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From: Judge Michael Nash (Ret.)
Executive Director, Office of Child Protection

EXAMINATION OF USING STRUCTURED DECISION MAKING® AND PREDICTIVE ANALYTICS IN ASSESSING SAFETY AND RISK IN CHILD WELFARE (ITEM NO. 49-A, AGENDA OF SEPTEMBER 20, 2016)

On September 20, 2016, the Board directed the Office of Child Protection (OCP), in consultation with the Department of Children and Family Services (DCFS) and any other involved departments, to report back on the current use and identified strengths and weaknesses of the Structured Decision Making® (SDM) tool, and to explore various alternatives to that tool, including an examination of the strengths and weaknesses of Project AURA and the use of predictive analytics for child safety and welfare.

This motion was issued as a result of the tragic death of 11-year-old Yonatan A., whose family had multiple contacts with DCFS between 2002 and 2012. For each of the four investigations occurring during Yonatan's life, although the SDM safety assessment tool did not identify a concern of imminent harm or danger, the SDM risk assessment tool did identify the family as being at high risk for a re-referral to the child welfare system. Yonatan died on August 22, 2016, allegedly from abuse/neglect inflicted upon him by his mother.

The report that follows was informed by research that included various articles and presentations, as well as conversations with representatives from a number of organizations including, but not limited to, the California Department of Social Services (CDSS), the Department of Children and Family Services (DCFS), Service Employees International Union (SEIU) Local 721, County Counsel, Casey Family Programs, the Children's Data Network (CDN), the Allegheny County [Pennsylvania] Department of Human Services, the Orange County Alliance for Children and Families, Children's Institute International, Inc., the National Council on Crime and Delinquency (NCCD),

and Fostering Court Improvement. In addition, a focus group was held with a number of DCFS children's social workers and supervising children's social workers.

Structured Decision Making® (SDM) Tool

SDM is a suite of instruments used to help guide the thinking of case workers when they are making determinations about the overall safety and well-being of children. The suite of tools includes screening and path-decision tools, a safety assessment, a risk assessment, a family strengths-and-needs assessment, a reunification re-assessment, and a risk re-assessment. The two tools most widely discussed in determining the safety of a child are the safety and risk assessments.

The safety assessment evaluates the imminent danger or harm to a child by considering the presence of factors such as safety threats, caregivers' impairments or involvement in substance abuse or domestic violence, and household strengths or protective actions/interventions.

The risk assessment evaluates the likelihood of a family being re-referred to the child welfare system within the next 12 to 18 months by considering factors such as prior DCFS investigations, the current investigation, and family characteristics including the presence of disabilities among children in the home, housing, domestic violence, disciplinary practices, any parental history of abuse or neglect as a child, mental health, substance use, and criminal history.

SDM functions as an actuarial model by using historical data from a point in time to predict the likelihood of a future event's occurring. In this case, Child Welfare Services/Case Management System (CWS/CMS) data in the domain areas listed above are analyzed and weighted through a set of algorithms developed to evaluate the current safety of and any future risk to a child. SDM works to identify the fewest elements necessary for providing the most precise classification of risk possible.

SDM is currently being used by child welfare agencies in all of California's 58 counties, as well as by numerous other jurisdictions across the country. Annual team meetings with child welfare directors and SDM users are held at the State level to gather feedback on the tool's effectiveness so it can be further refined and strengthened. A complete overhaul of the tool occurs every three to five years; the latest update (SDM 3.0) was released in October 2015. The State also conducts regular quantitative monitoring of the tool to ensure it is being regularly completed by case workers.

SDM Validity Data

In 2014, CDSS contracted with the Children's Research Center—the developers of the SDM tool and a center of NCCD—to conduct a validation study to assess how well SDM identifies future risks of re-referrals and maltreatment. Data from this study showed that families classified as high or very high risk for future re-referrals were more likely to have a future child welfare investigation within 18 months (43.3% and 49.4%, respectively) than families classified as low or moderate risk (16.9% and 31.3%,

respectively). The rate of subsequent substantiation of maltreatment followed a similar pattern: families classified as high or very high risk had higher rates of substantiated maltreatment within an 18-month period (17.8% and 22.9%, respectively) than those families classified as low or moderate risk (5.2% and 11.3%, respectively). Additionally, families classified as high and very high risk were more likely to have a child removed from their home as a result of a subsequent investigation within 18 months (8.8% and 13.4%, respectively) than families classified as low and moderate risk (1.5% and 4.4%, respectively) (Dankert & Johnson, 2014). SDM validation studies for California, it should be noted, have occurred only at the State level.

Independent researchers have also evaluated SDM and determined it to be a valid and reliable tool in classifying families' levels of risk for future referrals and in identifying families needing further assessment, when the tool is implemented within a structure that provides good supervisory and management support and high-quality, comprehensive training (Barlow, Fisher, & Jones, 2012; Kim, Brooks, Kim, & Nissly, 2008). Furthermore, a study by Johnson, Clancy, & Bastian (2015) concluded that SDM's risk assessment tool "could improve risk assessment accuracy in child protection" when used correctly (p. 76).

Strengths of SDM

One of the strongest identified benefits of using SDM is that, because it is a data-driven tool, it is more objective than professional judgment. When used correctly, it weighs its information uniformly and is not subject to human biases and stereotypes (Dawes, Faust, & Meehl, 1989). It can help to guide a case worker's thinking about a case, particularly when the factors of that case are not clear cut. It may also help to address disproportionality by assessing case characteristics, risk factors, and family functioning equally across families of varying social backgrounds.

The fact that the tool can be overridden and that the results of its assessments do not drive decision-making is part of SDM's design, and has been noted as a benefit. NCCD did not intend for the tool itself to make decisions, but rather to guide the assessment process and be another piece of data to be properly weighed against the client's perspective and case worker's judgment. With this design, good professional judgment can be applied appropriately, as the complexities of the case warrant.

Good training modules and supports for SDM's proper use have been made available by the tool's creators. This is significant, as validation studies noted that the tool was effective when good training and supports were utilized.

As a result of its current popularity and the existence of data validating its effectiveness, SDM is generally seen as the leading tool of its kind. Arguably, there does not appear to be a strong viable alternative at this time.

Weaknesses of SDM

One of the most cited weaknesses of SDM is that, because the model is proprietary, there is a lack of transparency about how its algorithms are constructed and various factors weighted (thus earning its classification as a "black box" model). This is

concerning to users and evaluators alike, as no way exists to understand how the decision-making process is being influenced by these elements, and if any systemic biases are inherent in the tool.

Users of the tool, in particular, fault it for not incorporating into its assessments the entire story of what is happening within a family, but instead focusing on a few broad strokes without giving weight to important nuances. Users additionally state that the tool is too narrowly focused on the caregiver and does not take into account the strengths of the family as a whole. (The latest version of SDM has been revised to try to be more strength-based in its approach.)

There also exists a notable lack of confidence in SDM's validity and utility in general among a large number of its users (known in the field as a lack of "face validity"). The "black box" design perpetuates a belief that the factor weightings in the tool's algorithms unfairly bias poor families, and do not properly take into consideration all the relevant information of a case. This belief further validates many workers' reliance on their own professional judgment and experience as a way of combating this perceived—or potentially real—bias. The lack of validation studies using local populations within California only exacerbates these opinions, given the significant diversity existing within the state. Again, the latest version of SDM has been revised to attempt to address a number of these concerns. However, this face-validity issue (which builds off the two weaknesses mentioned above) may be the most troubling because it directly affects how a number of users apply the tool and interpret its results.

Another weakness of SDM is that it relies on manually entered information. Various types of "operator error" can produce information that is inaccurate or incomplete, input incorrectly, or manipulated or skewed to support predetermined thinking. As discussed throughout the validation studies, SDM must be used correctly in order to be useful.

Lastly, while noted as a strength above, the fact that the tool can be overridden is also considered a weakness. If the tool is overridden, that must be done by using good professional judgment and in consultation with a supervisor and manager, and the reasons for the override should be well documented in the case file.

SDM in Practice in Los Angeles County

A number of case workers we spoke with in the County said they thought that SDM was a good supplemental assessment tool when used correctly. Several workers mentioned that the tool was "only as good as the person using it" and the "quality of the information being assessed."

Several case workers also reported that SDM was not used so much to guide the decision-making process as, more frequently, simply to document decisions after they had already been made. There appears to be a considerable amount of compliance-based usage of the tool; several workers stated that they use it because they "have to," not because they believe it is helpful or adds value to their work with families. The lack

of training and coaching on how to use the tool effectively was also mentioned as a real concern.

An additional concern among a cohort of workers is that using SDM does not assist with developing or improving case workers' critical-thinking skills. Workers who shared this said that the tool does not help case workers know what questions to ask, how best to engage families, or how to properly assess the information they receive. This concern has also been noted in a few research studies, suggesting that—without very careful implementation—this is a potential unintended consequence of using this type of tool (Barlow, Fisher, & Jones, 2012).

There is also a lack of clarity within existing DCFS policy about how to proceed with a case when the SDM risk score is high or very high, but the referral allegation turns out to be inconclusive or unfounded. The DCFS policy manual (DCFS Child Welfare Policy 0070-548.10, 2015) states that a referral with a high or very high risk score and an inconclusive allegation must be reviewed by an Assistant Regional Administrator (ARA) prior to its closure, but it does not have a similar requirement when the SDM risk score is high or very high and the referral allegation is unfounded.

The policy also indicates that in the case of unfounded and/or inconclusive allegations, a case worker could consult with a supervisor to determine if Community Response Services are appropriate if the family has had no prior referrals and the case worker believes they could benefit from such services. On the other hand, an April 16, 2010, DCFS *For Your Information (FYI)* memo to staff (Issue 09-57[REV], under Changes to the Referral Management Section, page 3), stated:

> *Child Welfare Services/Case Management Services (CWS/CMS) will now allow a referral to be promoted to a case without a substantiated allegation; however, until the Department receives further direction from the State, our Department policy will remain the same, [such that] an allegation must be substantiated for each child that is promoted to a case. Under no circumstances are users to select the client disposition of 'Open New Case' for a child without a substantiated allegation. [emphasis added]*

Further, the Children's Research Center of NCCD published its latest Policy and Procedures Manual, SDM 3.0, for CDSS in October 2015. This manual points out that the risk assessment tool does not predict a recurrence of abuse and neglect, but simply assesses whether—without intervention by the agency—a family is more or less likely to experience another referral. It further states that risk assessments are required for all substantiated and inconclusive allegations, and are recommended for unfounded allegations (NCCD, 2015, p. 83).

The manual recommends opening a case on all high or very high risk referrals (NCCD, 2015, p. 84) for *ongoing services* [emphasis added], unless a further explanation is provided. Examples of explanations for high or very high risk cases not being promoted

include that a family has declined voluntary family maintenance and no petition has been filed, or that a family is receiving or has been connected to community services that address their priority needs and/or contributing factors. The manual clearly states that the services are *directly related to the priority needs identified using the Family Strengths and Needs Assessment or other means to identify factors that contribute to risk* (NCCD, 2015, p. 85) [emphasis added]. While DCFS University, which is responsible for training case workers, trains staff on the SDM 3.0 Manual, it does not appear that these procedures articulated in the NCCD manual are included in current DCFS policy, as noted above.

SDM Risk Assessment Outcome and Usage Data in Los Angeles County

A recent analysis was conducted on 1,225 referrals (involving 1,211 children) investigated by DCFS between 2012 and 2016 that resulted in a negative outcome—critical incident, near-fatality, or fatality. This analysis looked at the use of the SDM safety and risk assessment tools in relation to factors such as the reported allegation, referral disposition, and whether or not there was a promotion to an open case.

The Value of the SDM Risk Assessment Tool

NCCD states that the SDM risk assessment tool is valuable in identifying children who are likely to be re-referred to the system if no intervention is put in place. This analysis of Los Angeles County data showed that children experiencing a negative outcome were nearly three times likelier to have had previous contact with DCFS before the incident happened than those with no previous DCFS contact (895 vs. 316). This suggests that knowing which children are at higher risk of being re-referred to the system provides an important clue about which children might also be at a greater risk of a negative outcome. The analysis showed that children who experienced a critical incident or who died were more likely to have had a high or very high risk score than a low or moderate score (critical incident, 423 vs. 254; death, 142 vs. 112). While a high or very high risk score does not mean a bad outcome will happen, it does indicate a need to pay closer attention.

This analysis looked only at cases ending in a negative outcome, which limits our ability to draw broad conclusions. However, these data are important; while we heard a number of case workers say they felt that the risk assessment tool was not helpful, this preliminary analysis suggests something different. High and very high risk scores are a warning sign that a closer look is warranted, and, because of the family's increased chance of being re-referred to the system, it should be connected to the types of services and supports that can help reduce this risk.

Emphasis on Allegation versus Risk

The data in this analysis appear to show that the decision to promote a child's referral to an open case is largely influenced by whether or not the allegation of abuse or neglect is substantiated, no matter what the risk level is. For example, when the risk level was high or very high, the number of children with cases that were promoted was extremely low when the allegations were not substantiated (promoted=5 vs. not promoted=162) compared to

when the allegations were substantiated (promoted=304 vs. not promoted=167). This practice is not consistent with the SDM 3.0 policy that recommends promoting to an open case when the risk level is high or very high, regardless of the allegation result.

This finding is interesting because the data do not show a stronger connection between a substantiated allegation and a negative outcome. For example, almost as many children had a near-fatality occur when the allegation was not substantiated as when it was substantiated, and more children died when the allegation was not substantiated than when it was.

	Negative Outcome	
Allegation Disposition	Near-Fatality	Fatality
Not Substantiated	106	167
Substantiated	103	99

These data are consistent with current practices across the country that place a lot of weight on the presence of substantiated allegations and immediate safety concerns, and less weight on determinants of future risk. However, these data also support the growing conversation in the field that allegation substantiation may be inadequate to identify those children who are most at risk for future safety concerns and negative outcomes (Keddell, 2016; Shlonsky & Wagner, 2005; Kohl, Jonson-Reid, & Drake, 2009). We spoke with some child welfare experts who expressed interest in placing more importance on levels of risk (instead of on allegation dispositions) when making case decisions, and in offering services and supports to families that may help to reduce this risk. This is an area that requires a great deal of further exploration, but one that potentially holds significant promise for improving the way the child welfare field operates as a whole.

Use of the SDM Tool

DCFS records indicate that the SDM risk assessment tool is completed on almost all substantiated and inconclusive allegations, and on about half of referrals with unfounded allegations. Consistent with the findings presented above, DCFS records further confirm that decisions to promote cases do not always appear to be in accordance with SDM risk assessment recommendations. These records additionally show that cases with high and very high risk scores had higher rates of being re-referred to the system when they were not promoted to an open case than when they were, and services were provided (NCCD, 2016).

A recent but separate review of 726 cases (from 2011 through 2015) that involved a critical incident or death of a child found that SDM was mentioned in only 17 percent of the resulting critical incident/child death reports (120 out of 726). Of the reports in which SDM was mentioned, at least one problem with the tool was identified 64 percent of the time. The problems most frequently noted were an inaccurate use of the tool (39%, 40

out of 103), the tool's not being used when required (26%, 27 out of 103), and the tool's not being completed in a timely manner (13%, 13 out of 103).

A 2012 report written by Los Angeles County's Children's Special Investigation Unit—published in the *Los Angeles Times* in 2013—indicated that in 9 of the 15 cases it reviewed for that report, the use of the SDM tool "was identified as a contributing factor to the adverse outcome of the case" (p. 39). The reasons cited for this were largely that the tool was being used incorrectly, it was not completed in a timely manner, or its results were overridden. These data are consistent with the anecdotal information mentioned earlier from case workers—that in a number of cases, even when the tool is used, it is not used properly or staff do not trust the results.

In the case of Yonatan A., the SDM risk assessment tool did identify the family as being at high risk for a re-referral to the system in four separate investigations during his life when allegations were determined to be unfounded or inconclusive. In this particular case, it appears that the SDM risk assessment tool got it right. The questions remain: what action did DCFS take, or what action should it have taken.

Collectively, the analyses outlined above clearly suggest that policy, training, and practice issues exist within the implementation of SDM in Los Angeles County.

Predictive Analytics

Predictive analytics is the process of analyzing current data to predict what might happen in the future. This involves using techniques from data-mining, statistics, modeling, machine-learning, and artificial intelligence to develop statistical algorithms that generate information for making predictions about the future. Algorithms are created by using published evidence (research) and/or local data that apply weights to a set of variables (CSSP & Alliance, 2016). These data elements may or may not have an already established relationship with the intended outcome (Cuccaro-Alamin, Foust, Vaithianathan, & Putnam-Hornstein, 2017), which can result in algorithms that may not be readily understood by or intuitive to others. Within the field of child welfare, the goal of using predictive analytics is to improve the trajectory of a child's life.

Strengths of Predictive Analytics

The greatest identified strength of putting predictive-analytic models into practice is that they are able to objectively and consistently weigh large quantities of highly complex information in making recommendations about what to do next. They are able to do this consistently, every time, without interference from "human" factors such as mood, fatigue, subjectivity, or other elements that tend to influence our thoughts and judgments. These models can more objectively control for unconscious assumptions and biases that people may not be aware are informing their decisions (CSSP & Alliance, 2016). While this is also true for SDM, predictive-analytic models would not be subject to the operational errors and unwanted variations that currently exist with SDM.

Another benefit to predictive analytics is that it does not require additional data entry. Because these models can quickly analyze hundreds of risk factors, they are not as time- and resource-intensive for social workers.

These models also have the capacity to be nimble enough to "learn" and continually adapt to new information and identified relationships among the data (Cuccaro-Alamin, Foust, Vaithianathan, & Putnam-Hornstein, 2017). This flexibility allows them to stay as current and accurate as possible—an important factor, given that the data these models analyze tend to be highly dynamic.

Many other large, heavily regulated industries have demonstrated success with the use of predictive analytics, including health care, insurance, retail, credit, and marketing.

Weaknesses of Predictive Analytics

A number of significant concerns have been raised in response to the idea of implementing predictive-analytic models in risk assessment, and these concerns would need to be effectively addressed before such a system could be recommended for use.

Fear exists about how information generated using predictive-analytic models in risk assessment might be used. This fear involves ethical and legal issues such as the government's potentially overstepping its role and acting in a "big brother" manner, caregivers' due-process rights becoming compromised by their being less equipped to dispute "scientific" findings, and case workers relying less on their professional judgment and experience and more on blindly trusting the system's results even in the face of conflicting information. The type of information involved is potentially very powerful. If predictive-analytic models are implemented, it is critical to ensure that adequate safeguards are in place to protect the information and make certain it is used both responsibly and solely as intended. Determining its "right" use—to identify families most in need of supports, rather than to trigger any negative consequences for them—will be fundamental.

There is also a growing concern over the lack of transparency in the configuration of proprietary algorithms (the "black box" models previously mentioned). When these systems are closed, there is no way of knowing what is driving risk score values and therefore influencing the decision-making process. Transparency is an important factor for designers to consider in developing these types of systems.

Additionally, there is significant concern that predictive-analytic models may inadvertently promote racial, socioeconomic, and other biases inherent in our society. This anxiety stems from the idea that if racial and/or other biases are embedded within our data, predictive-analytic models would "hard-wire" those biases into the data outputs they generate (CSSP & Alliance, 2016). The real potential for this was demonstrated recently by research conducted by ProPublica on predictive-analytic tools in the criminal justice arena. That study found that a predictive-analytic tool already in use correctly predicted recidivism 61% of the time on the sample studied. However, it also concluded that "blacks were almost twice as likely as whites to be labeled a higher risk but not actually

re-offend (44.9% vs. 23.5%, respectively), and that whites are much more likely than blacks to be labeled lower risk but go on to commit other crimes (47.7% vs. 28.0%, respectively)" (Angwin, Larson, Mattu, & Kirchner, 2016, p. 12). Transparency with regard to the configuration of these algorithms can help to address this issue, as can widening the scope of data sources used (Church & Fairchild, 2017; Cuccaro-Alamin, Foust, Vaithianathan, & Putnam-Hornstein, 2017; CSSP & Alliance, 2016).

Local Predictive-Analytic Efforts

Project AURA (Approach to Understanding Risk Assessment)

DCFS worked with the analytics software and solutions company SAS to develop a pilot project that applied advanced analytic methods to data to generate a score that identified the likelihood of a tragic outcome occurring for children in contact with the Department. The pilot project was completed in October 2014 with mixed results. While the tool correctly detected a high number of children (171 cases) at the highest risk for abuse, it also incorrectly identified an extremely high number (3,829 cases) of false positives (i.e., children who received high risk scores who were not at risk for a negative outcome). This is problematic because of its potential for overwhelming a system that cannot respond to such a high number of false positives and still be effective. Additionally, as the SAS system was proprietary, it was a closed "black box" model lacking transparency about how variables influenced scores. DCFS is no longer pursuing Project AURA.

Statewide Community Workgroup on Risk Assessment

Building on lessons learned from Project AURA, DCFS recently began working with CDSS, which is partnering with CDN, to develop a proof-of-concept in the area of predictive risk modeling within child welfare. Over the next two years, CDN will conduct a research project to create a front-end-of-the-system transparent model (a "glass box") focused on increasing secondary prevention efforts. The exercise will include establishing potential modeling information as a method for screening and triaging cases, using data from child protection records. The model will be tested to demonstrate its potential over the two-year study period. The first sets of initial model information and findings will be presented in May 2017.

Predictive Analytics Moving Forward

Research suggests that a prevailing set of standards should be adopted before considering the use of predictive-analytic models (Attachment I) to address the important operational, legal, and ethical considerations inherent in any implementation and to balance them with our ethical and fiscal imperatives to serve families in the most effective way possible. While the emerging area of predictive analytics within the child welfare field holds some real promise, it also has the potential to lead us down the wrong path if not implemented properly. We believe it is important at this time to proceed cautiously and responsibly while we engage in this process further and see what develops.

Recommendations

We want to do everything we can to help support and enhance the decision-making processes of child welfare workers. Their jobs are extremely complex, and they are likely to benefit greatly from having a variety of tools available to them that provide different types of information. This includes tools that help shape assessment interviews, others that enhance the information gathered, and those that can potentially provide more predictive capabilities as warranted.

The key is to ensure that the information captured within these tools is accurate, reliable, helpful, and used with the utmost care and sense of responsibility to ensure that our families are treated equitably and receive the most effective supports available to them. To that end, our recommendations are:

1) **DCFS should continue to use SDM, but ensure that it is being used properly and effectively.**

   - **Retrain all case workers, supervisors, and regional managers on the validity of SDM and its proper use.**

     This will require revisiting the current SDM curriculum and ensuring that it includes the use of critical thinking skills and Core Practice Model principles throughout the assessment process. The revised curriculum must also incorporate an emphasis on three components: how to guide safety and risk determinations, what the role of supportive supervision is in the decision-making process, and relevant data on the tool's validity and most effective use. SDM training for new social workers should also involve field work on using the tool in real-world situations. Ongoing refresher training sessions should be put in place for other staff.

     Training needs to particularly underscore the real value of SDM. All social workers should understand that the SDM risk assessment tool indicates the likelihood of a family being re-referred to the system, an important factor that serves as an opportunity for prevention services.

   - **Ensure that this training includes a thorough analysis of how to assess risk in general through all phases of a case, but particularly during investigations of abuse and neglect.**

     This will require revisiting the curriculum on risk assessment to ensure that it is incorporated into a more comprehensive training on how to better investigate cases of alleged abuse or neglect, and how to assess risk in general in all phases of a case.

     Investigation training should include, among other things, how to interview potential witnesses, whom to interview (especially with regard to mandated reporters and collateral contacts), when and how to request forensic exams,

when and how to use historical information about family members and others in the home, how to recognize battered-child syndrome, and how to give appropriate consideration to a child's recanted allegations.

Training should also include not only how to comprehensively assess risk, but how to appropriately use that information in decision-making, and how to mitigate risk through various services and supports.

- **Ensure that regular case-conferencing/supervision is occurring between case workers and their supervisors as part of the decision-making process.**

  Regular case reviews involving case workers and their supervisors should occur for each case so that decisions are made together as a team. For more complicated cases, case reviews should also include regional management as needed. It is particularly important to ensure that this occurs regularly, and that all staff understand that the quality of supervision drives the quality of practice.

2) DCFS should strengthen its oversight and accountability on the effective use of SDM.

- **DCFS should enlist the National Council on Crime and Delinquency (NCCD) to conduct a quality services review and provide technical assistance services on SDM.**

  NCCD is able to provide macro-level data reviews, policy and practice analyses, targeted-care record reviews, and focus groups as part of quality assurance monitoring and evaluation. This type of analysis can determine how effectively SDM is being used and what recommendations are needed for improving outcomes.

- **Accountability for the effective use of SDM should be driven by qualitative and quantitative evaluation data.**

  Accountability for the proper and effective use of SDM should occur at the deputy-director and regional-manager levels based on both qualitative and quantitative data. Those responsible for providing and overseeing trainings on the implementation of this tool should also be accountable for its proper and effective use.

- **DCFS regional offices should use the information that is generated by the Quality Improvement Unit to improve practices.**

  Data gathered by this unit could help guide case workers on the most effective questions to ask during an assessment of a family's needs, how best to engage a family to improve the quality of information received and the effectiveness of any interventions offered, and how best to address a family's underlying needs to

improve safety and minimize future risk. It also can provide practice data on the use of SDM.

- **DCFS and the OCP should partner to strengthen their critical incident/child death reporting practices and accountability.**

  DCFS and the OCP should work together to further strengthen the comprehensiveness of these reports and the evaluation of these cases in general, and to ensure that the resulting actions regarding needed policy, practice, and training improvements to attempt to minimize future risk concerns are followed up on and monitored. These reports should include information on the use of SDM.

  In addition, DCFS' current process for evaluating every child death before which it had contact with the family should be enhanced and further centralized. That evaluation should more explicitly include, among other things, whether there was anything DCFS could have done or should have done that might have affected the negative outcome. Consideration must be given to whether what DCFS did or did not do involved a policy issue, a training issue, a supervision issue, or a personnel issue. To the extent that policy changes need to be made or lessons learned, DCFS must develop a more consistent and effective way to ensure that all social workers receive that information.

3) NCCD should be provided with recommendations on how to further strengthen the SDM safety and risk assessment tools.

Based on this review, it is recommended that NCCD:

a. Conduct a validity study of the SDM tools in Los Angeles County or a comparable jurisdiction (similar to the study for California), and strongly encourage others to conduct independent validation studies of the tools as well

b. Maximize the transparency of the SDM tools by providing enough details on their algorithms so they can be independently tested

c. Conduct a performance evaluation of SDM that includes frequent experimentation with the types of data used and the configuration of the algorithms so that the tools can be more easily adapted to changes within the child welfare field

4) **DCFS' policy on how to respond when an SDM risk level is high or very high, but referral allegations are unfounded or inconclusive, should be revised to include case promotion and the appropriate level of manager approval needed prior to referral closures, as well as a further assessment of the family's needs for connections to appropriate voluntary services and/or community supports.**

   - **Ensure that all options for providing families with additional supports and resources are fully explored, especially given the higher likelihood of a re-referral.**

     This should occur as a general philosophical, humanistic approach to working with families, even when it is not legally required. Because a high risk score reflects some concern with the family's overall functioning, a plan should be developed for providing resources to the family to help reduce that risk. All appropriate options for staying connected to a family in this situation should be considered, including the use of voluntary family maintenance and other avenues.

   - **Connect families to the Prevention and Aftercare Networks (P&As) or other resources as appropriate.**

     The P&As can provide support to families that helps strengthen their functioning and lower their future risk of harm, and that support should be used to address the needs of these at-risk families. Home visitation, early care and education, and other key supports should also be explored as appropriate.

   - **Additional resources should be identified to ensure a strong connection between case workers and community-based/faith-based organizations and other supports.**

     In Orange County, community resource specialists are enlisted to help ensure a pathway for these connections. The use of community-based liaisons should be explored to ensure that clear pathways to these resources exist in Los Angeles County as well.

5) **The progress of predictive analytics should be monitored to determine its readiness to be considered for use in Los Angeles County.**

   DCFS, OCP, and others should continue to participate in the State's Community Workgroup on Risk Assessment, and DCFS should continue its ongoing efforts to explore the use of predictive analytics. Before moving forward with any predictive-analytic model, the standards for use outlined in Attachment I should be addressed.

Additionally, the OCP is partnering with DCFS and the Chief Information Office to develop mobile electronic access to relevant information for DCFS case workers to better inform their investigations and detention determinations. Development of this system is scheduled to begin by June 2017.

Finally, the OCP will partner with DCFS and other key stakeholders to further explore the larger question of the role that assessing risk should play in child welfare, the effectiveness of allegation substantiation, and how to improve the way the field operates as a whole.

If you have any questions, please contact me at (213) 893-1152 or by e-mail at mnash@ocp.lacounty.gov, or your staff may contact Carrie Miller at (213) 893-0862 or by e-mail at cmiller@ocp.lacounty.gov.

MN:CDM:eih

Attachments (2)

c: Chief Executive Office
Executive Office, Board of Supervisors
County Counsel
Children and Family Services

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ATTACHMENT I

Standards for Use of Predictive Analytics

A prevailing set of standards should be adopted before considering the use of predictive-analytic models.

1. A clear determination about what is being predicted, for whom, and how the information will be used needs to be established.

   This includes:

   - Developing a well-defined issue statement and desired outcomes
   - Determining specifically who will receive information and how it will be used

     Considerable thought must be given as to how best to minimize or eliminate bias as much as possible, how to address the effects on due process for caregivers, and what safeguards need to be established to ensure that information will be used responsibly.

   - Engaging community representatives, stakeholders, and system users in an open dialogue throughout the planning, developing, and monitoring process

2. The design of the system and the configuration of its algorithms should be transparent.

   This includes:

   - Ensuring access to reliable data with clear data definitions
   - Being clear and open about what information is driving the output
   - Using transparent coding of the data
   - Understanding how racism and other biases may be embedded in systemic data and addressing these within the model

3. The system requires close monitoring and independent evaluations of its results.

   This includes:

   - Ensuring that the system is flexible and adaptable so it can be updated easily and as frequently as needed to keep it as current and accurate as possible
   - Monitoring the balance between false positives and false negatives and their effect on outcomes
   - Determining the effectiveness of the system

ATTACHMENT II

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