

Ethical Analysis: Predictive Risk Models at Call Screening for Allegheny County

Response by the Allegheny County Department of Human Services

The Allegheny County Department of Human Services (DHS) solicited the feedback of an independent team of ethicists regarding the Allegheny Family Screening Tool (AFST). Tim Dare of the University of Auckland and Eileen Gambrell of University of California - Berkeley reviewed the AFST's planned design and explored general ethical considerations. DHS is in agreement with the reviewers' conclusions, which indicate that the AFST is ethically consistent with DHS's values and principles. Most importantly, DHS agrees with the ethicists' assessment that, given the AFST's demonstrated accuracy above current decisions, "...there [would be] significant ethical issues in not using the most accurate risk prediction measure." The following outlines DHS's response to the analysis, as well as details about how DHS has incorporated ethical findings into the tool's design and implementation.¹

¹ Some of the reviewers' specific ideas are summarized, but will not be repeated with full context; we assume that the reader is also familiar with the original ethical analysis which can be found at www.alleghenycountyanalytics.us

1. Consent and privacy not considered to be areas of concern

The reviewers identified two topic areas that might typically raise questions in predictive risk modeling: (a) client consent and (b) the appropriateness of accessing/utilizing information of individuals only indirectly associated with the maltreatment event. However, after considering the ethical analysis and the following factors, DHS does not consider these to be relevant concerns with the AFST:

- a. The tool is accessing no additional data other than that which is *already* accessible by call screening workers.
- b. DHS already owns — and maintains the rights to utilize — all data that the tool is accessing for the purpose of protecting and serving children and families.
- c. As implemented, the tool's content/output is being strictly limited to the same individuals who would already be using such data in their decision-making.

Additionally, from a legal standpoint, DHS complies with HIPAA's privacy and security rules with regard to client information. It believes that sharing its protected client information is important and, at times, critical for care, and also maintains the right to have and to re-disclose client protected information in its role as a contracting entity and as a government service coordination and oversight entity. All data use within the AFST is consistent with DHS's existing data use policies with regard to HIPAA.

2. The importance of judging the tool in comparison to the status quo

The ethicists acknowledged a number of performance challenges that the tool will inherently face. For example:

- **Error margins:** Even models that are highly accurate on average have error margins, estimating certain referrals as either higher- or lower-risk than their "true" level.
- **Racial disparity:** The data underlying the tool reflect racial disparities.

DHS agrees that these performance issues are meaningful and is in agreement with the key perspectives of the reviewers; i.e., that *decisions are already being made daily by call screeners* that are equally subject to any of these imperfections that the AFST would face, so the AFST should be viewed in comparison to the status quo. Given that the existing decision processes already are subject to errors, assumptions/biases and racial disparities, the AFST's performance at least has the advantages of being (a) more *accurate* than current decision-making strategies and (b) inherently more *transparent* than current decision-making strategies.

Despite the AFST's advantages in regard to accuracy and transparency, these performance challenges should still be monitored and mitigated as much as possible. But DHS agrees with two other ethical perspectives of the reviewers: 1) that the ultimate interventions aim to be protective in nature (rather than punitive) and 2) that the AFST's application at the early screening decision stage still allows for the investigation phase, in which additional information/decision-making will help to confirm or deny the appropriateness of the referral for services.

3. Training, monitoring and implementation efforts

Beyond the actual design, the reviewers' analyses emphasized that the context surrounding the tool — including appropriate training, ongoing monitoring and implementation — are critical from an ethical perspective. The ethical considerations have helped inform these activities.

- **Training**

DHS developed and delivered three hours of staff training prior to the AFST's implementation. Informed by the reviewers' suggestions, the training emphasized the AFST's specific meaning and limitations, and explored how its content should be appropriately incorporated into decision-making. Call screeners engaged in a group discussion of real-world referral vignettes covering diverse scenarios, viewed the associated screening score, and discussed how the score may or may not influence the screening decisions. Additionally, a thorough job aid document is being developed to help ensure ongoing consistency surrounding the use of the AFST.

- **Tool Evaluation and Ongoing Quality Assurance**

The ethical analyses found ongoing monitoring to be essential. To that end, DHS has contracted with two separate entities to evaluate the performance of the tool. One organization will be thoroughly assessing the implementation and business process changes, while the other will be analyzing the tool's quantitative impact on system trends and outcomes. DHS will also be carefully monitoring the internal use and impacts of the tool. Automated weekly support reports were developed alongside the AFST, and DHS analysts will be routinely providing on-site support and informal interviews with call screeners in the early weeks of its use. DHS also intends to have the content of the model revisited within the first year to make sure its statistical performance is still strong and to provide any necessary updates to the underlying weights.

- **Design and policy considerations**

Many design elements were conceived within the context of ethical consideration:

- a. Because the tool is not perfect, the official policy for its use makes clear that the screening score is only an additional piece of information, one that should never override the workers' clinical judgment regarding the appropriateness of investigating a referral.
- b. Consistent with the ethical analysis, the AFST score will only be accessible by workers who have been trained and who have a direct need to access the score.
- c. We share the reviewers' concern that better prediction is just one element in a continuum that must end in better, more evidence-based interventions. Our immediate concern is in identifying the right children for an investigation (i.e., the "intervention" resulting from the prediction is the investigation). Only then are we able to identify those children and families most in need of evidence-based programming. Thus, the AFST is one key element in a child welfare system designed to improve outcomes for families and children.
- d. The launch of the tool is accompanied by an alteration in the child welfare field-screening policy, which includes lowering the age for mandatory field screens while expanding the use of discretionary field screens whenever deemed necessary (regardless of age). The reviewers noted the research team's findings that field screens may reduce disparities in child protection data.