

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**

**Grantham,**

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**House Committees**

Public Health Care & Human Services  
Appropriations

**Senate Committees**

Finance  
Appropriations

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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.*

HOUSE  
3rd Reading Unamended  
May 4, 2016

HOUSE  
Amended 2nd Reading  
May 3, 2016

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) AFTER THE REVIEW BY THE JOINT TECHNOLOGY COMMITTEE  
7 CONDUCTED PURSUANT TO PARAGRAPH (c) OF THIS SUBSECTION (1), THE  
8 STATE DEPARTMENT SHALL CONVENE A STEERING COMMITTEE THAT  
9 INCLUDES APPROPRIATE STAKEHOLDER REPRESENTATION FROM CHILD  
10 WELFARE SERVICES AT THE STATE AND COUNTY LEVELS. THE STEERING  
11 COMMITTEE SHALL INCLUDE IN ITS CONSIDERATIONS ANY INFORMATION OR  
12 RECOMMENDATIONS PROVIDED BY THE JOINT TECHNOLOGY COMMITTEE  
13 PURSUANT TO PARAGRAPH (c) OF THIS SUBSECTION (1). THE PURPOSE OF  
14 THE STEERING COMMITTEE IS TO:

15 (I) CONSIDER AND RECOMMEND, AT A MINIMUM, THE APPROPRIATE  
16 NUMBER AND TYPES OF COUNTIES TO PARTICIPATE IN THE PILOT PROGRAM  
17 TO ENSURE ADEQUATE DATA AVAILABILITY AND REPRESENTATION OF  
18 DIVERSE POPULATIONS THAT WILL RESULT IN A MEANINGFUL PILOT  
19 PROGRAM;

20 (II) ASSIST THE STATE DEPARTMENT IN THE DEVELOPMENT OF THE  
21 REQUEST FOR PROPOSALS FOR A TECHNOLOGY VENDOR, AS DESCRIBED IN  
22 SUBSECTION (3) OF THIS SECTION, UTILIZING THE REQUIREMENTS OF  
23 SUBSECTION (2) OF THIS SECTION; AND

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

26 (c) PRIOR TO THE CONVENING OF THE STEERING COMMITTEE  
27 PURSUANT TO PARAGRAPH (b) OF THIS SUBSECTION (1) AND TO THE

1 RELEASE OF THE REQUEST FOR PROPOSALS, THE JOINT TECHNOLOGY  
2 COMMITTEE SHALL MEET AS SOON AS FEASIBLY POSSIBLE, SO AS TO NOT  
3 DELAY THE RELEASE OF THE REQUEST FOR PROPOSALS, TO DISCUSS ISSUES  
4 RELATED TO THE REQUEST FOR PROPOSALS, TECHNICAL AND COST BENEFIT  
5 ISSUES RELATED TO THE PILOT PROGRAM, AND THE OVERALL TECHNICAL  
6 FEASIBILITY OF THE PILOT PROGRAM.

7 (2) THE DATA ANALYTIC SYSTEM MUST PROVIDE THE FOLLOWING  
8 CAPABILITIES:

9 (a) THE ABILITY TO INTEGRATE DATA FROM VARIOUS STATE AND  
10 COUNTY DATA SOURCES;

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

13 (c) ADVANCED SOCIAL NETWORK OR LINK ANALYSIS TO  
14 DETERMINE BOTH KNOWN AND HIDDEN RELATIONSHIPS THAT THE CHILD  
15 MAY HAVE WITH OTHER PEOPLE;

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

20 (e) THE ABILITY TO REGULARLY MONITOR DATA SOURCES TO  
21 AUTOMATICALLY IDENTIFY CHANGES TO A CHILD'S ENVIRONMENT AND  
22 RECALCULATE THE CHILD'S RISK ACCORDINGLY;

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

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

1 (h) THE ABILITY FOR FEEDBACK AND SELF-LEARNING THAT  
2 CAPTURES OUTCOMES AND UTILIZES THE INFORMATION TO IMPROVE  
3 ANALYTIC ACCURACY OVER TIME.

4 (3) AT THE CONCLUSION OF THE REQUEST FOR PROPOSALS PROCESS  
5 DEVELOPED PURSUANT TO SUBSECTION (1) OF THIS SECTION, THE STATE  
6 DEPARTMENT SHALL SELECT AND ENTER INTO A VENDOR CONTRACT FOR  
7 THE PILOT PROGRAM IN AN AMOUNT NOT TO EXCEED FIVE HUNDRED  
8 THOUSAND DOLLARS WITH A TECHNOLOGY VENDOR WITH EXPERIENCE IN  
9 IMPLEMENTING DATA ANALYTICS TECHNOLOGY TO ACCESS, INTEGRATE,  
10 AND ANALYZE ENTERPRISE HUMAN SERVICES DATA TO CALCULATE RISK  
11 SCORES. THE TECHNOLOGY VENDOR SELECTED SHALL ENSURE AND  
12 CERTIFY ITS COMPLIANCE WITH ALL RELEVANT STATE AND FEDERAL  
13 PRIVACY LAWS AND POLICIES.

14 (4) UNLESS OTHERWISE PRECLUDED BY STATE OR FEDERAL  
15 STATUTE OR RULES OR REGULATIONS, STATE AGENCIES SHALL MAKE THEIR  
16 DATA AVAILABLE TO THE STATE DEPARTMENT FOR THE SPECIFIC PURPOSE  
17 OF THE PILOT PROGRAM. DATA SHARING AGREEMENTS OR MEMORANDA OF  
18 UNDERSTANDING MUST BE EXECUTED BETWEEN AGENCIES TO PROTECT  
19 THE PRIVACY AND CONFIDENTIALITY OF THE DATA.

20 **26-5.1-103. Reporting and recommendations.** (1) ON OR  
21 BEFORE MARCH 31, 2017, AND EVERY QUARTER THEREAFTER UNLESS  
22 OTHERWISE DIRECTED BY THE COMMITTEE CHAIRS, THE STATE  
23 DEPARTMENT SHALL SUBMIT A WRITTEN REPORT TO THE JOINT  
24 TECHNOLOGY COMMITTEE, THE HEALTH AND HUMAN SERVICES  
25 COMMITTEE OF THE SENATE, AND THE PUBLIC HEALTH CARE AND HUMAN  
26 SERVICES COMMITTEE OF THE HOUSE OF REPRESENTATIVES, OR ANY  
27 SUCCESSOR COMMITTEES, ON THE PROGRESS AND STATUS OF THE PILOT

1 PROGRAM. THE REPORT MUST INCLUDE, AT A MINIMUM:

2 (a) THE OVERALL PILOT PROGRAM STATUS, MILESTONES, AND  
3 BUDGETARY REPORTS;

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

7 (c) ANALYTICAL RESULTS AND ACCURACY;

8 (d) EXAMPLES OF CASE INTERVENTIONS;

9 (e) PRODUCTIVITY IMPROVEMENTS; AND

10 (f) AGENCY PROCEDURAL CHANGES OR BEST PRACTICES  
11 IDENTIFIED BY THE PILOT PROGRAM.

12 (2) AT THE CONCLUSION OF THE PILOT PROGRAM, THE STATE  
13 DEPARTMENT AND THE JOINT TECHNOLOGY COMMITTEE SHALL REVIEW  
14 AND, IN ADDITION TO THE QUARTERLY REPORTING REQUIRED PURSUANT  
15 TO SUBSECTION (1) OF THIS SECTION, AND AFTER REVIEW BY AN  
16 INDEPENDENT THIRD-PARTY EVALUATOR, PROVIDE A RECOMMENDATION,  
17 PLAN, AND COST ESTIMATE FOR A STATEWIDE IMPLEMENTATION OF THE  
18 PILOT PROGRAM.

19 **26-5.1-104. Repeal.** THIS ARTICLE IS REPEALED, EFFECTIVE  
20 JANUARY 1, 2018.

21 **SECTION 2. Appropriation.** (1) For the 2016-17 state fiscal  
22 year, \$500,000 is appropriated to the department of human services. This  
23 appropriation is from the general fund. To implement this act, the  
24 department may use this appropriation for the child welfare predictive  
25 analytic pilot program. \_\_\_\_\_

26 **SECTION 3. Safety clause.** The general assembly hereby finds,

- 1 determines, and declares that this act is necessary for the immediate
- 2 preservation of the public peace, health, and safety.