

TTU/CPS Partnership Opportunities



TEXAS TECH UNIVERSITY
College of Human Sciences

Community, Family
& Addiction Sciences™



Documents Reviewed

Judge Jack's ruling
(December 2015)

Stephen Group's Assessment Document (June
2014)

Stephen Group's High Needs Report (November
2015)

Foster Care Redesign Report
(February 2011)

Foster Care Redesign Implementation Plan (April
2015)

Child & Adolescent Needs & Strengths (CANS)
Comprehensive Manual

Family Strengths & Needs Assessment (FSNA)
Manual

Structured Decision Making Manual
(March 2016)

Whitman's PowerPoint presentation to the Senate
Committee on Health and Human Services
(September 2016)

Introduction

Child Protective Services and the State of Texas are at the forefront of creating a new, more positive landscape for Texas families and children.

This proposal outlines several partnership opportunities possible between the Texas Child Protective Services Division and Dr. Eugene Wang and his research team at the Department of Community, Family, and Addiction Sciences at Texas Tech University.

These are as follows:

1. Database Redesign
2. Data Driven Decision Making
3. Evaluation of Foster Care Redesign
4. Study of Two High Needs Subpopulations: Children with Mental Health Needs and Children Whom Age Out

Dr. Wang and his team can partner with CPS to redesign the IMPACT database and other collateral databases.

The Data Driven Decision Making Model is the method to be used for items two through four above. In light of this, detailed information is

included about the model, what it is; how it works; and its key benefits.

The Data Driven Decision Making Model is an actuarial process which identifies:

1. only the bits of information necessary to make a decision related to a desired outcome (probably no more than a dozen bits for any one decision), and
2. how to optimally combine these bits (such as optimal cutoffs, etc.)

Essentially, the Data Driven Decision Making Model optimizes how to choose and use data. From population studies and single program evaluation to systemic restructuring, the model establishes what and how much data is relevant. It then clearly connects how to effectively invest necessary resources to achieve desired outcomes.

**Essentially, The
Data Driven
Decision Making
Model Optimizes
How to Choose
and Use Data**

Data Driven Decision Making Model

Currently, the primary model for decision making centers on the “expert human” model. The “expert human” model has substantial flaws under optimal circumstances. Frequently, CPS staff members function in suboptimal decision making circumstances (uncertainty, time constraints, crisis/conflict, in addition to inherent human biases and variability).

An actuarial approach such as that used by the Data Driven Decision Making Model offers many advantages.* It improves on accuracy of outcome predictions and also refines the quantity of data needed (probably no more than a dozen “bits” of information for any one decision). Also, this decision making model can be “iterative” to continuously improve over time as new data come in (it can “learn”).

In addition, an actuarial decision making process can easily be digitized offering various benefits including reducing the administrative burden on staff.

*Grove & Meehl (pp. 1-6): Actuarial process has superior accuracy in 89% (64/72) of head-to-head studies vs. human judgment

Key Benefit Highlights

**EFFECTIVENESS
(IMPROVED OUTCOMES)**

**EFFICIENCY (IDENTIFY POINT OF
DIMINISHING RETURNS; LESS TIME;
LESS DATA; EASILY DIGITIZED)**

**REDUCED HUMAN BIAS AND
COMBAT MYTHS LEADING TO BIAS**

**DISCOVERY OF UNKNOWN
SYNERGIES AND RELATIONSHIPS
WITH OUTCOMES**

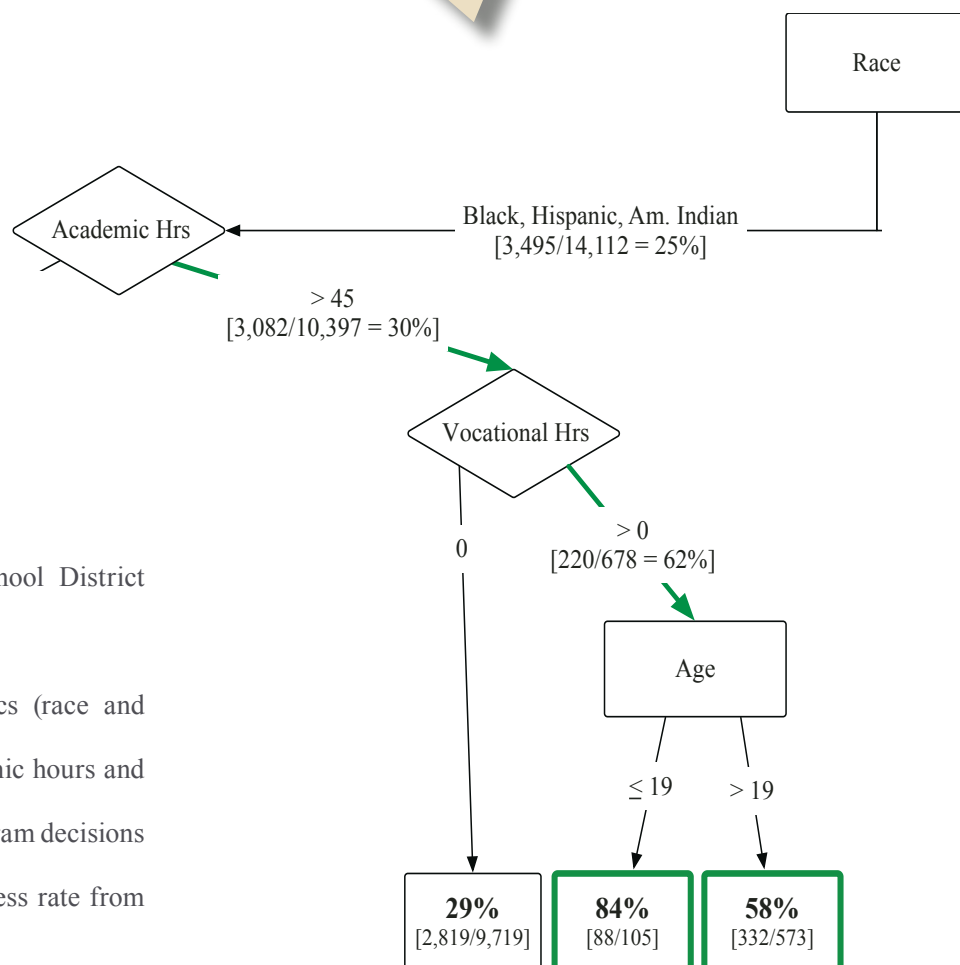
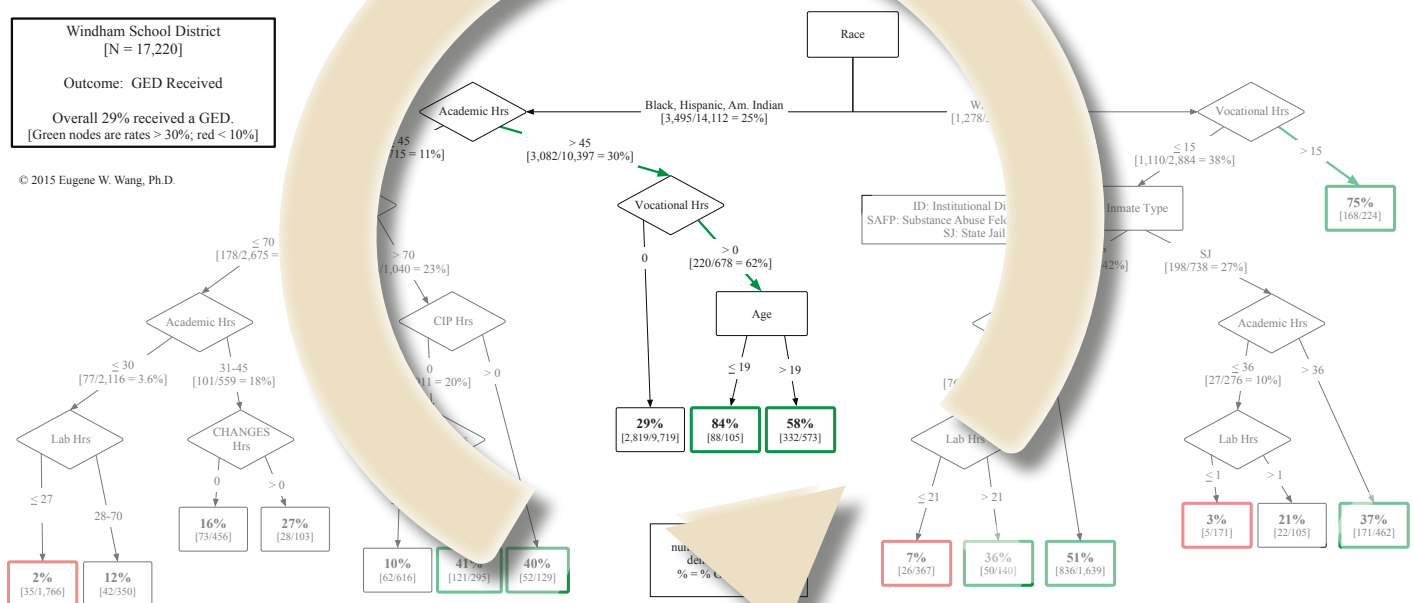
**CONSISTENCY OF SERVICE
DELIVERY**

**CONTINUOUS IMPROVEMENT
(LEARNING AND REFINEMENT WITH
NEW SAMPLES AND/OR VARIABLES)**

Decision Tree Example

Windham School District
[N = 17,220]
Outcome: GED Received
Overall 29% received a GED.
[Green nodes are rates > 30%; red < 10%]

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Example from Windham School District
GED Decision Tree:

Using only two demographics (race and age) and two services (academic hours and vocational hours) reveals program decisions which more than double success rate from 30% to 75% - 85%.

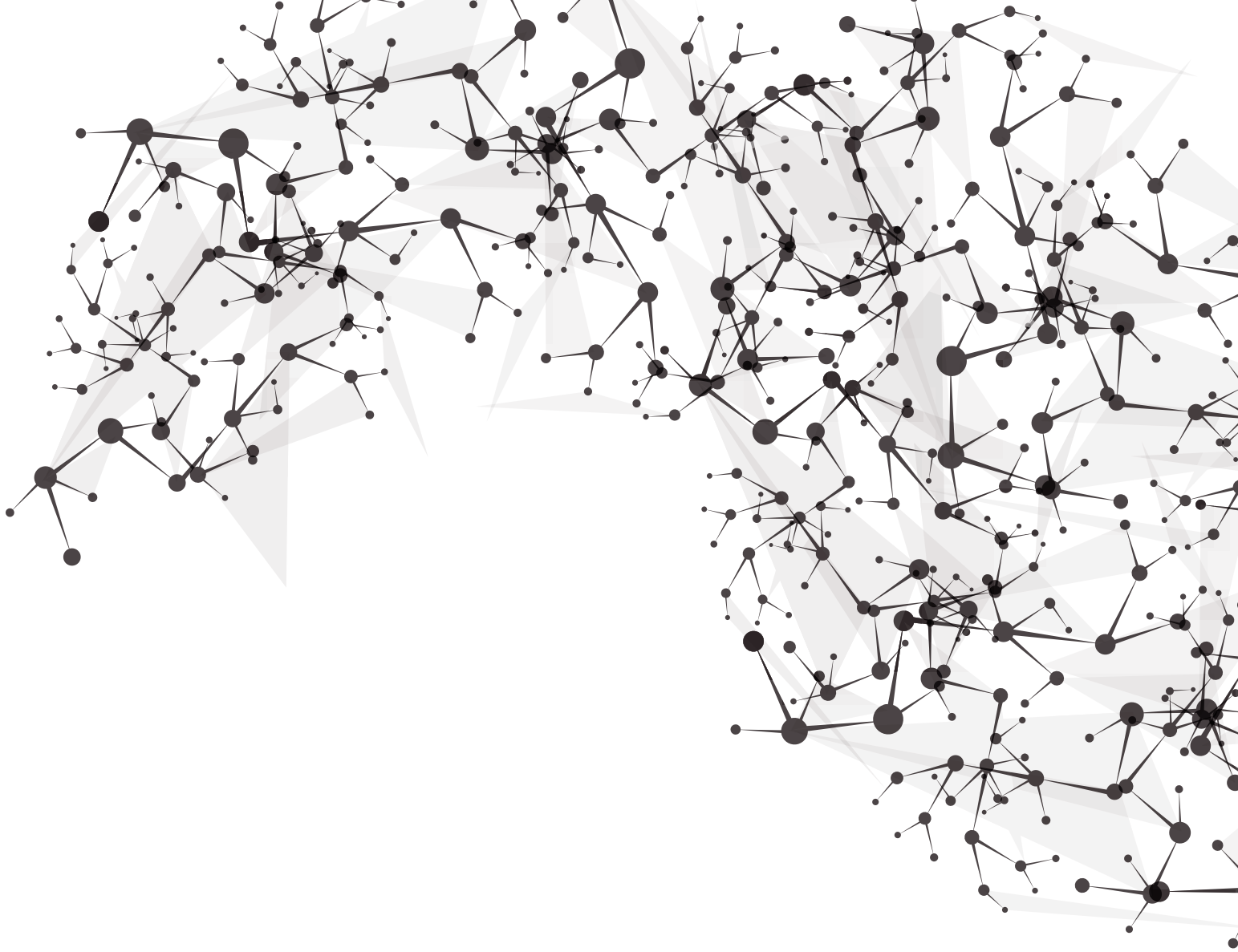


Partnership Opportunities

The four partnership opportunities between the Texas Child Protective Services Division and Dr. Eugene Wang and his research team are:

1. Database Redesign
2. Data Driven Decision Making
3. Evaluation of Foster Care Redesign
4. Study of Two High Needs Subpopulations:
Children with Mental Health Needs and
Children Whom Age Out

Through any of these partnership opportunities, our driving goal is to deliver pathways and solutions that lead to desired outcomes and successes.



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