



**CENTRE FOR
SOCIAL DATA ANALYTICS**

Implementing Predictive Risk Models to Support Child Maltreatment Hotline Decisions and the Future Use of Data in the New Zealand Public Sector

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Implementing Predictive Risk Models to Support Decision-making

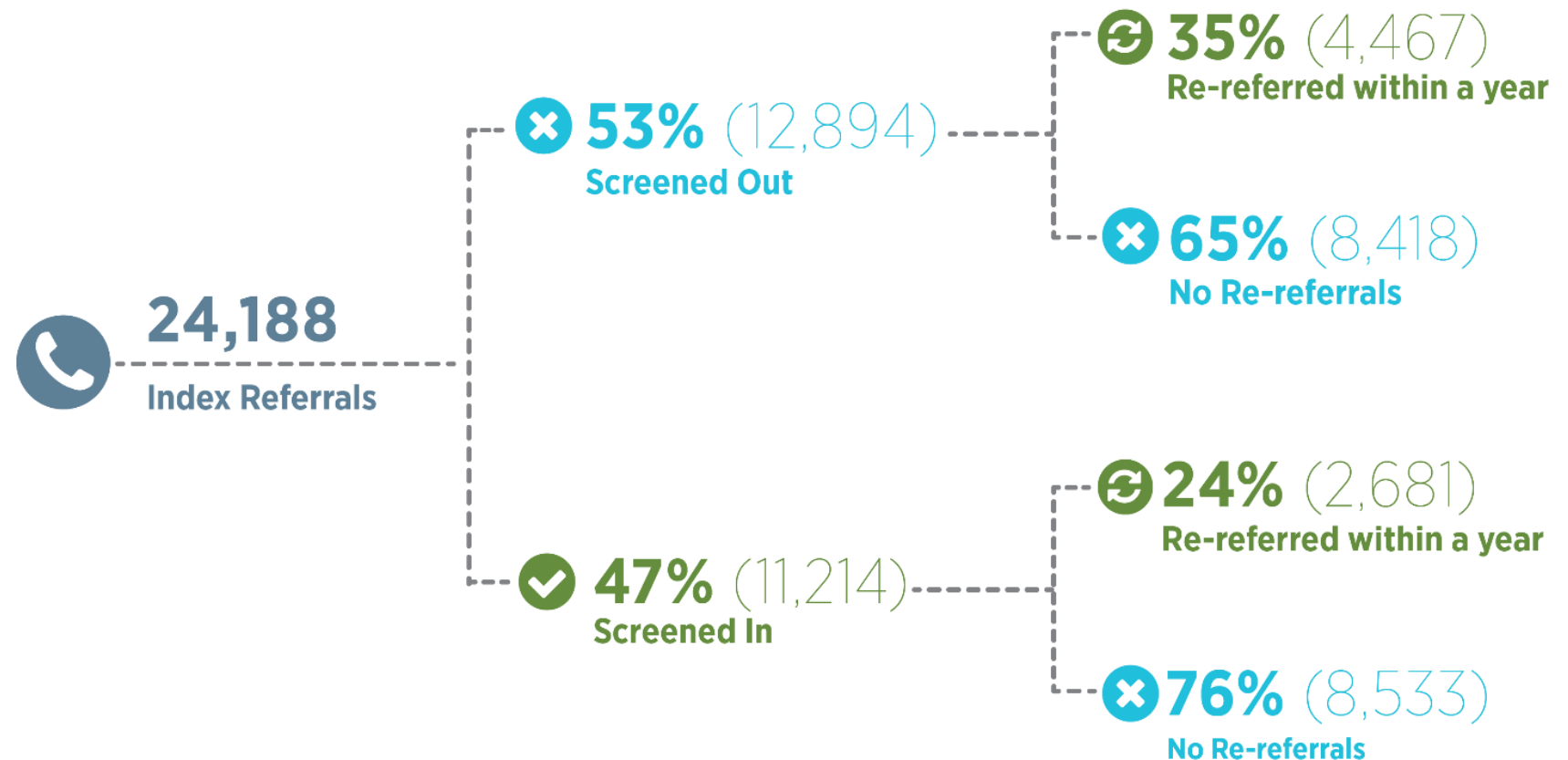
- Child Welfare Call Screening Model
Allegheny County (Pennsylvania), Douglas and Larimer County (Colorado), California, and Santiago Chile.
- Homeless Model
Allegheny County
- At-Birth Model
Allegheny County

What is the Allegheny Family Screening Tool?



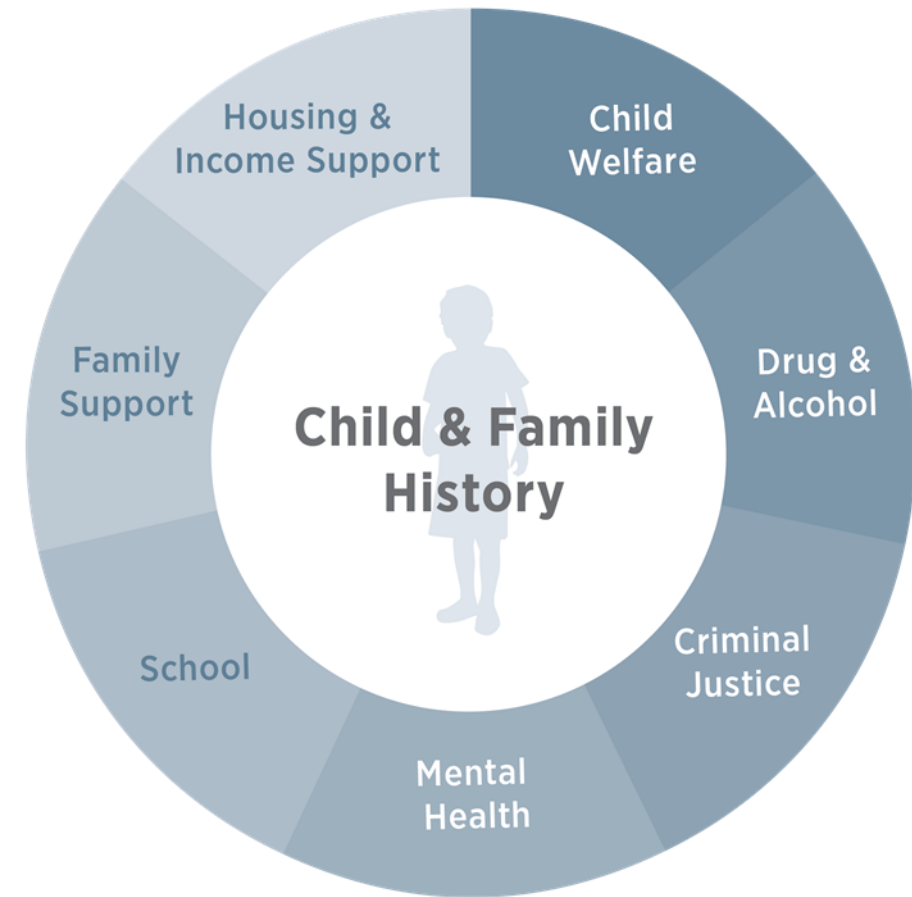
Allegheny County Child Maltreatment Hotline Decisions

A referral of abuse or neglect is made to the hotline



Motivation for the Work

- In Allegheny County, **rich data are available** to workers and supervisors to help inform decisions at call screening, **but there are no standardized protocols for using these data to inform screening decisions**
 - No method for systematically weighting this information in an equitable manner across all referrals
 - No understanding of what information predicts future adverse outcomes for children
- Can a predictive risk model address any of these concerns?



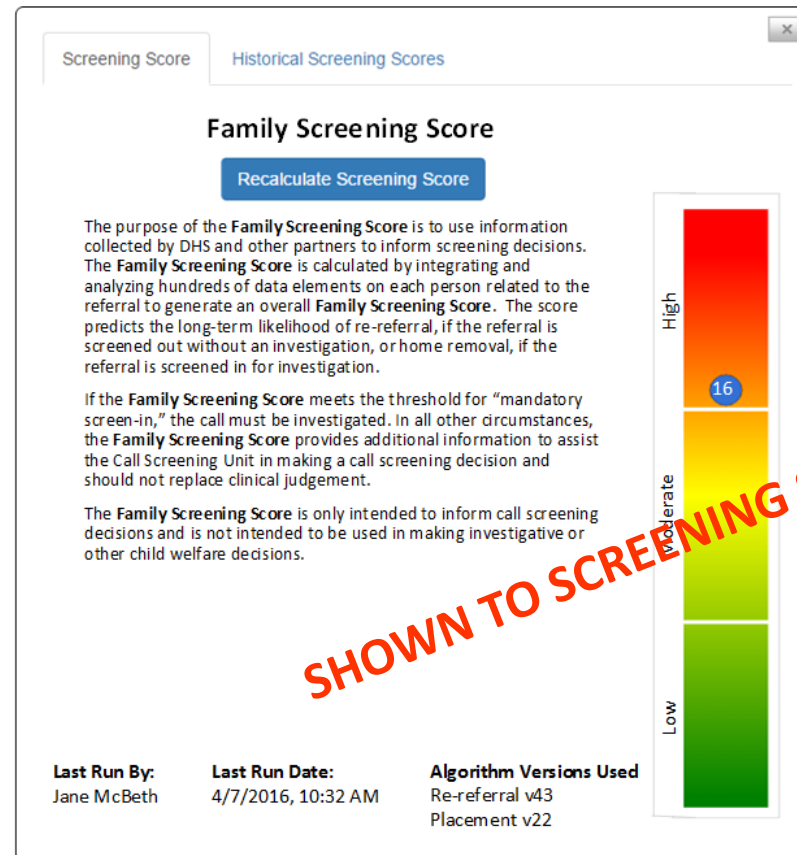
The Allegheny Family Screening Score

- The tool uses data already collected about individuals on the referral to predict the likelihood that a child on the referral will **have an out-of-home placement in 2 years if screened in**
- The predicted risk score is from 1 to 20
- The higher the score, the higher the chance of placement



Front-End Implementation

- Screening staff see the final risk score (1-20) as a decision support tool; they're encouraged to use it in combination with the clinical judgement used in the past.



Outcomes for Children who Receive a Score of 20 in the Placement Model



Outcomes for Children who Receive a Score of 1 in the Placement Model



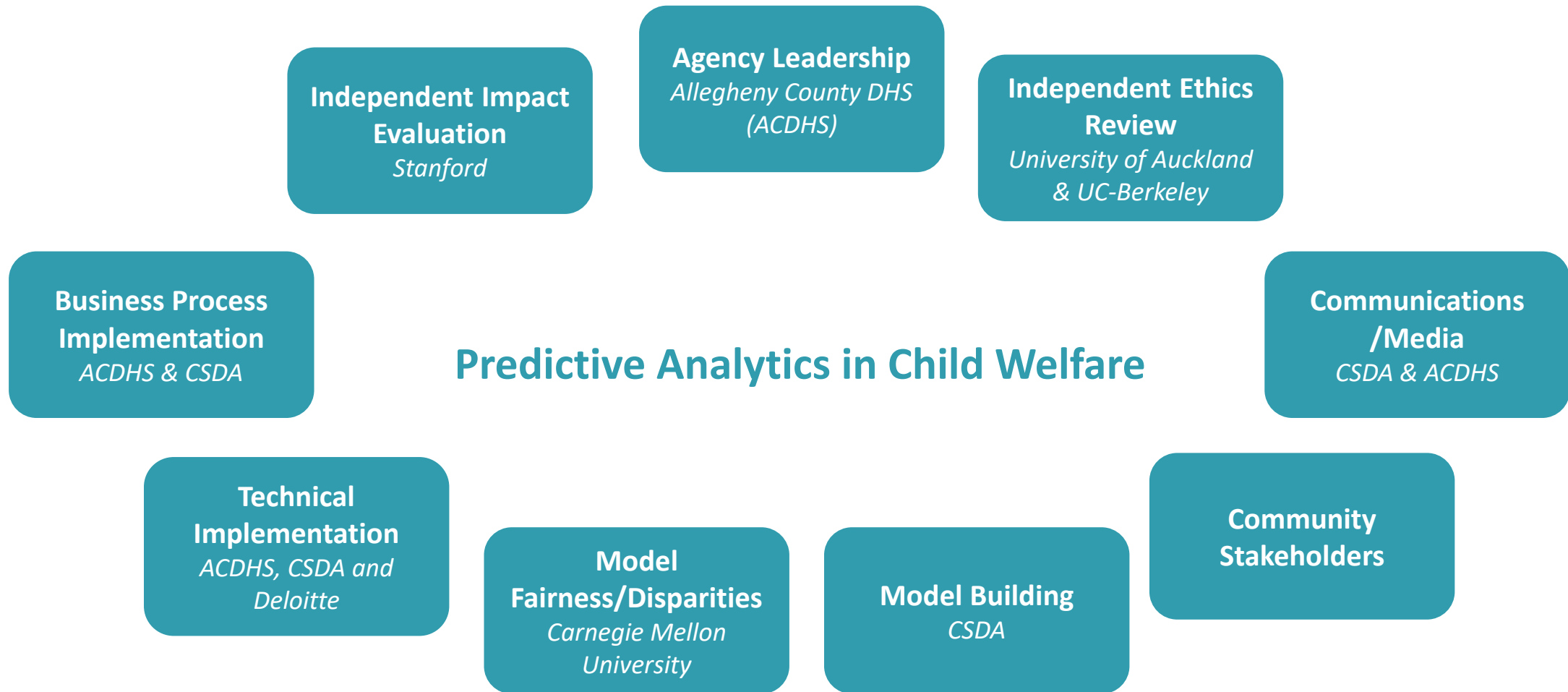
1 in 100 children

who received **a score of 1** were placed
out-of-home within 2 years of the call

Approach to Implementation



A Diverse Team of Experts is Critical



Future of Data Use in the Public Sector

- Availability of constantly improving linked administrative data (i.e., Integrated Data Infrastructure) will open up opportunities for better data analytics
- Skills within our ministries have to keep pace with these new opportunities
- We need to better connect with the academic community
- Requires careful consideration of the applications for these methodologies
- Finally, I wonder whether advances in a data analytics will lead to closer cooperation across ministries.