don't collect income data or that this method seemed more politically correct.) And why on earth would mental illness not be relevant to maltreatment in Michigan when it turns up on just about every survey? (On this one, I have no guess.)

One can certainly make a case for summing up a family's maltreatment risks, but such an assessment ought to reflect actual epidemiological findings about maltreatment risk, not agency practice in a particular jurisdiction. And risk assessment should certainly be balanced with an assessment of family strengths and needs.

These problems are magnified by the fact that even parents classified as high risk have a relatively low propensity toward recidivism. For example, using the revised North Carolina assessment tool, only 16.4% of parents classified as high risk

were the subjects of a new maltreatment complaint that was substantiated.[76] Put somewhat differently, the best prediction for any given parent within the high-risk group is that he or she would *not* be the subject of a subsequent maltreatment substantiation; that prediction would be right in more than eighty percent of all cases. Relatively imprecise assessment tools like those currently in use thus tend to overestimate risk. This might not be troublesome if the consequences of the risk assessment were benign, but they are not.

Risk assessment is used not just to assess the intensity of services to families who have been independently determined to have maltreated their children; instead, risk assessment is now, in many agencies, part of the process by which caseworkers decide whether a maltreatment complaint should be closed or an active case opened.[77] There is a real risk that parents will be classified as abusive or neglectful simply because they are experiencing multiple risks. Such a classification is highly stigmatizing; indeed, many forms of employment are not open to individuals who have a child-protection history. A maltreatment finding also subjects parents to continuing state surveillance and to the potential loss of their children.[78] In sum, a child maltreatment finding is like a quasi-criminal conviction. Criminal conviction based on risk-assessment is not permitted. It should also be disallowed in a child protection proceeding; indeed, given that risk-assessment tools were introduced to systematize worker decision making, it is particularly ironic that neither the weight to be accorded the assessment score nor the timing of its use is typically structured in any way.

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[76] *See* JOHNSON & BOGIE, *supra* note 10, at 44 tbl.18. Slightly more parents (20.3%) had cases opened than had cases substantiated. *See id*.

[77] Thus, for example, the North Carolina Policy Manual states that the risk assessment should be used in determining "whether to close a report or open a case for CPS In-Home or Out-of-Home Services." FAMILY RISK ASSESSMENT, *supra* note 59, at 10.

[78] Some experts also believe that surveillance level is a key factor in determining whether a family will be the subject of a new maltreatment report. *See* Mark Chaffin & David Bard, *Impact of Intervention Surveillance Bias on Analyses of Child Welfare Report Outcomes*, 11 CHILD MALTREATMENT 301, 301 (2006).

Even with respect to service intensity, where risk assessment seems relatively benign, it is not obvious that risk, as so measured, bears any relationship to service needs. Although child protection caseworkers tend to report that children in substantiated cases have more service needs than those in unsubstantiated cases, researchers who have performed careful needs assessments have reported that children in these two groups actually have similar social, behavioral, and emotional needs.[79]

It is also important to keep in mind that the climate of child protection work fosters overestimation of risk. The death or serious injury of a child is devastating to workers who failed to recognize a case as high risk. Such an event will also produce a wave of adverse publicity for the agency; it may result in sanctions or job loss for the individual workers involved.[80] Every child protective worker is aware of cases in which risk was underestimated and a tidal wave of adverse consequences followed. Indeed, caseworkers may see risk-assessment tools as guards against such tragedies. As one put it, "[w]e have a risk assessment model because kids died. And I mean they died when they shouldn't have and had there been more emphasis at looking at risk factors those kids would still be alive."[81]

Finally, even highly accurate risk-assessment instruments based on demographic data create, over time, what Professor Bernard Harcourt has described as a "ratchet effect," in which successful profiling produces a "supervised population that is disproportionate to the distribution of offending" by the profiled group:

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[79] *See* U.S. DEP'T OF HEALTH & HUMAN SERVS., NATIONAL SURVEY OF CHILD AND ADOLESCENT WELL-BEING NO. 9: DOES SUBSTANTIATION OF CHILD MALTREATMENT RELATE TO CHILD WELL-BEING AND SERVICE RECEIPT? 4 (2007), *available at* http://www.acf.hhs.gov/sites/default/files/opre/substan_child_0.pdf.

[80] There is also the remote chance of criminal charges. *See New York Charges Child Welfare Workers in Landmark Case,* REUTERS (Mar. 23, 2011), http://www.reuters.com/article/2011/03/23/us-child-abuse-idUSTRE72M9BE20110323.

[81] Palmer, *supra* note 75, at 20 (quoting an Ontario social worker).

> To give a quick illustration, if the targeted population represents 25 percent of the overall population, but 45 percent of the offending population—in other words, targeted persons are offending at a higher proportion than their representation in the general population, and the profiling is nonspurious—then if law enforcement profiles the targeted population by allocating, say, 45 percent of its resources to the targeted population, the resulting distribution of offenders will be approximately 67 percent targeted and 33 percent nontargeted individuals . . . . The disparity between targeted persons representing 45 percent of actual offenders but 67 percent of detected offenders represents a distortion that has significant negative effects on the [profiled] population.[82]

Disproportionate supervision "contributes to the exaggerated perception of criminality of the targeted group in the public imagination and among law enforcement officers,"[83] and we "begin to feel justified about punishing the members of the targeted group because they offend at higher rates. . . ."[84] Moreover, if agency officials rely on evidence of offending (such as new complaints) to further target its resources, the imbalance—and its negative effects on the target group—will only grow.[85]

In sum, risk assessment as it is currently practiced presents a wide range of risks. Current instruments give too much weight to local practice patterns. They sometimes rely heavily on the very type of subjective judgments they were designed to avoid; they invariably rely on relatively static negative variables and often fail to take account of a family's strengths. They routinely overestimate the likelihood of further maltreatment, thus creating the potential for unnecessary, stigmatizing intrusion into family life. And when they play a major role in assessments that should be fact based—as user guides like the North Carolina manual quoted above invite workers to do—they inappropriately

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[82] HARCOURT, *supra* note 36, at 28–29.

[83] *Id.*

[84] *Id.* at 33.

[85] *Id.* at 28–29, 147–57.

substitute risk profiling for fact finding, with potentially large and harmful consequences to parents and their children.

CONCLUSION: WHAT CAN BE DONE?

Twenty-two years ago, Mike Wald and Maria Woolverton reported that,

> Despite [their] promise, risk-assessment instruments have only limited utility at present. Many agencies have acted prematurely, implementing risk assessment instruments that have not been adequately designed or researched. . . . [W]e are concerned that many agencies are adopting risk-assessment instruments in lieu of addressing fundamental problems in existing [child protection] systems, such as the excessive number of inexperienced or incompetent workers and the lack of adequate resources.[86]

All the evidence suggests that Wald and Woolverton's assessment remains valid. This is not to say that risk assessment has no place in child protection work. Simple decision-making guides like the one shown in Figure 1 are useful and appropriate. So are assessment instruments that ensure thorough investigation of a family's needs by providing a standardized need checklist.

Epidemiological research that tracks agency success and failure with families is also sorely needed. At this point, we know perilously little about what kind of child protection services actually work. Professor Duncan Lindsey, who conducted an exhaustive survey of the literature on family preservation services, was able to identify twenty-five relevant studies—but only four met the requirements of conventional experimental design, i.e., minimum sample size, treatment and control groups, random assignment of subjects, and a post-sample comparison of what changes may have occurred among the two groups due to application of the experimental variable. Worse, Professor Lindsey found that the control group actually fared better than the experimental group receiving the family-

[86] Wald & Woolverton, *supra* note 65, at 484.

preservation services in two of the four well-designed studies. In the other two well-designed studies, the services group showed a slightly, but not significantly, improved result. And "[w]hen 'prevention of placement' was the outcome variable, *none* of the four [well-designed] clinical trials found a statistically significant difference in favor of family preservation."[87] "Only when the research study was so weakly designed as to be merely descriptive in nature did the results appear to support the family preservation program."[88]

Indeed, when the North Carolina risk-assessment instrument was tested and revised, researchers first wondered whether families receiving in-home services should be assessed separately from those that did not; if services reduced recidivism, this group should experience a lower rate of subsequent maltreatment reports and substantiations. But the researchers found that "receipt of services did not reduce recurrence"; thus, "analysis of the risk assessment's performance did not control for in-home service status." In plain English, the researchers were seeking to determine which families should receive the most intensive services when the evidence showed that services had no impact on case outcome. Clearly, we need to learn which services aid which families. Careful research relying on epidemiological methods could, and should, play a major role here.

In sum, the field of child protection needs easy-to-use, validated decision-making aids like the Apgar test that demonstrably improve case outcomes. Current risk-assessment tools do not meet this standard; indeed, they may be accomplishing more harm than good. To take the risk out of risk assessment, much work remains to be done.

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[87] *Child Cares,* CHALLENGE MAG., Spring 1997, at 31 (emphasis added) (quoting Professor Duncan Lindsey), *available at* http://www.research.ucla.edu/chal/31.htm; *see also* Duncan Lindsey, *Preserving Families and Protecting Children: Finding the Balance,* DIRECTORY FOR CHILD WELFARE, http://www.childwelfare.com/kids/fampres.htm (last visited Sept. 25, 2012); Christopher Mikton & Alexander Butchart, *Child Maltreatment Prevention: A Systematic Review of Reviews*, 87 BULL. WORLD HEALTH ORG. 353 (2009).

[88] *Child Cares, supra* note 87, at 31.