

**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