

Office of Children, Youth & Families

CLEARANCE SHEET

Predictive Analytics Scope of Work for Purchase order

Date / Contact Person / Agency

DATE: 1/9/17

CONTACT NAME: Korey Elger

CONTACT OFFICE/DIVISION: OCYF/ DCW

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CONTACT PHYSICAL ADDRESS/FLOOR/OFFICE:

PURPOSE:

Who: Identifying the children/youth who may emancipate from child welfare to provide intervention at an earlier point in time.

What: A Purchase Order for revising the algorithms for Predictive Analytics with IMPAQ.

When: The work is anticipated to start in February 2017 and be completed in June 2017.

Where: N/A

How: Through MCV funds and IV-E Waiver savings

Why: Currently Predictive Analytics identifies children/youth that are likely to emancipate from the child welfare system. With this new scope of work DCW would be able to identify these children/youth earlier to work towards preventing these children/youth from emancipating from the child welfare system.

Cost: \$ 19,961.43 Please see breakdown attached

Signature Approvals

Name: Jason Lester

Title Ongoing Services Manager

Name: Name: Paige Rosemond

Title Associate Director, Programs

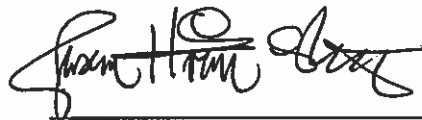
Title Name: Ann Rosales

Title DCW Director

Name: Name: Robert Werthwein

Title OCYF Director

Title



Date: 1/26/17



Date: 1/26/17

↓
E clearance

Date:

Notes / Special Instructions:

If approved we will need to provide IMPAQ with 2 trails profiles to extract the data. Please include Data Sharing Agreement+

DCW Only (I Drive Location of Document/s): Permanency Services Unit/
Predictive Analytics



COLORADO

Department of Human Services

17-0041

**Colorado Department of Human Services:
Legally Free Emancipation Risk Scores Predictive Analytics**

IMPAQ International (IMPAQ) Scope of Work – FY17

IMPAQ shall do, perform, and carry out, in a satisfactory and proper manner the following:

- 1. Review of Algorithms & Data** – IMPAQ will review the existing Legally Free Emancipation Risk Score (ERS) algorithms and the associated data. CDHS will provide IMPAQ with the current reports (including the associated code/syntax) that are used to calculate the ERS for the population of legally free children and youth, along with copies of the raw and finalized data from the most recent reporting period. IMPAQ will review the existing reports and most recent data to identify options for revising the algorithms to meet CDHS' needs. IMPAQ's recommendations will be summarized via a brief document that will be provided to CDHS for review and discussion with IMPAQ.
- 2. Revision of Algorithms & Exploration of Subpopulations of Interest** – After CDHS and IMPAQ have discussed IMPAQ's recommendations and CDHS has provided subsequent approval, IMPAQ will explore options for revising the algorithms to focus on subpopulations of interest to CDHS, including identifying younger populations of legally free children with elevated risk scores. IMPAQ will work with CDHS to run revised versions of the algorithms and examine the associated subpopulations.
- 3. Updating the Algorithms** – After working with CDHS to revise the ERS algorithms to identify the subpopulations of interest to CDHS, IMPAQ will update the ERS algorithms. The updates to the algorithms will consist of updates to the ERS code/syntax within Crystal Reports. IMPAQ will test the updated Crystal Report to ensure that the revised risk scores are properly calculated.
- 4. Final Report** – After updating the ERS algorithms, IMPAQ will develop a final report (not to exceed 25 double-spaced pages) that provides a detailed overview of the updates. The final report will include:
 - An overview of the methodological approach for updating the ERS algorithms
 - An overview of the revisions to the algorithms and the associated subpopulations of legally free children and youth that were explored
 - A discussion of the changes made to the ERS algorithms
 - A discussion of the associated implications of revising the ERS algorithms

CDHS Predictive Analytics

Scenario 2

COST ELEMENT	Unit Rate 1 (2/1/17 to 2/28/17)	Unit Rate 2 (3/1/17 to 6/30/17)	Blended Rate	TASK 1.1		TASK 1.2		TASK 1.3		TASK 1.4		TOTAL COST	
				Review of Algorithms & Data		Revision of Algorithms & Exploration of Subpopulations of Interest		Updating Algorithms		Final Report			
				Hours/ Units	Price	Hours/ Units	Price	Hours/ Units	Price	Hours/ Units	Price		
				Hours/ Units	Price	Hours/ Units	Price	Hours/ Units	Price	Hours/ Units	Price		
IMPAQ RESEARCH STAFF													
Elgin, Dallas J.	\$144.22	\$149.27	\$148.26	10	\$1,482.63	25	\$3,706.58	10	\$1,482.63	23	\$3,410.05	68	\$10,081.90
Smith, Jessica H.	\$132.09	\$136.72	\$135.79	10	\$1,357.92	15	\$2,036.88	5	\$678.96	15	\$2,036.88	45	\$6,110.65
Mukta, Srinivas	\$215.66	\$223.21	\$221.70	0	\$0.00	0	\$0.00	10	\$2,217.02	0	\$0.00	10	\$2,217.02
Subtotal Research Staff Wages				20	\$2,840.56	40	\$5,743.47	25	\$4,378.61	38	\$5,446.94	123	\$18,409.57
CONSULTANTS													
Editor	\$106.26	\$109.98	\$109.24	0	\$0.00	0	\$0.00	0	\$0.00	1	\$109.24	1	\$109.24
Subtotal Consultants Labor				0	\$0.00	0	\$0.00	0	\$0.00	1	\$109.24	1	\$109.24
OTHER DIRECT COSTS													
User Charge for Computing Services	\$6.24	\$6.24	\$6.24	20	\$124.86	40	\$249.71	25	\$156.07	38	\$237.23	123	\$767.86
Software	\$664.13	\$677.41	\$674.75	0	\$0.00	0	\$0.00	1	\$674.75	0	\$0.00	1	\$674.75
Subtotal ODCs					\$124.86		\$249.71		\$830.82		\$237.23		\$1,442.61
TOTAL PRICE					\$2,965.41		\$5,993.18		\$5,209.43		\$5,793.40		\$19,961.42

Notes:

1. IMPAQ's annual salary review process takes place as of March 1st each year. Salaries have been escalated by 3.5% as of this date.
2. Other Direct Costs are escalated by 2% annually, effective March 1.