

# **Independent Assessment of Michigan's Statewide Automated Child Welfare Information System (MiSACWIS) and Child Welfare Data Reporting Infrastructure**

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**February 25, 2019**

Submitted to:

The Honorable Nancy G. Edmunds of the United States District Court  
for the Eastern District of Michigan in the matter of *Dwayne B. v.  
Snyder*

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## Glossary

### Acronyms

Child Welfare ISA	Child Welfare Integration Service Area (formerly the Child Welfare Program Management Office [PMO])
CCWIS	Comprehensive Child Welfare Information System (the new model for SACWIS Systems advanced by the Children’s Bureau since June 2016). A case management information system that state and tribal title IV-E agencies may develop to support their child welfare program needs.
CSA	Children’s Services Agency
DTMB	Department of Technology, Management, and Budget
ISEP	Implementation, Sustainability, and Exit Plan for the case of <i>Dwayne B. vs. Snyder</i>
MDHHS	Michigan Department of Health and Human Services
MFCF	Michigan Federation for Children and Families
MiSACWIS	Michigan’s Statewide Automated Child Welfare Information System (SACWIS)
SACWIS	Statewide Automated Child Welfare Information System
SIA	Strategic Integration Administration (formerly the Business Integration Center [BIC])

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## Technical terms

Agile	An approach to software development that emphasizes iterative and incremental builds of software, often organized into “Sprints;” the use of self-organizing and cross-functional development teams <sup>1</sup> ; adaptive planning and continual improvement; and extensive collaboration with users and stakeholders. Software increments (i.e., what is completed in a given Sprint) are prioritized by business value as determined by the customer. Agile is often contrasted with Waterfall which takes a more linear approach to software development; gives more attention to documenting and collecting requirements up front instead of iteratively over the course of the project; and delivers larger segments of software later rather than smaller segments of software early and often.
(Product) Backlog	A prioritized list of the work to be done in order to create, maintain and sustain a product; managed by the Product Owner. <sup>2</sup> At MDHHS, backlog items include enhancements and new functionality, data fixes, defects, requests to change documents, and other work needed on the system.
Business Analyst	The individual who studies a customer’s problem, looks for solutions, and translates the solutions into a set of requirements which will be used by the developers when creating a product in the future.
Product Owner	The individual accountable for maximizing the value of a product, primarily by incrementally managing and expressing expectations for a product to the development team(s). <sup>2</sup>
Scrum	A set of practices used to develop software that follows the values and principles of agile project management. Scrum emphasizes daily communication, flexible reassessment of plans, and executing work in short, iterative phases. <sup>2</sup> Scrum is the most popular framework used to develop software consistent with Agile principles and values.
Scrum Team	A self-organizing team that organizes how the software development work will be done and executes it according to the team’s process. The team usually consists of a Product Owner, Scrum Master, and the development team. <sup>2</sup>
Scrum Master	The individual responsible for guiding, coaching, teaching, and assisting a Scrum Team and its environments in a proper understanding and use of Scrum. <sup>2</sup>
Sprint	A time-limited event, often of 30 days or less, during which the Scrum Team works on a set of backlog items in order to deliver an increment of the software. <sup>2</sup>

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<sup>1</sup> “Self-organizing” means the teams choose how to best accomplish their work, rather than being directed by others outside the team. “Cross-functional” means the teams hold all the skills required to produce the software.

<sup>2</sup> See <https://www.scrum.org/resources/scrum-glossary>.

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## Executive Summary

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This final report describes the results of an independent assessment of Michigan’s Statewide Automated Child Welfare Information System (MiSACWIS) and child welfare data reporting Infrastructure. The primary goal of this assessment was to identify factors that impact MDHHS’ ability to collect, store, process, and produce accurate data related to the commitments of the ISEP for the case of *Dwayne B. vs. Snyder*. The assessment was requested by the Honorable Nancy G. Edmunds of the United States District Court for the Eastern District of Michigan in response to persistent and significant data quality and reporting challenges that have prevented, delayed, or stymied efforts by court monitors to verify the state’s progress in implementing multiple ISEP commitments. In the Period 11 ISEP report, the court monitors reported that data quality issues delayed or prevented the monitors’ ability to verify over 25 ISEP commitments, including those related to safety and maltreatment in care, supervisory oversight, placement of children in custody, licensing of relative caregivers, monthly visits with siblings, and timeliness of updated service plans.

MDHHS has been under some form of court order since a 2006 filing by Children’s Rights against the Governor of the state of Michigan and the Director of the MDHHS.<sup>3</sup> The complaint alleged certain policies and practices that negatively impacted the safety, permanency, and well-being of children in MDHHS custody.<sup>4</sup> The parties settled the case in 2008 and the court approved the first Modified Settlement Agreement and Consent Order in 2011 and the current ISEP on February 2, 2016. The court-appointed monitors are Kevin Ryan and Eileen Crummy of Public Catalyst.

MDHHS and DTMB implemented MiSACWIS and the MiSACWIS mobile application in April 2014 to provide mission-critical case management support for child protective, foster care, licensing, adoption, and juvenile justice services provided to children and families. MiSACWIS replaced the Services Worker Support System (SWSS) which was not a statewide system, not SACWIS compliant, and provided minimal reporting and limited case management functionality for foster care and portions of CPS. Implementation of a SACWIS was driven by a United States district court order which mandated that MDHHS have an operational SACWIS in place by October 2013 in all counties. On October 22, 2013, MDHHS was granted a six-month extension until April 30, 2014.

MiSACWIS was rolled out in April 2014 in a “Big Bang” approach and experienced significant challenges due in part to numerous defects, missing functionality, and a navigation interface that many users considered cumbersome. These problems were compounded by the fact that private agencies had limited experience working with statewide child welfare systems (and had never used the prior system, SWSS); staff were used to SWSS which had an entirely different interface and navigation than MiSACWIS; and the case structure for foster care from changed from one that defined cases at the child

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<sup>3</sup> Children’s Rights is a national advocacy organization with experience in class action reform litigation on behalf of children in child welfare systems.

<sup>4</sup> For further details regarding the class actions related to the case of *Dwayne B. vs. Snyder* see [https://www.childrensrights.org/class\\_action/michigan/](https://www.childrensrights.org/class_action/michigan/).

level (SWSS) vs. the family level (MiSACWIS). In addition, the majority of training for users took place in early 2013 in anticipation of the October 2013 launch date. When the system went live in April 2014, it had been 6 to 12 months since some users were trained; many users needed to be re-trained due to the extended timeframe and because some aspects of MiSACWIS had changed. Efforts to stabilize MiSACWIS post-implementation included enhancing the help desk, implementing various training efforts for users, transitioning to Agile development, and multiple onsite visits at MDHHS offices and private agencies from April and December 2014. Within the first year, MDHHS significantly redesigned the Centralized Intake and Provider Management functionality. Child-caring institutions began using the system in late 2015.

MiSACWIS currently serves 7,942 users in 83 Michigan counties; 60 private agency foster care contractors which provide adoption, foster care, licensing, treatment foster care, and independent living services; and 45 child-caring institutions (CCIs) including those who have contracts for child abuse /neglect, juvenile justice, shelter care, and short-term assessment centers.

The MiSACWIS application support staff are situated under the CSA within MDHHS and include staff from MDHHS; DTMB; and Conduent, the primary vendor; with augmented staff from Computer Associates, Inc. The project is supported by the Child Welfare ISA through the SIA. The Child Welfare ISA provides the governance by which the MiSACWIS project operates and is comprised of MDHHS staff and contract staff from the SIA. The SIA was formed in 2016 with the goal of effectively planning and managing the MDHHS portfolio of projects using common project management processes, structure, and governance, enabling MDHHS to deliver projects on time, on budget, and within scope.

MiSACWIS development is managed by eight Scrum Teams<sup>5</sup> and four staffing teams. The Scrum Teams are organized by eight functional areas (e.g., Intake and Investigation, Case Management, etc.). The staffing teams focus on Data Warehouse and CSA Reporting, Data Warehouse Federal Reporting, Data Warehouse ISEP Support, and Testing. MDHHS transitioned to an Agile development framework and use of Scrum Teams soon after the 2014 roll out. The transition began with two Agile teams and by mid-2017 the remaining teams began transitioning further to an Agile and Scrum framework.

Much of this evaluation focused on MiSACWIS and its impact on casework and data quality, the MiSACWIS governance and project management framework, the development environment (e.g., Scrum Teams), and the Data Management Unit (DMU). The DMU is responsible for providing the court monitoring team with data files used to validate many of the ISEP commitments.

The key findings identified during the assessment are as follows:

1. **Finding # 1:** Persistent and significant defects stemming from a flawed MiSACWIS design and initial roll-out in 2014 continue to generate an unmanageable backlog of defects, incidents, and

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<sup>5</sup> As noted in the glossary, Scrum is a set of practices used to develop software which follow the values and principles of agile project management. Scrum emphasizes daily communication, flexible reassessment of plans, and executing work in short, iterative phases. A Scrum team is the group that organizes how the work will be done and executes it according to the team’s processes.

data fixes that are likely to persist indefinitely, inhibit effective casework, contribute to data entry errors, negatively affect outcomes for children and families, and impact MDHHS’s ability to collect and report accurate and timely ISEP data for both the monitors and field staff.

2. **Finding # 2:** The governance and project management framework introduced by the SIA has significantly reduced CSA’s role in advancing reform for MiSACWIS and the field, inhibited work on items related to data quality and features deemed critical by CSA for supporting casework, and created confusion around prioritization processes and scope of authority.
3. **Finding # 3:** Scrum Teams have limited time and resources to work on backlog items related to data quality and ISEP items due to unmanageable backlogs and other priorities assigned to them. In addition, many defects and data fixes that impact ISEP reporting are not identified as such and therefore may not always get considered for prioritization.
4. **Finding # 4:** The Data Management Unit has limited time and resources to produce data files and conduct a thorough quality review before providing data to the monitors. This results in errors in the extraction code and query logic or data that departs from the metric plan.

The remainder of this report describes in more detail the findings and recommendations, the evidence to support them, and the methods used to conduct this assessment.

## Introduction

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During a May 10, 2018 status conference in the matter of *Dwayne B. vs. Snyder*, the Honorable Nancy G. Edmunds of the United States District Court for the Eastern District of Michigan ordered an independent assessment of MiSACWIS and the state’s child welfare data reporting infrastructure. The order arose from persistent and significant data quality and reporting challenges that have prevented, delayed, or stymied efforts by court monitors to verify the state’s progress in implementing multiple commitments related to *Dwayne B. vs. Snyder*, including those prescribed in an Initial Agreement (approved October 24, 2008), a Modified Settlement Agreement (approved July 18, 2011), and the current ISEP (approved February 2, 2016). The two agreements and ISEP were all jointly submitted by the State of Michigan and MDHHS and Children’s Rights, counsel for the plaintiffs.<sup>6</sup>

The court-appointed monitor, Public Catalyst, provided several examples of the data quality concerns and reporting challenges in its *ISEP Period 11* monitoring report issued May 10, 2018. Many of these same concerns were also discussed among the counsel for the plaintiffs, counsel for the defendants, and

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<sup>6</sup> The court-appointed monitors are Kevin Ryan and Eileen Crummy of Public Catalyst. MDHHS is a statewide multi-service agency providing cash assistance, food assistance, health services, child protection, prevention, and placement services on behalf of the State of Michigan. Children’s Rights is a national advocacy organization with experience in class action reform litigation on behalf of children in child welfare systems.

the monitors at the May 10, 2018 status conference. In the *Period 11* report, Public Catalyst reported that data quality issues delayed or prevented the monitors’ ability to verify over 25 commitments of the ISEP, including those related to safety and maltreatment in care, supervisory oversight, placement of children in custody, licensing of relative caregivers, monthly visits with siblings, and timeliness of updated service plans. For one commitment, “DHHS had significantly undercounted the number of children in its child welfare custody who were abused or neglected in care during FFY16.” Data quality issues included duplicate and overlapping entries; discrepancies between two or more datasets that should provide similar information; missing, unavailable, and/or unknown data; and out-of-range data. MDHHS needed to resubmit data and/or performance calculations for 25 commitments and Quality Assurance Program (QAP) reviews, in some instances more than once.

Other reports have identified similar concerns related to the accuracy and completeness of data collected via MiSACWIS; user dissatisfaction with MiSACWIS; the ability of MiSACWIS to process child welfare cases; and improvements needed in the areas of project management, release management, quality management, and service level/capacity management.

## About MiSACWIS and the Organizational, Governance, and Development Environment

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### MiSACWIS

#### History

In April 2014, MDHHS and DTMB implemented MiSACWIS and the MiSACWIS mobile application to provide mission-critical case management support for child protective, foster care, licensing, adoption, and juvenile justice services provided to children and families. MiSACWIS replaced the Services Worker Support System (SWSS) which was not a statewide system, not SACWIS compliant, and provided minimal reporting and limited case management functionality for foster care and portions of CPS.

Implementation of a SACWIS system was driven by a United States district court order that mandated that MDHHS have an operational SACWIS in place in all counties by October 2013. On October 22, 2013, MDHHS was granted a six-month extension until April 30, 2014.

MiSACWIS planning began in 2009. Development began when MDHHS and DTMB contracted with Unisys as the prime vendor and Dynamics Research Corporation (DRC) as a Unisys subcontractor. MDHHS purchased a transfer system from Tennessee (TFACTS) which was previously implemented in Ohio, a county-administered state where the code base was initially developed. The base contract was \$47 million but estimates to implement the full costs were \$72.5 million (according to the June 2011 Implementation Advanced Planning Document [IAPD]).

MiSACWIS was rolled out in April 2014 in a “Big Bang” approach and experienced significant challenges due to numerous defects, missing functionality and a navigation interface that many users considered cumbersome. These problems were compounded by additional factors, including:

- private agencies had not worked in SWSS;
- private agencies had limited experience working with statewide child welfare systems;
- staff were used to SWSS which had an entirely different interface and navigation than MiSACWIS;
- a change to the case structure for foster care from SWSS to MiSACWIS.

Efforts to stabilize MiSACWIS post-implementation included enhancing the help desk, assessing training needs for the field, transitioning to Agile development, and 13 onsite visits at MDHHS offices and private agencies from April and December 2014. Training assessments indicated a need for additional training which included strike teams for over-the-shoulder support, implementing a 10<sup>th</sup> week of New Worker training, and launching the MiSACWIS Training Academy in January 2015. Within the first year, MDHHS significantly redesigned the Centralized Intake and Provider Management functionality. Child-caring institutions began using the system in 2016.

## Users and Functionality

MiSACWIS serves **7,942** users including:

- **4,914** MDHHS child welfare users and **2,735** contracted child-placing agency (CPA) users including:
  - Centralized intake who receive calls reporting suspected abuse or neglect;
  - MDHHS child welfare local offices, including CPS, foster care, licensing, juvenile justice, and adoption;
  - MDHHS central offices (accounting, adoption subsidy, federal compliance, policy office, Division of Continuous Quality Improvement, etc.);
  - Private agency foster care contractors who provide foster care, treatment foster care, licensing, adoption, and independent living services; and
  - Child-caring institutions (CCIs) including those who have contracts for child abuse/neglect, juvenile justice, shelter care, and short-term assessment centers.
- **269** court users (for child care fund [CCF] budget functions)
- **24** tribal users (for CCF budget functions)

MiSACWIS serves users in:

- **83** Michigan counties
- **60** private agency foster care contractors
- **45** child-caring institutions (CCIs)

MiSACWIS functionality includes:

- Centralized Intake
- CPS investigation
- CPS ongoing case management
- Foster care case management
- Placement assessments
- Adoption assessments
- Adoption and guardianship subsidy
- IVE and subsidy eligibility
- Financials and payments
- County child care fund budget
- Provider management
- Interfaces and batch functions

## **Organizational Structure, Governance, and Development Environment**

### **Organizational Structure and Governance**

The MiSACWIS application support staff are situated under the CSA within MDHHS and include staff from MDHHS; DTMB; and Conduent, the primary vendor; with augmented staff from Computer Associates, Inc. The project is supported by the Child Welfare ISA through the SIA. The Child Welfare ISA provides the governance by which the MiSACWIS project operates and is comprised of MDHHS staff and contract staff from the SIA. The SIA was formed in 2016 with the goal of effectively planning and managing the MDHHS portfolio of projects using common project management processes, structure, and governance, enabling MDHHS to deliver projects on time, on budget, and within scope. The Child Welfare Data Warehouse staff are housed with the MiSACWIS project but operate as their own program under the Child Welfare ISA.

The MDHHS CSA includes multiple divisions, including MiSACWIS, Program and Policy, Division of Continuous Quality Improvement, Division of Child Welfare Licensing, Child Welfare Services and Support, Field Operations, and the Office of Family Advocate.

### **Development Framework**

MDHHS transitioned to an Agile development framework soon after the 2014 roll out. Reasons for the transition were to increase quality and productivity, improve engagement with stakeholders, help balance resources across development teams, and allow flexibility in planning and forecasting resources. The Agile transition began with two Agile teams and by mid-2017 the remaining teams began transitioning further to an Agile and Scrum framework.

MiSACWIS development is managed by eight Scrum Teams and 4 staffing teams.

The Scrum Teams are organized by functional areas<sup>7</sup>:

- Team 1 – Intake & Investigation (CPS intakes/investigations, non-CPS intake types)
- Team 2 – Case Management (assessments, permanent ward cases, adoption, case closure)
- Team 3 – Court & Eligibility (title IV-E eligibility, adoption subsidy eligibility, court and legal)
- Team 4 – Service Provision (case service plans, court reports, placements, family team meetings)
- Team 5 – Payments and Accounting (service authorization for placement and case services, administrative payments, interactive voice response [IVR], and payment rosters, Statewide Integrated Governmental Management Application [SIGMA])
- Team 6 – Provider Management (home evaluations, provider licensing, relative providers)
- Team 7 – Administration, Security, and Interfaces (security user groups, Bridges [IV-A and Medicaid], immunizations, child support)
- Team 9 – Juvenile Justice and Social Work Contacts

The staffing teams include:

- Team 10 – Data Warehouse and CSA Reporting
- Team 13 – Unified Functional Testing team (develops automated test scripts)
- Team 15 – Data Warehouse Federal reporting (e.g., NCANDS, AFCARS, etc.)
- Team 16 – Data Warehouse ISEP Team

Scrum Teams include Product Owners, Scrum Masters and a development team that includes business analysts, developers, and testers.

## **Prioritization**

Items considered for prioritization and release planning include unresolved help desk tickets; leadership needs; field-identified issues from onsite visits; ISEP; audit findings and federal reporting; changes in state and federal regulations and policy; and audit responses, data queries, and time-sensitive deadlines. Prioritization processes include team backlog reviews and prioritization, cross-team meetings, prioritization meetings through the Child Welfare ISA, and priorities assigned to teams by leadership through SIA’s governance process.

## **Evaluation Goal**

The goal of this assessment was to identify factors that impact MDHHS’ ability to collect, store, process, and produce accurate data related to the commitments of the ISEP for the case of *Dwayne B. vs. Snyder*.

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<sup>7</sup> The team numbers skip due to changes made over time in team restructuring and consolidation.

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## Methods

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This evaluation was conducted from July 2018 to February 2019 with an official kick-off event held on August 8, 2018 with leadership and stakeholders from MDHHS; DTMB; SIA; and Conduent, the vendor supporting MDHHS in MiSACWIS maintenance and operations.

Assessment methods included the following activities:

### 1. Stakeholder Interviews

From July to December 2018, 35 individuals were interviewed one or more times. Interviewees were initially selected based on their roles and responsibilities. Additional interviewees were identified at the end of each interview by asking the interviewee whom he or she recommend be interviewed. Interviews were one-on-one for all but two interviews which involved two people together. In those two instances, both individuals performed similar functions and neither supervised the other. Interviews averaged one hour and ranged from 45 minutes to two hours. Thirty-one individuals were interviewed at MDHHS headquarters and four individuals were interviewed by phone.

Interviewees included the following individuals:

- the court monitoring team;
- SIA leadership and staff working closely with the Child Welfare ISA;
- individuals at all levels of CSA and DTMB, including testers, developers, business analysts, Scrum Masters, Product Owners, program managers, division and department directors, staff responsible for child welfare and ISEP reporting (both to the field and to the monitors), and executive leadership. CSA interviewees included representatives from the following CSA divisions and program areas: Executive Office, Continuous Quality Improvement, MiSACWIS, Field Operations, Child Welfare Services and Support, and Policy and Programs;
- the Executive Director of the Michigan Federation for Children and Families, which includes 54 private agencies that provide through contract with MDHHS adoption, residential, and foster care services in Michigan.

Interviews were semi-structured and began by reviewing the purpose and scope of the assessment and a statement about confidentiality. Interviewees were informed that 1) details of each interview and attribution would not be shared with their colleagues, supervisors, or employees of the state of Michigan; 2) the final report would not attribute statements to individuals or quote them by name but will instead relay aggregate themes; and 3) details of each interview and attribution may be shared with the court monitoring team only if it is critical to understand context, but such details and attribution would not be shared with the court unless there is a concern about misconduct. There were no concerns about misconduct during this evaluation. The remainder of the interview was guided by the following questions or prompts, although many additional questions were asked based on individual responses:

1. Tell me about your role and how long you have been working in this role.
2. How familiar are you with the ISEP commitments?
3. What role(s) do you have as it relates to the ISEP?
4. How are priorities determined as they relate to MiSACWIS and data needs, e.g., bug fixes, features requests, new projects and initiatives, and ISEP?
5. What do you think contributes to data quality and reporting problems?
6. What improvements do you think can be made?
7. Is there anything to discuss that we did not talk about, but which would assist in this work?
8. Whom else do you think I should talk to, who might have insight into this work?

Interview notes were analyzed using NVIVO version 12, a qualitative data analysis software designed to organize and analyze non-numerical and unstructured data such as text and multimedia information. For this analysis, NVIVO was used to classify and identify recurring themes and identify relationships among them.

## **2. Private Provider Focus Group**

A joint focus group was held with approximately 35 members (foster care caseworkers, supervisors, and managers) of the Michigan Federation for Children and Families. The focus group lasted approximately 1 hour and 15 minutes and was guided by the same questions and prompts used for the individual interviews with the exception of questions 3 and 4. In addition, the group was asked to speak about its MiSACWIS documentation and usability experiences in the following areas: entering and tracking dates; closing cases; worker-parent contacts; worker-child visits; worker-supervisor contacts; searching for individuals and providers / handling duplicate entries; assigning people to cases; system instability / losing work; help desk; and training needs, opportunities, and effectiveness. These items were identified ahead of time because they related to previous data quality issues for one or more ISEP commitments or the area was identified as a potential concern in previous interviews, surveys, or documents.

## **3. MiSACWIS Walk-Throughs**

Two MiSACWIS system walk-throughs and overviews were provided to the evaluator, one by MDHHS staff and another by a private provider organization that provides through contract with MDHHS foster care, adoption, and licensing services in Michigan and operates in nine offices throughout the state. Each walk-through lasted approximately 1 hour and 30 minutes. In addition to a general overview, the evaluator also asked that the walk-through include a demonstration of documenting allegations of maltreatment, person relationships, placement changes, supervision and contacts; and functionality related to person searches and closing cases. These items were identified ahead of time because they related to previous data quality issues for one or more ISEP commitments or the area was identified as a potential concern in previous interviews, surveys, or documents.

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## 4. Document Review and Analysis

Approximately 50 reports, documents, and other artifacts were reviewed and analyzed, including results from previous MiSACWIS assessments and site visits, Michigan Office of the Auditor General (OAG) audits, MiSACWIS backlog items, governance and project management documents, organizational charts, technical and operational overviews, intake request forms, and agendas and content from recent MiSACWIS prioritization and leadership meetings. Appendix A provides the full list of documents reviewed.

## 5. MiSACWIS User Surveys

Immediately prior to or during this evaluation, two surveys were administered to MiSACWIS users.

### MiSACWIS User Survey to all users (sponsored by MDHHS)

MDHHS administered an online MiSACWIS user survey to all 8,214<sup>8</sup> MiSACWIS users. MDHHS distributed the survey using its GovDelivery delivery email service which is updated every month and includes all active users including private providers. In addition to emailing users directly with a link to the survey, MDHHS sent a communication announcing the survey to 2,700 individuals who were part of MDHHS’ standard communication channel. The communication was distributed to CSA Central Office Managers/Staff, MDHHS BSC and County Directors, MDHHS Juvenile Justice Managers/Staff, MDHHS Child Welfare Managers/Staff, Office of Workforce Development and Training, Private Agency Child Welfare Managers/Staff, Private Residential Abuse/Neglect Managers/Staff, and Private Residential Juvenile Justice Managers/Staff. Recipients also included all individuals subscribed to the Child Welfare Weekly News which is distributed at the beginning of each week. Respondents were informed that “individual responses will remain strictly anonymous, but data will be distributed to key stakeholders.”

The survey launched on October 22, 2018 and closed on November 16, 2018. The response rate was 19.9% (1,634 completed / 8,214 who received the email with the survey link). Many of the questions were identical or similar to questions asked on a user survey administered by the OAG as part of its MiSACWIS performance audit from April 1, 2014 to February 28, 2017. Both surveys focused on overall user satisfaction, MiSACWIS effectiveness and efficiency, experience with the MiSACWIS help desk, and the sufficiency and availability of training. However, slight changes to the response options in the MDHHS-sponsored survey prevented comparing several responses across the two surveys. The aggregate and raw survey results were provided to the evaluator for analysis. Results were analyzed in SPSS Statistics version 25.

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<sup>8</sup> This number differs from the number of users cited previously due to different queries used to produce these counts, the timing of those queries, and the fact that the number of active users is always changing due to new hires, removals from the agency, and users in different stages of access to the system.

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## MiSACWIS User Survey to members of the Michigan Federation for Children and Families (MFCF) (sponsored by MFCF)

The Michigan Federation for Children and Families (MFCF) administered an online MiSACWIS user survey to MiSACWIS users employed at its member agencies. The survey was developed at the request of the court monitors to help inform the efforts of the court monitors and plaintiffs in preparation for this assessment. The survey launched on May 23, 2018 and closed on May 31, 2018. Responses were received from 180 individuals at 27 member agencies which represents 50% of the agency members. The survey focused on overall user satisfaction, functionality, data and report accuracy, and reliability.

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## Findings & Recommendations

The remainder of this report summarizes the key findings and recommendations, all of which are grouped around four key factors that impact MDHHS’ ability to report accurate and timely data on the ISEP provisions. The findings and recommendations are supported using data from the stakeholder interviews, provider focus group, document review and analysis, and MiSACWIS user surveys.

### **Finding # 1: Persistent and significant defects stemming from a flawed MiSACWIS design and initial roll-out continue to generate an unmanageable backlog of defects, incidents, and data fixes that are likely to persist indefinitely, inhibit effective casework, contribute to data entry errors, negatively affect outcomes for children and families, and impact MDHHS’s ability to collect and report accurate and timely ISEP data for both the monitors and field staff.**

Multiple sources indicated that MiSACWIS system defects, system design problems, and data entry errors lead to persistent data quality challenges that impair the quality and availability of data needed for reporting and responding to ISEP commitments. These issues present an obstacle to effective, efficient, and quality casework and impair caseworkers’ ability to achieve positive outcomes for children and families consistent with the expectations of the ISEP. Of great concern to users was how MiSACWIS defects result in delays providing services and quality case management to children and families in their care.

As of November 2018, there were **2,193** unresolved backlog items, including **623** deemed critical (6) or high (617) in severity. **Table 1** lists the number of items in the MiSACWIS backlog, by type of item and severity.

**Table 1. MiSACWIS backlog items, by type and severity (as of 11/27/18)**

Backlog Type	Critical	High	Medium	Low	Total
A request to change a document <sup>1</sup>		10	119	13	<b>142</b>
A request to change something other than a document (e.g., enhancements or new functionality) <sup>2</sup>		357	483	81	<b>921</b>
Data Fix	4	74	93	7	<b>178</b>
Incident / Defect	2	163	374	349	<b>888</b>
Work <sup>3</sup>		13	26	25	<b>64</b>
<b>Grand Total</b>	<b>6</b>	<b>617</b>	<b>1,095</b>	<b>475</b>	<b>2,193</b>

<sup>1</sup> Known internally as a “Change Control Governance 5”; will not be tested by the team

<sup>2</sup> Known internally as a “Change Control Governance 3”

<sup>3</sup> Technical upgrade – no functional change to the system; testing is involved on some work items

Since 2014, the MiSACWIS teams have addressed more than 9,723 data fixes and 7,136 incidents, with the number of data fixes increasing every year since 2014 (from 0 in 2014, 895 in 2015, 3,476 in 2016, and 3,670 in 2017). Many of the items in the backlogs contribute to persistent data quality problems or create dependencies that have delayed ISEP reports designed for field staff or require complicated workarounds to calculate an ISEP metric. Due to other priorities assigned to Scrum Teams, many of these defects and data fixes remain unresolved despite their severity rating (See also Finding #3).

Many backlog items come through the help desk. From January to July 2018 the help desk had fielded 20,084 calls. The help desk averages 2,691 monthly calls<sup>9</sup>, which is 936 higher than the 1,755 average monthly calls the help desk handled as of July 2016 (based on PCG’s 2017 final SACWIS assessment report). This number is also higher than the average monthly help desk calls observed in four other states (Arizona = 2000, Ohio = 1544, Kentucky = 1123, Minnesota = 500) that were examined as part of PCG’s 2017 MiSACWIS assessment.<sup>10</sup> Among the 580 help desk tickets as of August 5, 2018, 243 were in Tier 2 Review (which means they were escalated from Tier 1) and 217 were in Escalate to Remedy (which means Tier 2 has reviewed the ticket and identified an issue that needs a data fix or code fix for resolution). Tickets in Escalate to Remedy are often converted to intake requests and added to a team’s backlog.<sup>11</sup>

<sup>9</sup> Monthly average based on help desk statistics for May through July 2018.

<sup>10</sup> PCG compared Michigan with these four states due to these states having systems at similar stages of maturity, similar numbers of children receiving assistance, and similar levels of expenditures.

<sup>11</sup> Per MDHHS, over 70% of the help desk calls are resolved on the first call, at Tier 1. In addition, the MDHHS MiSACWIS user survey showed that 50% of users are very to somewhat satisfied with the MiSACWIS help desk, 35% are neutral, and only 15% are very or somewhat dissatisfied. Generally, levels of user satisfaction with the

Many of the backlog items exist due to the lack of front-end validation rules in MiSACWIS, cumbersome usability and navigation, and system defects and instability. These factors allow users to enter inaccurate or omit critical information, force workers to create complicated work arounds in order to move forward with case management, delay their ability to process cases in a timely fashion, or result in information not being saved or assigned to the correct case or individual. These factors result in data that are duplicated, missing, out of range, inaccurate, or untimely.

Data quality concerns due to system defects and design problems have been evident since the launch of MiSACWIS in 2014 and continue to persist. For example:

- Among the 2,193 items in the MiSACWIS backlog<sup>12</sup>, **40%** (888) are defects and **8%** (178) are data fixes. **19%** (165) of the defects and **44%** (78) of the data fixes are rated as critical or high in severity, which suggests they are having a significant impact on some aspect of casework practice or operations. Stakeholder interviews revealed that many of these data fixes recur repeatedly due to the underlying problem (likely related to one or more of the 888 defects) not being resolved.
- Data quality issues were cited by ACYF on its July 2016 site visit, where users reported challenges in correcting inaccurate data and that not all data to support a comprehensive case plan was available.
- A recent OAG audit of Michigan’s CPS system<sup>13</sup> determined that MDHHS did not capture complete, accurate, and/or valid investigation commencement data for 26% of reviewed investigations.
- The MFCF user survey showed that 72% of respondents use “another system, software, or case record IN ADDITION [emphasis from the survey question] to MiSACWIS in order to track information due to concerns of reliability or validity in SACWIS.”

Results from the MDHHS-sponsored MiSACWIS survey conducted during this evaluation support the fact that users struggle with documenting and ensuring accurate data in MiSACWIS. For example:

- **63%** (n = 837) reported they had difficulty determining the appropriate person to add to a case due to multiple person IDs;
- **61%** (n = 801) reported that **information entered into MiSACWIS was not saved**;
- **58%** (n = 774) reported being **unable to correct information that was entered incorrectly**;

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help desk are high, moderate, or neutral in the five areas the survey assessed: timeliness of receiving assistance, timeliness of issues being resolved, help desk agents’ knowledge about MiSACWIS, help desk assistance received, and information received about how the issue was resolved.

<sup>12</sup> As of November 27, 2018.

<sup>13</sup> The audit involved reviewing a randomly selected representative sample of 160 CPS investigations that MDHHS completed between May 1, 2014 and July 31, 2016; on-site reviews at 16 MDHHS local county offices in 14 Michigan counties; and an off-site review of the selected investigation files for one additional county.

- **48%** (n = 677) reported that MiSACWIS has **very to somewhat weak performance** when it comes to ease of documenting case information; and
- **43%** (n = 578) reported that MiSACWIS does not accurately **prefill prepopulated forms and screens**.

Also, within the last 6 months:

- **48%** (n = 689) reported that MiSACWIS negatively impacted their **ability to document case work timely**, due primarily to inadequate system design (52%) and system defects (76%);
- **36%** (n = 512) reported that MiSACWIS negatively impacted their **ability to close a case timely**, due primarily to inadequate system design (56%) and system defects (69%); and
- **32%** (n = 458) reported that MiSACWIS negatively impacted their **ability to make or change a placement**, due primarily to inadequate system design (47%) and system defects (67%);

Several users explained how challenges closing cases in a timely way negatively impacts children and families. One example involves processing adoption cases. Once an MDHHS Child Welfare Funding Specialist (CWFS) uploads the termination of parental rights, at least 24 steps must be completed before the foster care worker can close the foster care case so the case can be changed to a permanency ward case and move closer to finalization and approval. These steps involve various individuals, including the foster care worker, adoption worker, supervisors, adoption assistance analysts, and the CWFS. Two steps require the worker to wait for the CWFS to upload various orders<sup>14</sup> because MiSACWIS and policy prevent the worker from completing these tasks. Users also reported that MiSACWIS requires users to complete certain documentation that is not required by policy in order to close the case; however, MDHHS was unable to identify instances in which this occurs. Once the foster care worker can close the foster care case, 15 additional steps are required involving the adoption worker, supervisor, and CWFS. Three of these steps require the worker or supervisor to wait for the CWFS to complete various tasks because policy and MiSACWIS assign this role only to the CWFS<sup>15</sup>. Together, the MiSACWIS job aid for processing an adoption case specifies at most 39 steps that must be completed, and the cumbersome navigation of MiSACWIS, lack of automation and streamlined workflow, and MiSACWIS limitations add considerable time to an already lengthy process. As a result, a family may go as long as four to six months without an adoption subsidy payment and may not be able to get medical care and must cancel services.<sup>16</sup>

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<sup>14</sup> For example: The petition to adopt, the Order of Placing (PCA 320), and Order Terminating Parental Rights after Release or Consent (PCA 318).

<sup>15</sup> For example: Add 43 legal status, enter and upload the Order of Adoption, and change the legal status to 97 adoption subsidy.

<sup>16</sup> Several of these workers requested the ability to initiate an administrative closure based on the court order, even if other requirements for closing the case have not been met, simply to ensure that families can get needed services for their adopted children. MDHHS indicated that workers can request at any time an administrative closure and their rationale as to why it is appropriate. However, MDHHS indicated that administrative approvals when granted may lead to other problems, such as policy violations (e.g., steps that were not completed according

Several users also reported that the tickler system designed to remind workers of upcoming deadlines, like a home visit or assessment, is often incorrect. This can lead to missed visits and assessments and has led many workers to develop and rely on systems outside of MiSACWIS to track upcoming deadlines.

The system defects and design issues explain in part the high levels of user dissatisfaction observed in the two user surveys conducted prior to and during this evaluation. For example:

- **48%** of users surveyed by the MDHHS-sponsored survey were **very to somewhat dissatisfied** with MiSACWIS, 16% were very satisfied to satisfied, and the remaining 36% were neutral. Dissatisfaction levels were similar for supervisors (52%, n = 166), workers (51%, n = 403), and other users (41%, n = 180) and similar for MDHHS (51%, n = 435) vs. non-MDHHS staff (45%, n = 314). Dissatisfaction levels varied somewhat by program type: Adoption (58%, n = 59), CPS (57%, n = 224), foster care (48%, n = 303), Licensing (40%, n = 69), and Other (37%, n = 94).
- The user survey by the Michigan Federation for Children and Families showed **user satisfaction at 4.44 on a scale of 1-10** (one being the lowest level of satisfaction and 10 being the highest).

Many of the stakeholders interviewed confirmed the pervasive nature of data quality problems and system defects. In addition to recommending more front-end validation checks, several interviewees indicated that users, both workers and supervisors, need more training to use MiSACWIS properly and to enter data in accordance with policy. This observation is supported by Michigan’s final CFSR 3 report, which indicated that Initial Staff Training (Item 26) was rated as an Area Needing Improvement, due in part to stakeholders reporting “the need for training on navigating the state’s information system and on agency policies.” However, according to the MDHHS user survey, users were split on the degree to which training is sufficient for them to use MiSACWIS effectively: **32%** of workers (n = 424) **strongly agreed or somewhat agreed** that the **amount of training provided is sufficient**, and **38% strongly disagreed or somewhat disagreed**. The remaining 29% (n = 387) were neutral on the sufficiency of training. Lack of training was cited by only a small percentage of workers when explaining what contributed to their not documenting casework timely (14%, 98), not closing a case timely (13%, 68), and not being able to make or change a placement (19%, 85). Most users (76%, n = 1,003) reported receiving at least 2 days of MiSACWIS training. According to MDHHS, training staff completed 45 onsite visits at MDHHS offices and private agencies since 2014 and conducted 179 trainings for 2,143 participants from January to July 2018.

Many individuals cited that MiSACWIS was not ready when it rolled out in 2014 and the defects and problems from that initial roll-out continue to create a burden on users and contribute to an unstable base for development efforts. Many recent development efforts are noteworthy, but they are built on top of a problematic architecture, interface, and data model which will likely impede the success of many new development efforts. As one individual noted, MiSACWIS is staffed for maintenance and operations but it is still very much a system in development.

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to policy) and data integrity problems (e.g., documentation that is missing or incomplete because an administrative closure allowed it to be skipped, at least temporarily).

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## Recommendations for Finding #1

1. MDHHS should procure or develop a new child welfare information system that does not rely, in any significant way, on the infrastructure, design, and data model of the current MiSACWIS. If the court determines this approach is untenable or the State is unable to implement this approach due to financial constraints, the second-best solution is a move toward CCWIS, with its modular design philosophy. This move is an opportunity for MDHHS to redesign or develop aspects of MiSACWIS functionality using modular builds of components and features that represent a significant departure from the current system. This approach can leverage newer technologies, eliminate long-standing defects, and provide critical functionality. Recent modular development efforts at MDHHS, such as the development of a CPS mobile app, should be studied to identify the strengths and challenges associated with modular development practices that depart from how MDHHS has traditionally developed for users.
2. Given the significant challenges related to MiSACWIS usability and inefficient workflow as expressed by users, MDHHS should complement its development teams with experts in User Experience (UX) and User Interface (UI) design. Individuals with these skillsets can assist MDHHS in streamlining workflows and assist developers in coding and building interfaces that are optimized for usability and efficiency.

The remaining findings and recommendations are designed to remedy or mitigate several of the problems that have negatively affected ISEP reporting and workers’ ability to achieve positive outcomes consistent with ISEP requirements. Although these recommendations should lead to improvements in ISEP reporting, they will not overcome the fundamental problems with MiSACWIS that only a new, or significantly modified, system can address.

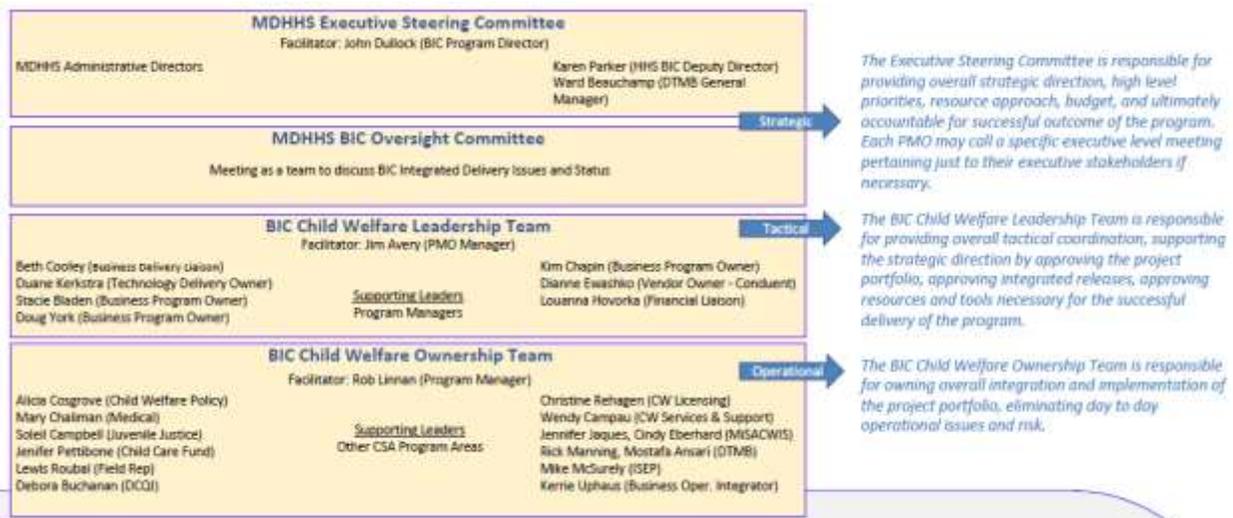
## **Finding #2: The governance and project management framework introduced by the SIA (formerly known as the BIC) has significantly reduced CSA’s role in advancing reform for MiSACWIS and the field, inhibited work on items related to data quality and features deemed critical by CSA for supporting casework, and created confusion around prioritization processes and scope of authority.**

The governance and project management framework introduced in 2016 by the SIA (formerly known as the BIC)<sup>17</sup> has significantly reduced CSA’s role and voice in advancing reform for MiSACWIS and the field, created confusion around prioritization and scope of authority, and introduced cumbersome Waterfall-

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<sup>17</sup> The SIA was formerly known as the Business Integration Center (BIC) and the Child Welfare ISA was formerly known as the Child Welfare Program Management Office (PMO). These name changes, along with changes to SIA’s governance approach over the Child Welfare ISA, occurred in November 2018 as this evaluation was underway.

like<sup>18</sup> requirements that impede MiSACWIS development teams’ ability to work efficiently. There is significant conflict and tension between the SIA and CSA and members of the development environment which have frustrated CSA’s efforts to advance priorities CSA deems critical for the field as they relate to MiSACWIS improvements and caseworker support and satisfaction. The SIA governance style and infrastructure are viewed by many individuals as top-heavy, cumbersome, and lacking in child-welfare expertise. The SIA’s IT governance approach is more Waterfall than Agile and many of its requests of Scrum Teams run counter to several agile principles the Scrum Teams seek to follow, such as requiring significant documentation and layers of approval in order for the team to make minor changes in how it originally planned to build a piece of functionality. Lastly, the SIA has reduced CSA’s decision-making power over MiSACWIS development efforts, and its most recent governance change (which occurred in November 2018 during this independent evaluation) reduces even further the opportunity for CSA leadership and those with child-welfare expertise to take an active part in setting priorities and informing the direction of MiSACWIS. For example, the previous governance model (**Figure 1**) included a MDHHS BIC Oversight Committee and a BIC Child Welfare Leadership Team. The Leadership Team included representation from three CSA Business Owners, including MiSACWIS, Policy and Programs, and Field Operations.



**Figure 1. Previous SIA Child Welfare Integration Service Area governance model (as of 3/20/18)**

The new governance model (**Figure 2**) eliminates the MDHHS BIC Oversight Committee and replaces the BIC Child Welfare Leadership Team with the SIA Child Welfare Executive Leadership Team and includes

<sup>18</sup> Waterfall is a software development process that emphasizes a linear, highly structured approach to software development where progress generally flows in one direction (“downwards” like a waterfall). As noted in the glossary (see “Agile”), Waterfall gives more attention to documenting and collecting requirements up front instead of iteratively over the course of the project and delivers larger segments of software later rather than smaller segments of software early and often. Waterfall was the primary framework for developing software until the early 1990s when alternative frameworks, such as those based on Agile principles, emerged and gained in popularity.

only one individual from CSA, the CSA Senior Deputy Director. The Executive Leadership Team is responsible for “providing overall tactical coordination, supporting the strategic direction by approving project work and prioritizing work within the overall project portfolio budget.”



Figure 2. New SIA Child Welfare Integration Service Area governance model (as of 12/5/18)

This governance change moves in a direction opposite to the needs and interests expressed by many stakeholders and is likely to exacerbate tensions between SIA and CSA, reduce transparency in decision-making, and the further limit the opportunity for those with child-welfare expertise and field perspective to inform MiSACWIS development efforts and improve support for workers and supervisors.

The conflict between SIA’s and development teams’ development approach was echoed in the Children’s Bureau’s MiSACWIS Site Assessment Report based on its on-site MiSACWIS visit from September 26-28: “A new decision-making process has been put in place prior to the start of development that is relatively rigid, Waterfall-style and top-down. It requires the creation and maintenance of a project charter that must be updated as requirements change. There is tension and pockets of disagreement between the two sides relative to what being ‘Agile’ means and how that impacts the end-to-end approach.” Although the report cited some progress in achieving ‘fit’ between the different methods, the majority of stakeholders interviewed expressed that the current project management and governance framework creates considerable confusion, rework, and reduces team velocity. Examples include work that teams were asked to halt mid-sprint, or incorporate mid-sprint, due to a new priority handed down by SIA. Changes to requirements often require protracted changes and approval to the project charter and other documentation which delay development efforts.

SIA’s Waterfall approaches lead to disagreements between SIA and Scrum Teams about how to execute work, including how to write requirements. In some instances, the SIA assigned the requirements work to an individual with limited to no child welfare expertise, which created considerable delays in moving forward with development. The majority of Scrum Teams use a common framework guided by Agile practices and Michigan’s assessment report score (which incorporates Agile knowledge and capabilities) from the Children’s Bureau’s September site visit is the highest score assigned to any state since the

inception of the Children's Bureau's Technical Assistance Program in 2017. Consequently, a decision-making process that is relatively rigid, Waterfall, and top-down will create significant conflict among development teams that have been trained for years to operate in a different framework. Further, this increasingly top-down approach to governance along with the reduced opportunity of those with child welfare expertise to inform priorities and requirements risks leaving unaddressed the concerns and priorities identified by those in the field when using MiSACWIS to promote effective casework.

## Recommendations for Finding # 2

1. SIA and CSA leadership must work together to propose and pilot a new governance structure that addresses the wide-spread concerns of CSA and DTMB staff regarding SIA's current governance model. This proposal must include the input and recommendations of CSA leadership and Scrum Teams, who are critical to executing development work and in the best position to self-organize the process. The new governance structure should be tested for 6 months and then evaluated to determine the extent to which Scrum Teams and other key stakeholders view the new approach as an improvement over the previous model. The structure must also identify how MDHHS will identify intake and backlog items that inhibit MDHHS' ability to accurately and efficiently report on ISEP provisions and how those items will be prioritized for development relative to other items (see also Finding 4, Recommendation 2).
2. Any individuals, including SIA staff, who play a significant role in MiSACWIS project management and oversight, priority setting, and development activities such as requirements writing should receive training in Agile principles and Scrum methods to better understand the value orientation the existing Scrum Teams have, the challenges that occur when development methods are in conflict, and the limitations and advantages of different approaches to development.

## **Finding #3: Scrum Teams have limited time and resources to work on backlog items related to data quality and ISEP items due to unmanageable backlogs and other priorities assigned to them. In addition, many defects and data fixes that impact ISEP reporting are not identified as such and therefore may not always get considered for prioritization.**

Data quality problems stemming from unresolved MiSACWIS defects have led to significant and unmanageable backlogs for most of the Scrum Teams. As described in Finding #1, as of November 2018,

there were 2,193 backlog items, including 623 deemed critical (6) or high (617) in severity.<sup>19</sup> Due to other development priorities, often assigned by SIA, the existing Scrum Teams have insufficient resources and time to devote to fixing data quality problems and addressing the root causes that contribute to them. The existing Scrum Teams must balance both high priority projects being assigned to them by leadership while also addressing hundreds of other backlog items. In addition, the responsibilities of Scrum Masters and Business Analysts are vast and cover too many areas of focus, a concern also cited in PCG’s 2007 final MiSACWIS assessment report.

Often, the high priority projects assigned to teams take precedent and the teams must delay their work on fixing data quality problems and addressing the root causes that contribute to them. Significant resources are spent responding to data fixes that will continue to reappear due to the underlying problem not being fixed. Since 2014, the MiSACWIS teams have addressed more than 9,723 data fixes and 7,136 incidents, with the number of data fixes increasing every year since 2014 (from 0 in 2014, 895 in 2015, 3,476 in 2016, and 3,670 in 2017). As discussed in Finding #1, many backlog items contribute to persistent data quality problems or create a dependency that has delayed ISEP reports designed for field staff or require complicated workarounds to calculate an ISEP metric.

The number of backlog items per team ranges from 9 to 301. The team assigned to Intake and Investigation, which is in the position to affect data and functionality for many ISEP commitments related to child safety, has the second highest number of backlog items (282) (see **Figure 3**).

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<sup>19</sup> As noted in the glossary, backlog items include enhancements and new functionality, data fixes, defects, requests to change documents, and other work needed on the system. See Table 1 for a count of backlog items by type and severity.

### Number of MiSACWIS backlog items, by team (as of 11/27/18)

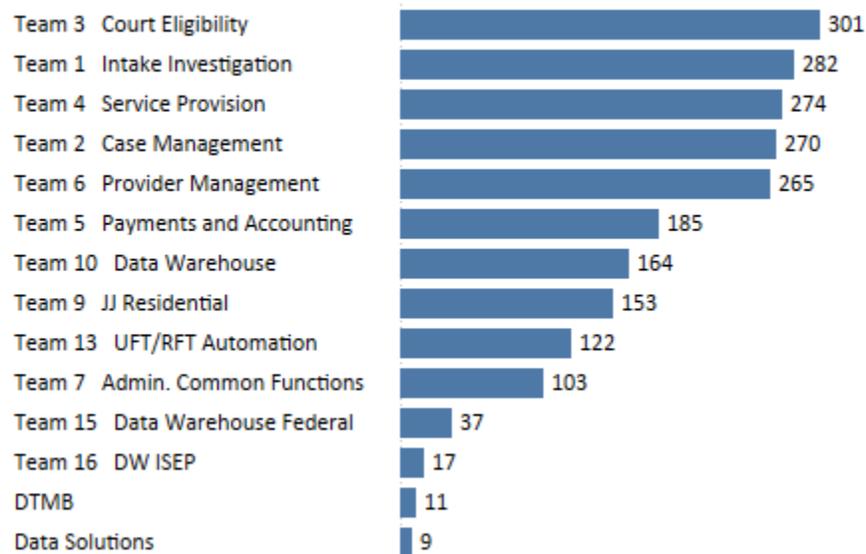
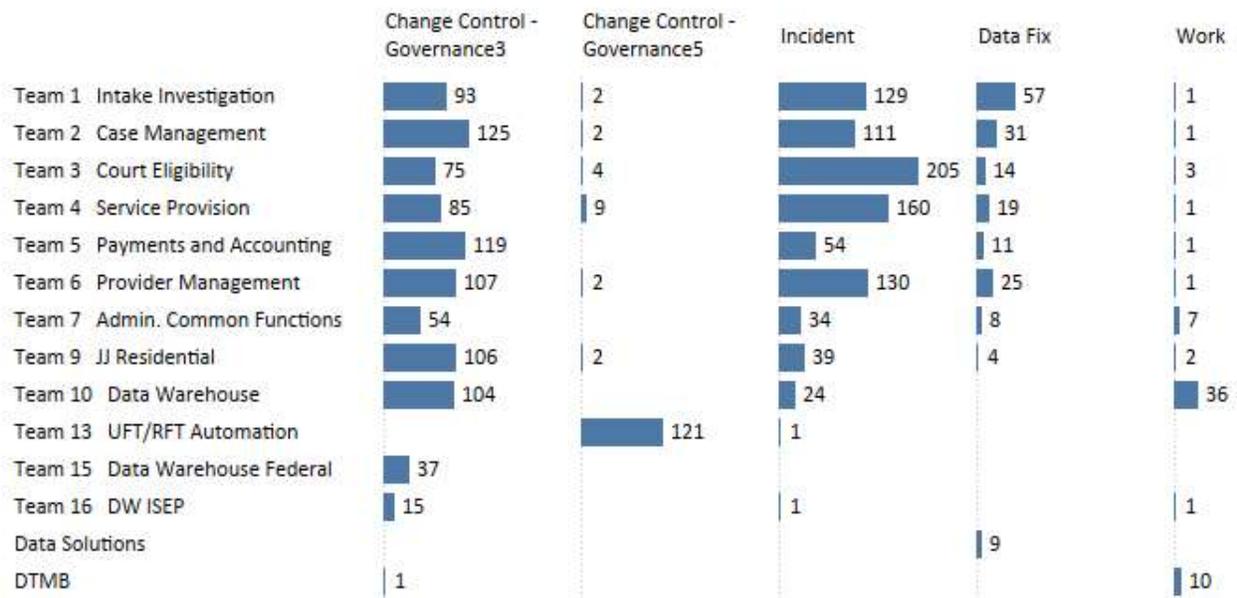


Figure 3. Number of MiSACWIS backlog items, by team (as of 11/27/18)

The Intake and Investigation team also has the highest number of data fixes (57) and the second highest number of incidents (129) (see **Figure 4**).

**Number of MiSACWIS backlog items, by team and backlog type**  
(as of 11/27/18)



**Figure 4. Number of MiSACWIS backlog items, by team and backlog type (as of 11/27/18)**

The workload for the Intake and Investigation team will likely remain high and increase: the recent OAG audit of Michigan’s CPS investigations has resulted in additional, high-priority projects being assigned to this team, further reducing the chance the team can get to the large number of data fixes and incidents in the backlog which impact the work of CPS workers and supervisors.

Many of the backlog items, if unresolved, will negatively impact one or more ISEP provisions. However, the relationship between a backlog item and its impact on an ISEP commitment is not always indicated, which reduces the likelihood that ISEP-related items are prioritized for development. For example, a backlog item that comes in through the help desk from a user complaint or request is unlikely to be identified as something that could improve ISEP reporting, because neither the users nor the help desk staff are deeply familiar with the ISEP. The individuals in the best position to make the ISEP connection are those with extensive knowledge of the ISEP provisions and the data issues that affect reporting.

Stakeholders were mixed on the most effective solution to addressing the sizeable backlogs related to data quality and root causes in light of teams’ resources and other priorities assigned to them. Some individuals recommended adding additional individuals to each team who can focus exclusively on backlog items related to data quality and solving the root issue. These individuals would include business analysts along with developers and testers, all of whom would be shielded from work that is not within the scope of data quality. Other individuals, concerned about the large size of some teams, recommended forming a separate Scrum Team that focuses exclusively on backlog items related to data

quality. However, some individuals are concerned this approach would lead to siloed programming and make it difficult to coordinate with other teams working in a similar area of functionality.

### Recommendations for Finding #3

1. Hire additional business analysts (BA), developers, and testers to focus exclusively on working through backlog items related to defects, incidents, and data fixes that contribute to data quality problems, identifying root causes, and advancing solutions to prevent future data issues. Two approaches to this effort should be considered: 1) expand existing Scrum Teams to include additional individuals who have this exclusive focus or 2) create a new, adequately staffed Scrum Team that focuses exclusively on data quality, data fixes, and root cause analysis. Ideally, there should be at least two BA’s for each team that maintains a sizeable backlog. As stakeholders pointed out, there are strengths and limitations with both approaches. The Scrum Teams, with assistance from the Product Owners, should decide collectively the best strategy to pursue and the best way to organize the Scrum Teams and processes to incorporate this strategy. The Scrum Masters and Product Owners, in consultation with their teams, should identify the backlog items that should be assigned to the new individuals or the new Scrum Team. This change will allow the existing teams to focus on high priority projects, incidents, and feature requests that advance the mission and priorities of MDHHS, allow it to meet emerging state and federal requirements, and improve MiSACWIS usability.
2. MDHHS should review the ISEP commitments for which it has been unable to provide accurate and complete data due to data that, *at its source* (i.e., due to a data entry error or system defect), was duplicated, missing, out of range, or otherwise inaccurate. This effort will likely involve mapping data elements or data relationships for affected ISEP commitments against the nature of the data quality issue. For each instance, a backlog item should be generated that is specifically flagged as ISEP-related and then prioritized and assigned to the appropriate team for requirements gathering and resolution. If the backlog item already exists, but is not flagged as ISEP-related, it should be updated to reflect its relationship to ISEP and reexamined for prioritization. If the item is not prioritized for development, MDHHS must provide an explanation to the monitoring team as to why it was not prioritized. For each backlog item related to an ISEP commitment, MDHHS must provide an update to the monitoring team every 6 months as to the status of the backlog item, including how it was or is being addressed (e.g., “validation rule was added to front end that makes this a required field”).

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**Finding #4: The Data Management Unit has limited time and resources to produce data files and conduct a thorough quality review before providing data to the monitoring team. This results in errors in the extraction code and query logic or data that departs from the metric plan.**

MDHHS stakeholders indicated that limited resources of the Data Management Unit in CSA combined with a significant ISEP workload and aggressive delivery schedule often lead to limited time available to engage in thorough data preparation and quality assurance checks. The problem is compounded due to the complexity required to query the data given a heavily normalized data model (which requires joining multiple tables), numerous data quality problems and, most recently, the requirement to simultaneously validate commitments for two periods (Period 12 and 13). As a result, errors are made in the extraction code or the code does not adhere fully to the *ISEP Reporting Matrix* (i.e., metrics plan) agreed to by MDHHS and the monitoring team.

For example, there are 129 commitments in the ISEP, 43 (33%) of which must be reported as either a data file or report. Validating commitments for two periods involves 86 commitments, and several commitments involve complex logic and coding requirements, due in part to the complexity of joining data from multiple tables into a single view (a function of MiSACWIS' heavily normalized data model, the data quality problems, and the calculation logic for the provisions). According to the monitors' product request grid (as of April 6, 2018) and data production file, MDHHS missed the 6/29/18 reporting deadline for at least 18 out of 28 commitments (64%), with a median delay of 49 days and a range from 5 days late (1 product) to 104 days late (2 products). In addition, 11 of the 27 submissions (41%) had to be resubmitted at least once; 6 (22%) had to be resubmitted twice.

Although the due dates are set by MDHHS and the monitors routinely grant extensions when requested, it remains clear that changes are needed for MDHHS to be able to provide accurate data within agreed upon time frames.

At the time of this evaluation the Data Management Unit had no written quality assurance plan in place, although one was in development. Based on interviews, quality assurance checks within the Unit often involve a second individual comparing a sample of records in an ISEP data file against the actual MiSACWIS case file, but this strategy can verify only cases that were pulled and will not easily identify cases that were not extracted but should have been. Providing data to the University of Michigan for a final quality review before forwarding to the monitoring team has often been an effective quality assurance practice; however, the utility of this resource is sometimes limited due to the extensive ISEP expertise needed to understand some of the provisions. In addition, some MDHHS stakeholders indicated that there is insufficient time to provide the University with files to validate due to fast-approaching deadlines.

Some stakeholders indicated that staff would benefit from additional training to streamline processes and improve facility with data querying tools and software. Some stakeholders also indicated additional staff are needed to handle effectively the significant workload in constructing and reviewing ISEP data files. Staff that used to be available to support data validation have been reassigned to conduct case reviews for Quality Assurance Program (QAP) reviews and Quality Service Reviews (QSRs). However, when these staff were available data files were still being provided to the monitoring team that contained significant data quality problems. A previous effort to recruit and hire an on-site statistician was not fruitful, but it is not evident from this evaluation that statistical expertise is needed to support the ISEP commitments. Instead, the skillsets needed are expertise in child welfare administrative data and programming and software skills related to SQL.<sup>20</sup>

Recent strategies agreed to by MDHHS and the monitoring team, such as basing analysis on “frozen” files (i.e., fixed on a given date) and increased use of a metrics plan has reduced errors and introduced some control and reliability in report production. As a result, there has been some progress in the quality of data provided to the monitoring team from ISEP Period 11 to Period 12 and 13, with fewer resubmissions and more instances of MDHHS identifying on its own errors in a file and initiating resubmissions. In several cases, however, MDHHS has resubmitted files without a clear indication of the reason for the resubmission. This delays the monitoring team’s ability to assess what changed, the reason for the change, and any revised methods needed to validate the provision.

## Recommendations for Finding #4

1. MDHHS should develop, document, and provide to the monitoring team for its review a quality assurance plan that describes the processes it uses to verify the accuracy of a data file before it is provided to the monitoring team.
2. When MDHHS submits a resubmission, it should provide to the monitoring team the reason for the resubmission, the nature of the changes it reflects, and the process(es) that led to the discovery of the issue that necessitated the resubmission. In these instances, MDHHS must also review the quality assurance plan to identify the process(es) that failed to identify the error or the factors that contributed to it, revise the quality assurance plan if necessary, and document measures that will be used to prevent similar errors from occurring in the future.
3. If a provision cannot be properly validated due to significant data quality problems stemming from data entry errors, data quality, or problems with MiSACWIS functionality and usability, those items must be submitted as a backlog item and specifically identified as an ISEP-related issue that is preventing MDHHS from accurately reporting on a commitment. For such items not deemed a priority by the governance approach, MDHHS must provide a rationale to the monitors for the item

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<sup>20</sup> SQL refers to Structured Query Language and is the predominant programming language the Data Management Unit uses to query and extract MiSACWIS data.

not being identified as a priority (see also Finding #2, Recommendation #1; and Finding #3, Recommendation #2).

4. If MDHHS believes the existing data production schedule and deadlines are unrealistic given resources and workload, it should propose to the monitoring team a revised schedule that gives MDHHS adequate time to produce and quality check each report before it is sent to the monitoring team.
5. MDHHS should continue to make use of external partners such as the University of Michigan, particularly to conduct cohort matching and similar gap analysis, to assist with data validation before data are sent to the monitoring team.
6. MDHHS should assign to the Data Management Unit at least one additional staff member with significant expertise in SQL to assist with developing and validating extraction code and query logic and producing data reports for ISEP provisions.

## Appendix A: Documents Reviewed

### Abbreviations:

ACYF	Administration on Children, Youth and Families
CB	Children’s Bureau, ACYF
PMO	(Child Welfare) Program Management Office (new name: Integration Service Area)
BIC	Business Integration Unit (new name: Strategic Integration Administration)
DTMB	Department of Technology, Management, and Budget
ISEP	Implementation, Sustainability, and Exit plan
MDHHS	Michigan Department of Health and Human Services
OAG	Michigan Office of the Auditor General
PCG	Public Consulting Group, Inc.

### MiSACWIS Assessments, Reviews, Audits, and Surveys

Document	Document Date	Author / Source	Description
<b>Federal Site Visit Report – ACYF MI SACWIS Monitoring July 2014 Site Visit Report</b>	October 6, 2014	ACF	ACF letter transmitting findings and observations from its MiSACWIS monitoring visit on July 22-24, 2014
<b>Federal Site Visit Report – ACYF MI SACWIS Monitoring July 2016 Site Visit Report</b>	September 6, 2016	ACF	ACF letter transmitting findings and observations from its MiSACWIS monitoring visit on July 12-14, 2016
<b>MiSACWIS User Survey – Michigan Federation for Children and Families (MFCF) Data Collection Summary: MiSACWIS System Reform Needs</b>	June 2018	MFCF	Results of the MFCF survey of member agencies regarding MiSACWIS user satisfaction and functionality conducted June 2018
<b>Key MiSACWIS Concerns – A list of concerns from private provider users provided by the Michigan Federation for Children and Families (MFCF)</b>	October 2018	MFCF	A list of 15 concerns related to system defects and design flaws that create problems for workers and supervisors when using MiSACWIS and doing case management.
<b>MiSACWIS User Survey – MDDHS Survey, Summary</b>	November 2018	MDHHS	Results of the MDHHS-sponsored survey of users regarding MiSACWIS

Document	Document Date	Author / Source	Description
Results, and Response Data			user satisfaction and functionality conducted October 26, 2018 to November 16, 2018
<b>MiSACWIS User Survey – Communication Issuance</b> announcing the MiSACWIS User Survey	October 22, 2018		A communication issuance distributed by MDHHS announcing the launch and purpose of the MiACWIS user survey, deadline for completion, and link to the online survey
<b>State Audit Report – OAG MiSACWIS Performance Audit Report</b>	June 2017	OAG	Results of the OAG’s audit of MiSACWIS conducted April 2014 to February 2017
<b>State Audit Report Response – MDHHS Initial Response to OAG MiSACWIS Performance Audit Report</b>	January 2018	MDHHS	MDHHS initial response to the OAG’s audit of MiSACWIS
<b>State Audit Report Response – MDHHS summary of responses as of August 6, 2018 to the OAG MiSACWIS Performance Audit Report</b>	August 6, 2018	MDHHS	MDHHS summary of responses as of August 6, 2018 to the OAG’s audit of MiSACWIS
<b>Private Assessment Report – PCG Final Report and Action Plan – SACWIS Special Assessment</b>	January 2017	PCG	Results of PCG’s MiSACWIS assessment conducted April 2016 – September 2016
<b>Federal Technical Assistance Assessment Report – Children’s Bureau Technical Assistance MiSACWIS Site Assessment Report</b>	September 2018	CB	Results of Children’s Bureau’s technical assistance MiSACWIS site assessment conducted by LeadingAgile on September 26 – 28, 2018

## Other Michigan Assessments, Reviews, Audits, and Surveys

Document	Document Date	Author / Source	Description
<b>Federal CFSR Report – Children’s Bureau Michigan Child and Family Services</b>	January 2019	CB	Results of Children’s Bureau’s Michigan CFSR conducted on August 13, 2018

Document	Document Date	Author / Source	Description
Reviews (CFSR) Final Report			
<b>Federal AFCARS Assessment Review Report</b> – Children’s Bureau Michigan Adoption and Foster Analysis and Reporting System (AFCARS) Assessment Review Final Report	March 2016	CB	Results of Children’s Bureau’s Michigan AFCARS review conducted during the week of July 13, 2015
<b>State Audit Report</b> – OAG Children’s Protective Services (CPS) Performance Audit Report	September 2018	OAG	Results of the OAG’s audit of MDHHS CPS Investigations conducted May 2014 to July 2016

## ISEP- and Court-Related Documents

Document	Document Date	Author / Source	Description
ISEP in the case of Dwayne B. v. Snyder	February 2, 2016	U.S. District Court – Eastern District of MI	ISEP agreement between plaintiffs and defendants (DHHS) in the case of Dwayne B. v. Snyder
ISEP Court Monitor Report – Public Catalyst ISEP 11 Monitoring Report for Swayne B. v. Snyder ISEP	May 10, 2018	Public Catalyst	Court monitor’s report for ISEP Period 11, reflecting progress for the second half of 2016
Court transcript of May 10, 2018 status conference between plaintiffs and defendants (DHHS) in the case of Dwayne B. v. Snyder	June 7, 2018	U.S. District Court – Eastern District of MI	Court transcript of the status conference which led to the court order for an independent assessment of MiSACWIS and MI’s child welfare reporting infrastructure
ISEP 12 & 13 Product Request Grid Draft	May 6, 2018	Public Catalyst	Excel file documenting for each ISEP commitment the DHHS lead, DHHS

Document	Document Date	Author / Source	Description
			team assignments, products requested by the court monitor, data source, due date, and court monitor lead
ISEP 12 & 13 Data Production Dates	January 22, 2019	Public Catalyst	Excel file documenting data files, memos, and other products provided by MDHHS to the court monitors, by ISEP commitment, period, date the court monitors received it, and description
ISEP Commitment Table	August 2018	Public Catalyst	List of ISEP commitments and reporting formats (i.e., QAP, Reports, Data, QSR)
ISEP Reporting Matrix: and Metric Plans	April 2018	Public Catalyst	Metric plan that defines for each ISEP commitment the agreed upon unit of analysis, date range, numerator and denominator, calculation method, applicable cohort, report columns, and other details
Various memos and written correspondence among MDHHS, the court monitoring team	Varies	Public Catalyst	Memos and correspondence related to various ISEP commitments, including reasons for resubmissions, validation results, and other actions being taken or considered to address ISEP commitments

## Organizational, Program Management, and Governance Documents

Document	Document Date	Author / Source	Description
Organizational charts for State of Michigan, CSA, and DTMB	July 1, 2018	MDHHS	Organizational charts for State of Michigan, CSA Executive Office, CSA divisions, and DTMB
BIC Child Welfare PMO Communication Plan	January 12, 2016	BIC	Lists the standing meetings and tools used to promote communication and manage work related to the Child Welfare PMO

Document	Document Date	Author / Source	Description
BIC Child Welfare PMO Governance Diagram	March 20, 2018	BIC	Graphic that depicts the day-to-day delivery governance model to deliver business and technology projects for the Child Welfare PMO
SIA Child Welfare Integration Service Area Governance Diagram	December 5, 2018	BIC	Graphic that depicts the day-to-day delivery governance model to deliver business and technology projects for the Child Welfare ISA. Reflects the change in governance and change in names (BIC → SIA; PMO → ISA) from the previous model.
Child Welfare Data Warehouse Governance Diagram	no date	DHHS	Graphic that depicts the governance model for the Child Welfare Data Warehouse program area (for creation and maintenance of child welfare reports and queries using the data warehouse)
BIC Child Welfare PMO Program Management Plan	March 20, 2018	BIC	Describes the “project plan” for the Child Welfare PMO that serves as “the process disciplines that will be adhered to by all Child Welfare PMO teams and projects”
BIC Child Welfare PMO Role and Responsibilities	August 22, 2018	BIC	Describes the key roles and responsibilities defined on the Child Welfare PMO governance diagram and additional roles specific to the Child Welfare PMO
BIC Child Welfare Program Charter	March 15, 2016	BIC	Describes the purpose and objectives of the Child Welfare PMO along with its scope, stakeholders, assumptions, success factors, and high-level program plan.
Child Welfare Leadership Meeting Packet	November 15, 2018	MDHHS	Example of a meeting agenda and packet for a Child Welfare Leadership Meeting (including leadership action items, data warehouse requests, prioritization action items, status of

Document	Document Date	Author / Source	Description
			select projects, and project priorities by program area, and MiSACWIS roadmap)
Child Welfare PMO Prioritization Meeting Packet	November 13, 2018	MDHHS	Example of a meeting agenda and packet for a Child Welfare Prioritization and Release Planning Meeting (including prioritization action items, data warehouse requests, and project priorities by program area)
BIC Work Intake Request Form	no date	BIC	Screenshot of the BIC intake request form used for all major enhancements to systems, new systems, infrastructure changes, changes or adds for tools that support the PMO, and any new business initiatives
ClearQuest Request Form	no date	MDHHS	Screenshot of the ClearQuest intake request form used for all defects and minor enhancements

## MiSACWIS Operational and Technical Documents

Document	Document Date	Author / Source	Description
MiSACWIS Operational Overview	August 8, 2018	MDHHS	Power point describing the history of MiSACWIS development, planning and implementation; user population; functionality; transition to Agile; project staffing; agile teams; prioritization items and processes; help desk statistics; and training and field support activities
MiSACWIS Technical Overview	August 8, 2018	MDHHS	Power point describing MiSACWIS staffing, functional areas, application functions and structure, interface design, user population, backlog

Document	Document Date	Author / Source	Description
			types and description, release and backlog statistics, inputs and outputs, data warehouse access and reports, and agile development processes
MiSACWIS Job Aids	Varies	MDHHS	Job aids are written documents and protocols designed to teach users how to complete various case management tasks or access resources in MiSACWIS. Reviewed were job aids for Adoption Subsidy / Finalization of Adoption Process Flow; Completing the DHS-441 Case Service Plan (ISP & USP); Provider Record Member Management; Available Data Warehouse (DW) Reports; and Uploading Documents
MiSACWIS backlog as of August 24, 2018	August 24, 2018	MDHHS	List of MiSACWIS backlog items (includes priority and severity score, status, type [change control, data fix, incident, work], and assigned team)
MiSACWIS backlog as of November 27, 2018	November 27, 2018	MDHHS	List of MiSACWIS backlog items (includes priority and severity score, status, type [change control, data fix, incident, work], and assigned team)
ISEP Commitments Backlog Dashboard – CQ Data Warehouse	August 17, 2018	MDHHS	List of ISEP commitments on the backlog for the Child Welfare Data Warehouse (includes stage of development and age of the request)
MDHHS response to evaluator regarding ISEP Commitments Backlog Dashboard – CW Data Warehouse	December 26, 2018	MDHHS	MDHHS response to the evaluator’s request to explain significant delays in produce ISEP work items shown in the CW Data Warehouse request backlog document for the ISEP Reporting Group

## Other Documents

Document	Document Date	Author / Source	Description
Contract between the State of Michigan and Conduent State and Local Solutions, Inc.	August 2014	DTMB	The contract between the State of Michigan and Conduent State and Local Solutions, Inc. for maintenance and support of MiSACWIS
NCANDS extraction code for maltreatment in care (MIC)	September 2018	MDHHS	SQL code showing extraction logic to extract data on MIC allegations
NCANDS relationship mapping for perpetrator relationships	September 2018	MDHHS	Document showing how MDHHS maps its MiSACWIS values of perpetrator relationships to NCANDS values
MiSACWIS screenshots related to identifying roles and relationships of individuals involved in investigations of allegations of maltreatment	September 2018	MDHHS	MiSACWIS screenshots for specifying a person’s relationship to the investigation person, specifying a person’s role (e.g., alleged victim, alleged perpetrator, parent, etc.), and displaying investigation persons, roles, and relationships
List of MiSACWIS participant roles for individuals involved in investigations of allegations of maltreatment	September 2018	MDHHS	List of participant roles available to workers when documenting in MiSACWIS a person’s role as it relates to individuals involved in investigations of alleged maltreatment
MDHHS CSA Dataset	November 26, 2018	MDHHS	Report produced by the Division of Continuous Quality Improvement, Data Management Unit. Shows the number and percent of services and activities performed in a timely manner, by county, agency, and month, on various outcomes and metrics for CPS and foster care program
MDHHS Monthly Management Report	October 2018	MDHHS	Report produced by the Division of Continuous Quality Improvement,

Document	Document Date	Author / Source	Description
			Data Management Unit. Shows the number and percent of services and activities performed in a timely manner, by county, agency, and over time, on various outcomes and metrics for CPS and foster care program