

Second Regular Session  
Seventieth General Assembly  
STATE OF COLORADO

**PREAMENDED**

*This Unofficial Version Includes Committee  
Amendments Not Yet Adopted on Second Reading*

LLS NO. 16-1071.02 Jane Ritter x4342

**HOUSE BILL 16-1383**

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**HOUSE SPONSORSHIP**

**Singer and Fields,**

**SENATE SPONSORSHIP**

**(None),**

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**House Committees**

Public Health Care & Human Services  
Appropriations

**Senate Committees**

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**A BILL FOR AN ACT**

101 **CONCERNING A PREDICTIVE DATA ANALYTIC TECHNOLOGY FOR CHILD**  
102 **WELFARE PILOT PROGRAM, AND, IN CONNECTION THEREWITH,**  
103 **MAKING AN APPROPRIATION.**

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**Bill Summary**

*(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://www.leg.state.co.us/bills summaries>.)*

The bill requires the department of human services (department) to develop, on or before September 1, 2016, a state-of-the-art data analytic system for child welfare pilot program (pilot program) to access, integrate, and analyze data sources for the purpose of calculating a child's risk for abuse or neglect. The pilot program must be able to integrate data

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.  
*Capital letters indicate new material to be added to existing statute.*  
*Dashes through the words indicate deletions from existing statute.*

from various state and county sources, use various types of technology to accurately and precisely calculate child risk scores, and provide mechanisms to alert and assist caseworkers to changes in the environment of a child at risk.

The department shall report to the health and human services committee of the senate and the public health care and human services committee of the house of representatives, or any successor committees, on the progress and status of the pilot program.

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1 *Be it enacted by the General Assembly of the State of Colorado:*

2 **SECTION 1.** In Colorado Revised Statutes, **add** article 5.1 to title  
3 26 as follows:

4 **ARTICLE 5.1**

5 **Implementation Plan for a Predictive Data Analytic**

6 **System for Child Welfare**

7 **26-5.1-101. Legislative declaration.** (1) THE GENERAL  
8 ASSEMBLY FINDS AND DECLARES THAT:

9 (a) CHILD ABUSE AND NEGLECT IS A CRISIS THAT AFFECTS THE  
10 SAFETY AND WELFARE OF VULNERABLE CHILDREN ON GLOBAL, NATIONAL,  
11 STATE, AND COUNTY LEVELS;

12 (b) IN THE UNITED STATES ALONE, MORE THAN ONE THOUSAND  
13 FIVE HUNDRED CHILDREN DIE EACH YEAR AS A DIRECT RESULT OF ABUSE  
14 OR NEGLECT;

15 (c) IN COLORADO BETWEEN 2007 AND 2012, ONE HUNDRED  
16 SEVENTY-FIVE CHILDREN DIED AS A DIRECT RESULT OF ABUSE OR  
17 NEGLECT; [REDACTED]

18 (d) INFORMATION EXISTS IN STATE AND COUNTY DATABASES THAT  
19 CAN HELP DETERMINE WHICH INDIVIDUALS MIGHT HAVE ACCESS TO A  
20 CHILD AND THE RISKS THOSE INDIVIDUALS POSE TO THE CHILD;

21 (e) MODERN TECHNOLOGIES AND BEST PRACTICES EXIST, AND

1 HAVE BEEN UTILIZED SUCCESSFULLY IN OTHER STATES, THAT CAN ACCESS,  
2 INTEGRATE, AND ANALYZE DATA ABOUT A CHILD AND HIS OR HER  
3 ENVIRONMENT IN NEAR REAL TIME TO PROVIDE A MORE TIMELY,  
4 ACCURATE, AND PRECISE MEASURE OF A CHILD'S RISK OF TRAGIC  
5 OUTCOMES AS A RESULT OF ABUSE OR NEGLECT;

6 (f) BY USING TECHNOLOGY TO MONITOR A CHILD'S ENVIRONMENT  
7 AND CONTINUOUSLY UPDATE THE CHILD'S RISK PROFILE, CASEWORKERS  
8 ARE ABLE TO FOCUS BETTER ON THE HIGHEST RISK CASES AND THOSE THAT  
9 HAVE THE MOST IMMEDIATE NEED FOR INTERVENTIONS, THUS BETTER  
10 EQUIPPING CASEWORKERS TO PREVENT TRAGIC OUTCOMES; AND

11 (g) PROVIDING APPROPRIATE, USER-FRIENDLY TOOLS AND  
12 TECHNOLOGY TO CASEWORKERS CAN DRAMATICALLY IMPROVE  
13 OUTCOMES, INCREASE PRODUCTIVITY, AND REDUCE EMPLOYEE TURNOVER  
14 RESULTING FROM BURNOUT, STRESS, AND FRUSTRATION.

15 (2) THEREFORE, THE GENERAL ASSEMBLY DECLARES THAT IT IS IN  
16 THE BEST INTERESTS OF THE CHILDREN OF COLORADO TO ESTABLISH AN  
17 IMPLEMENTATION PLAN FOR A STATE-OF-THE-ART PREDICTIVE DATA  
18 ANALYTIC SYSTEM FOR CHILD WELFARE THAT IS COMPATIBLE WITH THE  
19 COLORADO CHILD WELFARE MANAGEMENT SYSTEM AND THE STATE'S  
20 INFORMATION TECHNOLOGY ENVIRONMENT.

21 **26-5.1-102. Predictive data analytic technology for child**  
22 **welfare pilot program - steering committee - requirements -**  
23 **independent vendor - reporting. (1) (a) ON OR BEFORE DECEMBER 15,**  
24 **2016, USING THE RECOMMENDATIONS OF THE STEERING COMMITTEE**  
25 **FORMED IN PARAGRAPH (b) OF THIS SUBSECTION (1), THE STATE**  
26 **DEPARTMENT SHALL RELEASE A REQUEST FOR PROPOSALS FOR A**  
27 **TECHNOLOGY VENDOR FOR A PREDICTIVE DATA ANALYTIC TECHNOLOGY**

1 FOR CHILD WELFARE PILOT PROGRAM, REFERRED TO IN THIS ARTICLE AS  
2 THE "PILOT PROGRAM". THE PURPOSE OF THE PILOT PROGRAM IS TO  
3 IMPLEMENT A STATE-OF-THE ART DATA ANALYTICS TECHNOLOGY SYSTEM  
4 TO ACCESS, INTEGRATE, AND ANALYZE DATA SOURCES TO CALCULATE A  
5 CHILD'S RISK SCORES FOR ABUSE OR NEGLECT.

6 (b) THE STATE DEPARTMENT SHALL CONVENE A STEERING  
7 COMMITTEE THAT INCLUDES APPROPRIATE STAKEHOLDER  
8 REPRESENTATION FROM CHILD WELFARE SERVICES AT THE STATE AND  
9 COUNTY LEVELS. THE PURPOSE OF THE STEERING COMMITTEE IS TO:

10 (I) CONSIDER AND RECOMMEND, AT A MINIMUM, THE APPROPRIATE  
11 NUMBER AND TYPES OF COUNTIES TO PARTICIPATE IN THE PILOT PROGRAM  
12 TO ENSURE ADEQUATE DATA AVAILABILITY AND REPRESENTATION OF  
13 DIVERSE POPULATIONS THAT WILL RESULT IN A MEANINGFUL PILOT  
14 PROGRAM;

15 (II) ASSIST THE STATE DEPARTMENT IN THE DEVELOPMENT OF THE  
16 REQUEST FOR PROPOSALS FOR A TECHNOLOGY VENDOR, AS DESCRIBED IN  
17 SUBSECTION (3) OF THIS SECTION, UTILIZING THE REQUIREMENTS OF  
18 SUBSECTION (2) OF THIS SECTION; AND

19 (III) RECOMMEND AN INDEPENDENT THIRD-PARTY EVALUATOR TO  
20 PERFORM THE OBLIGATIONS SPECIFIED IN SECTION 26-5.1-103 (2).

21 (2) THE DATA ANALYTIC SYSTEM MUST PROVIDE THE FOLLOWING  
22 CAPABILITIES:

23 (a) THE ABILITY TO INTEGRATE DATA FROM VARIOUS STATE AND  
24 COUNTY DATA SOURCES;

25 (b) ADVANCED MATCHING AND ENTITY RESOLUTION TO  
26 ACCURATELY MERGE DATA FROM DIFFERENT DATABASES;

27 (c) ADVANCED SOCIAL NETWORK OR LINK ANALYSIS TO

1 DETERMINE BOTH KNOWN AND HIDDEN RELATIONSHIPS THAT THE CHILD  
2 MAY HAVE WITH OTHER PEOPLE;

3 (d) USE OF THE LATEST ADVANCED ANALYTICAL TECHNIQUES,  
4 INCLUDING PREDICTIVE MODELING; COMPLEX PATTERN ANALYSIS; SOCIAL  
5 NETWORK ANALYSIS; TEXT MINING; AND GEOSPATIAL ANALYSIS, TO MORE  
6 ACCURATELY AND PRECISELY CALCULATE CHILD RISK SCORES;

7 (e) THE ABILITY TO REGULARLY MONITOR DATA SOURCES TO  
8 AUTOMATICALLY IDENTIFY CHANGES TO A CHILD'S ENVIRONMENT AND  
9 RECALCULATE THE CHILD'S RISK ACCORDINGLY;

10 (f) AN ALERTING MECHANISM THAT NOTIFIES CASEWORKERS WHEN  
11 CHILD RISK FACTORS EXCEED PRESET TOLERANCE LEVELS;

12 (g) AN INTUITIVE USER INTERFACE FOR CASEWORKERS TO EASILY  
13 PRIORITIZE AND VISUALIZE CASES AND RELATED INFORMATION ABOUT THE  
14 CHILD AND HIS OR HER ENVIRONMENT; AND

15 (h) THE ABILITY FOR FEEDBACK AND SELF-LEARNING THAT  
16 CAPTURES OUTCOMES AND UTILIZES THE INFORMATION TO IMPROVE  
17 ANALYTIC ACCURACY OVER TIME.

18 (3) AT THE CONCLUSION OF THE REQUEST FOR PROPOSALS PROCESS  
19 DEVELOPED PURSUANT TO SUBSECTION (1) OF THIS SECTION, THE STATE  
20 DEPARTMENT SHALL SELECT AND ENTER INTO A VENDOR CONTRACT FOR  
21 THE PILOT PROGRAM IN AN AMOUNT NOT TO EXCEED FIVE HUNDRED  
22 THOUSAND DOLLARS WITH A TECHNOLOGY VENDOR WITH EXPERIENCE IN  
23 IMPLEMENTING DATA ANALYTICS TECHNOLOGY TO ACCESS, INTEGRATE,  
24 AND ANALYZE ENTERPRISE HUMAN SERVICES DATA TO CALCULATE RISK  
25 SCORES. THE TECHNOLOGY VENDOR SELECTED SHALL ENSURE AND  
26 CERTIFY ITS COMPLIANCE WITH ALL RELEVANT STATE AND FEDERAL  
27 PRIVACY LAWS AND POLICIES.

1 (4) UNLESS OTHERWISE PRECLUDED BY STATE OR FEDERAL  
2 STATUTE OR RULES OR REGULATIONS, STATE AGENCIES SHALL MAKE THEIR  
3 DATA AVAILABLE TO THE STATE DEPARTMENT FOR THE SPECIFIC PURPOSE  
4 OF THE PILOT PROGRAM. DATA SHARING AGREEMENTS OR MEMORANDA OF  
5 UNDERSTANDING MUST BE EXECUTED BETWEEN AGENCIES TO PROTECT  
6 THE PRIVACY AND CONFIDENTIALITY OF THE DATA.

7 **26-5.1-103. Reporting and recommendations.** (1) ON OR  
8 BEFORE MARCH 31, 2017, AND EVERY QUARTER THEREAFTER UNLESS  
9 OTHERWISE DIRECTED BY THE COMMITTEE CHAIRS, THE STATE  
10 DEPARTMENT SHALL SUBMIT A WRITTEN REPORT TO THE HEALTH AND  
11 HUMAN SERVICES COMMITTEE OF THE SENATE AND THE PUBLIC HEALTH  
12 CARE AND HUMAN SERVICES COMMITTEE OF THE HOUSE OF  
13 REPRESENTATIVES, OR ANY SUCCESSOR COMMITTEES, ON THE PROGRESS  
14 AND STATUS OF THE PILOT PROGRAM. THE REPORT MUST INCLUDE, AT A  
15 MINIMUM:

16 (a) THE OVERALL PILOT PROGRAM STATUS, MILESTONES, AND  
17 BUDGETARY REPORTS;

18 (b) THE DATA SOURCES THAT HAVE BEEN INCORPORATED, AS WELL  
19 AS ADDITIONAL DATA SOURCES THAT WOULD ADD VALUE TO THE OVERALL  
20 GOALS OF THE PILOT PROGRAM;

21 (c) ANALYTICAL RESULTS AND ACCURACY;

22 (d) EXAMPLES OF CASE INTERVENTIONS;

23 (e) PRODUCTIVITY IMPROVEMENTS; AND

24 (f) AGENCY PROCEDURAL CHANGES OR BEST PRACTICES  
25 IDENTIFIED BY THE PILOT PROGRAM.

26 (2) AT THE CONCLUSION OF THE PILOT PROGRAM, THE STATE  
27 DEPARTMENT SHALL, IN ADDITION TO THE QUARTERLY REPORTING

1 REQUIRED PURSUANT TO SUBSECTION (1) OF THIS SECTION, AND AFTER  
2 REVIEW BY AN INDEPENDENT THIRD-PARTY EVALUATOR, PROVIDE A  
3 RECOMMENDATION, PLAN, AND COST ESTIMATE FOR A STATEWIDE  
4 IMPLEMENTATION OF THE PILOT PROGRAM.

5 **26-5.1-104. Repeal.** THIS ARTICLE IS REPEALED, EFFECTIVE  
6 JANUARY 1, 2018.

7 **SECTION 2. Appropriation.** (1) For the 2016-17 state fiscal  
8 year, \$432,153 is appropriated to the department of human services for  
9 use by the office of information technology services. This appropriation  
10 is from the general fund. To implement this act, the office may use this  
11 appropriation as follows:

12 (a) \$50,000 for the child welfare predictive analytic pilot program;  
13 and

14 (b) \$382,153 for the purchase of information technology services.

15 (2) For the 2016-17 state fiscal year, the general assembly  
16 anticipates that the department of human services will receive \$432,153  
17 in federal funds for use by the office of information technology services.  
18 The appropriation in subsection (1) of this section is based on the  
19 assumption that the department will receive this amount of federal funds,  
20 which is included for informational purposes only.

21 (3) For the 2016-17 state fiscal year, \$764,306 is appropriated to  
22 the office of the governor for use by the office of information technology.  
23 This appropriation is from reappropriated funds received from the  
24 department of human services under subsections (1) and (2) of this  
25 section. To implement this act, the office may use this appropriation to  
26 provide information technology services for the department of human  
27 services.

1           **SECTION 3. Safety clause.** The general assembly hereby finds,  
2 determines, and declares that this act is necessary for the immediate  
3 preservation of the public peace, health, and safety.