The Use of Predictive Analytics in Child Welfare

Anna Yelick, Ph.D., MSW
What is Predictive Analytics?

The recommendation system influences approximately 80% of the content streamed on Netflix. Netflix collects behavioral data to create a better experience for the user. Using Big Data to Streamline your Streaming
Predictive Analytics & the Social Sciences

Making Decisions Better, Making Lives Better
Predictive Analytics & Child Welfare

Can Predictive Analytic Models Really Enhance Decision-making?
Evaluation of the Child Welfare Predictive Analytics Project

The State Child Welfare Agency

The State Child Welfare Research Institute

Child Protective Investigators

Public Relations Specialist
Flexible and adaptive
Organized
Trained in indicators of child abuse
Evaluation of the Child Welfare Predictive Analytics Project

In what ways, if any, does the use of a predictive model, during pre-commencement, add value to child protective services?

- Workload Standards
- Worker Efficacy and Confidence
- Chronic Re-abuse by Caregivers
Evaluation of the Child Welfare Predictive Analytics Project
Evaluation of the Child Welfare Predictive Analytics Project

RESULTS

Effective?  Indeterminate

Functional?  Too many technical issues

Useful?  Not as helpful in understanding chronic maltreatment as proposed
Evaluation of the Child Welfare Predictive Analytics Project

RESULTS

Strengths of Predictive Model
- Presents the case holistically instead of in pieces

Barriers of Predictive Model
- Potentially profiles cases using characteristics like race and income
Predictive Analytics & Child Welfare

Can an algorithm really tell when kids are in danger?

Latent or Implicit Biases can influence the model and create predictions that perpetuate biases.
Google & the Beauty Pageant
Next Steps: Predictive Analytics & Child Welfare

Consider the latent and implicit biases that could bias the model and perpetuate biases that harm more children and families.