



Dr. Deidre Gifford, Commissioner
State of Connecticut Department of Social Services

Victoria Veltri, Executive Director
State of Connecticut Office of Health Strategy

Re: Draft State of Connecticut Technology Report

November 9, 2020

Dear Commissioner Gifford and Executive Director Veltri,

I am writing in response to the draft *State of Connecticut Technology Report* (Report) provided to Alan Fontes, Director of the University of Connecticut Analytics Information Management Solutions (UConn AIMS) on 10/19/2020. The Report was issued by Velatura Public Benefit Company (Velatura), a designated contractor for the Office of Health Strategy (OHS). It is our understanding that the purpose of the Report was to review the Core Data Analytics Solution (CDAS) and its capacity to support the Medicaid Information Technology Architecture (MITA) and Medicaid Management Information System (MMIS) objectives. The Report, while still in draft format, raises a number of concerns for the University of Connecticut, including factual errors, misrepresentation of scope and purpose, omission of key factors necessary for evaluation, and lack of transparency and engagement of key constituents during the evaluation and review process. We would like to provide an initial response to the Report while in draft format.

Below is an initial summary that highlights some of our concerns with the Report followed by further details:

- Lack of engagement and consultation with OHS key personnel who have provided direction, oversight and review to UConn AIMS.
- Inconsistent and misaligned scoring criteria that are out of step with industry standards and previous technical reports. In some instances, evaluative scores were provided without explanation of the assessment criteria used to generate the scores.
- The Report faults UConn AIMS for a lack of production data. Production data does not fall within the scope or responsibility of UConn AIMS and never has. This responsibility has always fallen with OHS, and therefore, should not have been included as evaluative criteria for UConn AIMS.
- The Report evaluated UConn AIMS on Consent Management Application; however, this responsibility lies with OHS and not UConn AIMS, and therefore, should not have been included as evaluative criteria for UConn AIMS.

- The Report incorrectly characterizes CDAS Data Ingestion/Integration as the Health Information Exchange (HIE) services. This assessment is factually wrong.
- The Report incorrectly characterizes CDAS as lacking ingestion data for case flow. This assessment is factually wrong.
- The Report evaluated UConn AIMS for a lack of complete HITRUST certification when such certification is not required for PHI data and ignored that in many instances, HITRUST coverage is provided through software, systems and services integrated by CDAS.
- The Report does not evaluate CDAS as a complete solution with capabilities, but rather focuses on some individual technologies while omitting others that would fully inform the capabilities of CDAS.
- The Report contains a number of items that exceeded the review scope or did not appear relevant to an objective evaluation of UConn AIMS' technical capabilities. Thus, we have serious concerns with potential bias and conflict of interests with the review process and the evaluator Velatura.

Background and Context

As a sister-state agency, UConn AIMS has had a collaborative working partnership with OHS since 2017. Alan Fontes, the Director of UConn AIMS, has provided subject matter expertise to the Executive Director, Victoria Veltri, and has presented to several of the OHS-sponsored advisory groups on a number of occasions. The Report that UConn AIMS received is an "Addendum" to a previously published State Technology Assessment document (Original Report). The Original Report's Executive Summary states that it was completed to address inquiries from the Centers for Medicare and Medicaid Services (CMS) regarding the IAPD-Update (FFY 2018 and 2019).¹ It is UConn's understanding that CMS did not raise any specific inquiries related to CDAS, as the work had previously been reviewed and approved as part of the State Innovation Model (SIM) Operations Plan and in previous IAPD-Update, and that the current Addendum Report serves as a supplemental review of CDAS capabilities.

The Review Process

The Report was to be the culmination of review efforts (Review), as communicated to Alan Fontes via email from Velatura on May 17, 2020, with the following goals and objectives:

"The goal is to understand how CDAS can be leveraged to support Medicaid Information Technology Architecture and Medicaid Management Information System objectives as the information exchange and its services begin to come online. The objective is complete an analysis of each target technology, tool or application from an architecture, functionality and lifecycle development perspective."

The Review included presentations and demonstrations conducted over the course of eight (8) meetings between July 7, 2020 through August 12, 2020, for a total of 16.5 hours. The Review presentations and demonstrations were conducted by UConn AIMS with the attendance of Velatura

¹ Health Information Technology Implementation Advanced Planning Document Update (HIT IAPD-U) to obtain enhanced 90 percent Federal Financial Participation (FFP) under the Health Information Technology for Economic and Clinical Health (HITECH) Act

and DSS staff and contractors. It should be noted that no OHS staff were present at these UConn AIMS presentations and demonstrations.

During the Review, UConn AIMS demonstrated numerous CDAS components' capabilities and the CDAS holistic, end-to-end processes flow twice, once at the July 8, 2020 meeting (Comprehensive End-to-end Review and Demonstration) and once again at the August 12, 2020 meeting (End-to-End Demonstration, Security Assessment and Budget Review). During the July 8 demonstration, UConn AIMS detailed the CDAS Architectural Overview, its Technical Systems and Services Configuration, and its Data Pipelines (automation flows). During the August 12 demonstration, UConn AIMS presented Data Pipelines (automation flows) including simulations of receiving, processing and sending data from/to a healthcare organization, using Mirth Connect and automated parallel processes.

Throughout the Review, members of the Velatura team requested additional information and documentations from UConn AIMS, including a final list of **all** outstanding items on August 19, 2020. UConn AIMS provided **all** requested information. Despite providing all requested information, the Report incorrectly states that *not all requested materials were received* (page 10).

Evaluation Framework

The scoring approach in the Original Report used a six point Likert scale to assess maturation level (0 – 6), where a score of zero (0) indicated no information exchange and a score of six (6) indicated the highest level of maturity possible. In contrast, the scoring approach used by Veltura in the addendum Report is a three-tier scale (met, partially met, not met). The three-tiers include: (i) a **requirement is met** if all conditions of that capability are demonstrated in a production environment with production data, (ii) a **requirement is partially met** if most conditions of that capability are available and have been configured, but are not tested and have not moved to a production environment; and (iii) a **requirement is not met** if the conditions of that capability are available but are not demonstrated, not tested, and configuration is in process or no configuration has been started.

The scoring criteria, definition of requirements, and evaluative outcomes used by Veltura are not aligned with the Original Report nor are they consistent with the scope and expectations outlined in the MOU between UConn AIMS and OHS. For instance, the only way to meet the top tier requirement is to demonstrate CDAS capability with production data, which would place the responsibility for obtaining production data with UConn AIMS. It is well-documented that it is the responsibility of OHS to **provide** production data by developing and executing data use and HIPAA business associate agreements with healthcare organizations. It is not the responsibility of UConn AIMS, and thus should not have served as the basis for evaluating CDAS capabilities.

In addition, the evaluative criteria for Analytic Tools and Consent Management were not clearly defined and simply described as “*developed for this assessment only.*” As such, it is unclear how Velatura’s requirements map onto industry standards or relate to “*use cases for State data analytics and the State-wide health information exchange network,*” the stated objective of the Review. Providing an objective review of CDAS’ technical capabilities would necessitate a process whereby review criteria are clear and well-defined, linked to measurable outcomes, and consistently applied. The Report did not follow these standards in its evaluation of UConn AIMS and CDAS capabilities

nor did it provide the criteria in advance which would have allowed UConn AIMS to directly address each scoring metric in its presentations and demonstrations.

CDAS Capabilities Findings

For the Review, Velatura evaluated the Mirth Connect tool as both the Integration Engine and Interface Engine components of the system, which is only one piece of the CDAS Data Ingestion/Integration capability. To fully understand CDAS Data Ingestion/Integration capabilities, the evaluation team would have needed to include other services in addition to Mirth Connect, such as Azure Data Factory (ADF), Informatica Data Quality, Databricks, and Diameter Health. For example, as presented and demonstrated during the Review, UConn AIMS currently uses Databricks and Mirth Connect for advanced transformations and ADF for simple data transformations, and Azure Blob Storage as a secure transfer service for outside organizations to transfer data into CDAS.

Moreover, the need for UConn AIMS to actually add the Mirth Connect to CDAS Data Ingestion/Integration capability was deployed specifically in response to the Health Information Technology Officer's (HITO) directive in order to address the healthcare organizations' requests to share data and assist in coordinating a potential COVID-19 data collection initiative. UConn AIMS responded to the HITO's request, filled the gap in the state's HIE capabilities, and provided data transfer services. Thus, in response to this immediate need, UConn AIMS implemented Mirth Connect and matured the CDAS Data Ingestion/Integration capability to that of an HIE.

Additionally, the Report noted concerns related to the security and scalability of Mirth Connect, as it is an open-source software tool. UConn AIMS chose to implement Mirth Connect based on conversations with a leading HIE organization, the Chesapeake Regional Information System for our Patients (CRISP), which also uses Mirth Connect open source within their HIE services. UConn AIMS also included a demonstration of the CDAS analytics capabilities as a part of this Review. UConn AIMS showcased system capabilities and functionalities to support a wide range of analytic use cases. As part of the Review, UConn AIMS demonstrated these capabilities operationally, as they have been applied within projects, such as OHS's Cost Estimator and Affordability Calculator and the state's ReOpenCT dashboards. The Review also demonstrated the generation of various quality measures.

The Report inaccurately states (page 16) several CDAS analytics use cases, as described in the UConn AIMS presentations, are not fully enabled. However, the Report subsequently states (pages 16 and 17) that *"three projects for OHS have been ongoing with some dashboard outputs used as snapshots to demonstrate the utility of the analytics solution for certain State data programs,"* which would indicate an enabled capacity. Velatura did not explain why these projects which required the enablement of the listed analytics use were not included in their evaluative conclusions.

As with the other Report sections, Velatura scored the Analytic Tools component lower due to the lack of data flowing through the system. CDAS, as demonstrated, is fully capable of ingesting and analyzing data sources and has ingested data and demonstrated analytic capabilities across several state projects. Relatedly, the Report inaccurately states (page 17) that UConn AIMS uses 3M groupers on All Payer Claims Data (APCD) that is *"available in bulk transfer annually,"* though various presentations, emails, and reports have made clear that UConn AIMS is capable and has requested APCD data more frequently. UConn AIMS even stated that the frequency of CDAS

ingesting data is limited only by the frequency by which the data sources send the data to UConn AIMS. The Report also incorrectly states (page 18) that *“no clinical, operational or health care examples other than the public health use case for Coronavirus Pandemic were available for this review”* when UConn AIMS demonstrated clinical data analytics during the July 15, 2020 and August 12, 2020 presentations.

The Report fails to acknowledge the information provided during the demonstrations, as multiple instances demonstrated requirements and were not captured as doing so. For example, Velatura states that UConn AIMS showed no examples of using a globally unique identifier per patient or as “identity fragment” (page 24). However, UConn AIMS presented and mentioned many times the use of a CUID (CDAS unique identifier), representing a globally unique identifier. UConn AIMS even brought in test claims to show how a Person’s Golden Record is updated with CDAS Master Data Management (MDM) capabilities.

The Report fails to acknowledge the CDAS MDM’s Master Provider Registry (MPR) information provided during the demonstrations, where there were multiple instances in which the requirements were met in full. For example, Velatura stated (page 26) *“UConn AIMS report the Informatica provider registry currently stores approximately 70k individual Connecticut providers but none of this was demonstrated. Data collected at the time of the review was unable to confirm the number of providers in the MPR.”* However, UConn AIMS presented this functionality in detail and showed multiple data quality reports that provided unique counts of individual records.

The Report evaluated UConn AIMS on Consent Management Application when the functionality was not implementable at the time of Review. The Consent Management Application was to be designed and implemented in collaboration between UConn AIMS and OHS. OHS was to drive the design, business logic, and develop the web application, whereas UConn AIMS was to provide the CDAS MDM’s Application Interfaces (APIs) for the single-source management of expressed consent. In understanding the importance of the Consent Management Application and the fact that the OHS team had not accomplished their drive, UConn AIMS began to design the web application’s user experience and document the business logic and was only in the initial design stage at the time of Review. While the Report does state the Consent Management Application *“could not be assessed or scored”* (page 30), it subsequently went on to include the requirement in the scoring table and provided a score of 0.

Security

CDAS is also built upon the Microsoft Azure cloud platform, which is HITRUST certified against HITRUST CSF v9.2, allowing UConn AIMS to focus on only the controls that Microsoft does not cover. Therefore, CDAS can rely on Azure services being HITRUST certified and does not have to focus on as many controls since Microsoft services eliminate the need to be evaluated on some HITRUST controls. Since those have already been assessed and certified, UConn AIMS only needs to focus on the incremental security controls.

The UConn AIMS team worked with a third-party security contractor, GreyCastle, to assess UConn AIMS and CDAS and test the CDAS environment against the base HITRUST CSF v9.3 controls to move forward with the HIPAA controls and initial certification. UConn AIMS provided a document (UConn – HITRUST Assessment – 20200701) with the initial set of 266 controls evaluated and

scored by GreyCastles, based on HIPAA, to Velatura as part of a broader package of Review documents.

The Report states that the HITRUST audit “*covered only 266 of the 1747 HITRUST privacy and security controls.*” While accurate, this statement is misleading and implies a limitation of CDAS capabilities, which is not the case. There are cases where controls do not apply to an organization and/or a solution, such as CDAS. For example, CDAS does not require Payment Card Industry (PCI) compliance because CDAS does not manage credit card transactions. If CDAS were to ever process credit card transactions, UConn AIMS would then add those HITRUST controls to mature its HITRUST certification.

Out of Scope Evaluations

The Report states (page 21) that “*the current UConn AIMS team roster does not show a clinical informatics SME, electronic health record data SME, a health care standard terminologies SME, or data science resources that are commonly found in clinical analytic work environments.*” There are no requirements that such staffing and personnel align nor does the MOU between UConn AIMS and OHS require specific clinical expertise. That said, UConn AIMS is part of the UConn School of Nursing (SON) and has access to ample clinical resources including the broad spectrum within the University and also UConn Health, should the need arise.

The Report states (page 17) that “*It may be relevant to note that though 3M has use for the cost estimator project, it has little to no utility on the initial use cases that Connie expects CDAS to support.*” The purpose of this statement is unclear. If information is irrelevant to the Review of CDAS, it should not be included in the Report; likewise, the Report does not detail the applications of the 3M groupers on non-HIA use cases, which is one of the Report’s objectives. These statements demonstrate inconsistency in the scope of the review and evaluative process employed by Velatura.

Additional Issues and Concerns

The University believes there are significant issues and limitations regarding the review process employed and that the subsequent evaluation and recommendations do not apply objective criteria to UConn AIMS and its capabilities. UConn AIMS engaged in the Review process in good faith, having worked closely with the HITO (Allan Hackney) for several years and collaboratively with OHS. It is unclear if the HITO provided any input regarding the Review, the evaluative criteria, or the scope and responsibilities of UConn AIMS, which should have guided the Review. It is also unclear if any of the individuals, other than Velatura, who attended the Review presentations and demonstrations provided any input for the Review and the Report. A good faith evaluation should be a transparent process and include clear expectations regarding the review criteria, assessment process, input from key constituents, and objective outcomes. Moreover, UConn AIMS should have been provided with an opportunity to respond to the inaccuracies in the draft Report prior to recommendations. Finally, concerns have been raised about Velatura having a conflict of interest in its ability to conduct the Review in light of its other ongoing work and past history with OHS and

UConn AIMS. These concerns should be fully vetted *should* the draft Report proceed to finalization and be used as part of a CDAS assessment.

Conclusion

While the Report has been classified as still in draft format and undergoing scrutiny by OHS, UConn feels very stringently that the serious flaws in this Report document prevent its consideration as part of a critical assessment of the CDAS functionality at this time. UConn is proud of the CDAS solution and the work performed by UConn AIMS to bring the state's multiple healthcare technology endeavors to their present point. We also acknowledge that more work must be done, and we look forward to partnering with our sister-state agencies in reaching our common goals. We do not shrink away from a critical review of the CDAS functionality and embrace this opportunity to assess the areas to enhance and strengthen CDAS in light of the state's overall health information technology strategy. But if an assessment must be conducted, it would be performed in good faith and with clear objectives and evaluation criteria, which are lacking in the current draft Report.

UConn would like to remove any disruptive barriers and move forward from this Report. This can only be accomplished with OHS, DSS and UConn AIMS working collaboratively to open the lines of communications with a common goal to improve healthcare for Connecticut residents and become the model for other states to follow.

Sincerely,

A handwritten signature in cursive script that reads "Marie Radenka".

Radenka Maric, Ph.D.

Vice President for Research, Innovation and Entrepreneurship