THE University *of* Vermont MEDICAL CENTER

Via Regular Mail & E-mail

June 14, 2017

Donna Jerry, Senior Health Policy Analyst
State of Vermont
Green Mountain Care Board
89 Main Street
Montpelier, Vermont 05620

Re: Docket No. GMCB-001-17con, Proposed Replacement of Electronic Health Record

Dear Donna,

This letter responds to the questions from your letter dated May 31, 2017. The questions are bolded followed by our responses in un-bolded font.

RESPONSES

1. Additional materials provided in response to the last set of questions, including the business plan, indicate there was an analysis completed of the current state applications. Please provide the details of this analysis.

RESPONSE: An analysis of current-state applications for UVM Health Network (UVMHN) was conducted in order to determine which systems will be replaced as part of the Epic project and which systems will remain in use. Each UVMHN hospital provided a list of all IT systems currently in use, along with the annual maintenance costs for the systems. Each system was then reviewed to determine if it would be replaced as part of the Epic project and, if so, by which Epic module.

The results of this analysis are reflected in a current-state mapping analysis, attached as Exhibit 1. These mappings will help guide the sunset plan for Accounts Receivable and non-Accounts Receivable systems. While the intent of these mappings is to indicate which applications will be replaced by an Epic module, in some instances, there may not be an Epic counterpart and systems will instead be sunset as part of our effort to standardize all applications across UVMHN.

2. Explain the pricing methodology developed for building other costs into the TCO specifically to "level of effort" for implementation of both the Epic Connect approach and the Full Design Process for Revenue Cycle Management (RCM) and ancillary modules.

RESPONSE: In order to develop the pricing methodology and costs contained in the TCO, UVMHN worked with Cumberland Consulting Group (Cumberland), a national HIT

implementation and support services firm, and Epic, the software vendor, to determine the appropriate implementation strategy, the deployment timeline and sequencing, and the internal and external staffing resources that would be needed to successfully complete the project. Cumberland has a proprietary methodology that it uses to accurately estimate implementation costs for large-scale, multi-year HIT projects, which was used for the development of the project's TCO as well as numerous other TCOs for similar HIT projects that were implemented successfully. In addition, Epic, which also assisted with the development of the implementation plan, has a long history of completing projects on time and on budget. Epic's own data indicates that 87% of Epic implementation projects are completed on or under their budget, with the majority of Epic implementations using only 87% of their original implementation budget.[1]

Two key cost drivers associated with all of the implementation waves for the Epic project are (1) the duration of the waves, and (2) the amount of staffing resources needed to support the implementation and long-term maintenance of the modules. Based on hundreds of successful implementations, Epic recommended staffing levels for each of these areas and worked with Cumberland and UVMHN to make any necessary adjustments to the implementation plan.

3. As UVMMC represents that the "As Is" and "To Be" assessment, which include detailed requirements, will be completed after a CON is issued, the overall cost and cost to each hospital is of concern, especially since the contingency is only 10%. Explain further how Cumberland Consulting derived the risk percentage to this project given there are four sites, 22 interfaces and legacy systems to be replaced/sunsetted, an Epic Connect, EMR, RCM and ancillary modules to be implemented over five years.

RESPONSE: As described in the CON application, significant planning on the part of UVMHN, Epic and Cumberland went into determining the most efficient and cost-effective strategy for completing the project. The costs contained in the TCO were validated thoroughly and rely upon knowledgeable input from affected stakeholders, and Cumberland's proven methodology. UVMHN has confidence in the accuracy of the project's TCO, including its contingency, because of the expertise of Cumberland, and UVMHN's own experience successfully implementing Epic at UVM Medical Center.

A ten percent contingency is industry-standard for HIT implementation projects of this size and scope, and consistent with Cumberland's experience with similar projects. As mentioned above, Cumberland helped build the project's TCO and relied upon its substantial experience building Epic implementation TCO models and managing large-scale Epic implementation projects for other health care systems. Cumberland's track record of successful Epic implementations began in the mid-1990s, when some of its senior executives started working with Epic. Cumberland has successfully completed, or is currently involved in, Epic implementation projects for 20 percent of Epic's customer base. Cumberland also has experience converting the legacy systems used by the UVMHN hospitals to Epic, including the GE/IDX

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[1] *See*, "Amended and Restated Certificate of Need Application for an Electronic Health Record Replacement Project," *Docket No. GMCB-001-17con,* dated February 23, 2017, p. 26.

billing system (UVM Medical Center), Meditech (CVPH and Porter), and eClinicalWorks (CVMC).

The TCO also includes considerable input from Epic. UVMHN and Cumberland worked closely with Epic to develop the implementation timeline and sequence of deployment across UVMHN. Epic has provided input on software, support, third-party systems and implementation costs from Epic's implementation services team. Epic is the leading clinical and revenue cycle system with over 190 million patients having medical records on the Epic platform, and a strong track record of successful implementations.

Finally, UVM Medical Center, which accounts for more than 60 percent of UVMHN, has been using Epic for several years as its inpatient and outpatient electronic medical record, and under the implementation model described throughout the CON application, it will serve as the "hub" organization through which the other UVMHN hospitals access Epic. UVM Medical Center has deep organizational experience implementing Epic, on time and on budget, and adding Epic modules and upgrades over time. Having UVM Medical Center serve as the hub for UVMHN's unified EHR system will help ensure successful implementation of the project.

For these reasons, UVMHN believes the project's overall cost estimate, including the contingency, is reasonable and appropriate for an HIT implementation project of this size and configuration.

4. Page 26-27 of the Business Plan identifies risks to the UVMHN. Identify which of these risks are "critical" or "high." Explain in detail the contingency plans that have been developed for these critical or high risks to mitigate negative impacts on costs, schedule and/or resources.

RESPONSE: The following table outlines the critical or high risks to the project. Although we consider the likelihood of each of these risks occurring to be low, the ones that are listed would have a significant impact on the project. The mitigation strategies provided describe the approaches that will be followed in order to avoid the realization of these risks.

Critical/High Risks	Mitigation Strategy
UVMHN is unable to provide resources to assist with the project as defined in the project staffing plan	• The implementation team will communicate with executive leadership on progress toward staffing the implementation team • Development and approval of a change request to add additional resources to the project, or to modify the scope, timeline and associated project costs
Project resourcing requirements, both internal and external, are not met in a timely manner	• Identify needs to fill open positions and the impact on project by not filling • Engage the project leadership team to assist in filling open positions on a timely basis

Critical/High Risks	Mitigation Strategy
	• Work with consulting partners to bring in temporary assistance to bridge gaps to keep the project on time
Due to unforeseen needs, project warrants additional funds that were not accounted for in the original budget	• A contingency of 10% has been built into the budget for capital and operating expenses. A contingency of this amount is industry-standard for projects of this size and configuration (i.e., EHR implementations by nonprofit health care systems).
Revisiting of project decisions or requests received for additional modules, functionality, workflow design, and/or non-standard build interfere with the project's approved scope and put implementation milestones at risk for delay	• Log of major decisions and issues will be kept throughout the course of the project • The implementation team will define a thorough approach to addressing key decisions, but will emphasize decision-making and adhering to decisions in order to keep the project on-track • Rigorous scope management will be key to keeping the project on-time and within budget • Requests will be reviewed on a case-by-case basis and then brought to the Epic Steering Committee for approval as necessary
Risks associated with technology: • Interfaces considered in-scope fall behind and will not be ready in time for the scheduled go-live • Contractual or other financial obligations with current systems prevent ability to move forward according to schedule • Planned data migration from legacy systems is not complete	• Technical Project Management will track status closely and provide regular updates to project leads, escalating issues to senior leadership as necessary

5. Explain in detail whether Epic or Cumberland Consulting has completed design build, implementation, support and training level of effort for the EMR, RCM and ancillary modules for UVMHN. If not, explain further the development of TCO pricing methodology not to exceed $151.6 million reflected in the Board minutes.

RESPONSE: The design, build, implementation, support and training required for UVMHN have not been completed. Work of this nature cannot be completed unless a Certificate of Need is issued for the project. Please reference the response to Question 2, above, for an explanation on the development of the TCO.

6. Clarify whether there will be a single patient record or a single Epic system across all four sites, including the one site in New York. Explain in detail whether all interfaces needed to exchange data between systems and among these four hospitals are included in the total project cost represented in the application.

RESPONSE: As explained throughout the CON application, the implementation of Epic will result in a single instance of the Epic system (i.e., a single patient record) for the UVMHN

organizations involved in the project, including CVPH in New York. This is explained in the CON application as follows:

> The objective of this Project is to improve both patient care as well as the care experience by replacing the existing disparate and outdated HIT systems at four of the six member hospitals of the UVM Health Network with a single-platform, unified EHR system from Epic Systems, the nation's leading vendor and the same company that provided UVM Medical Center with its clinical information system in 2008. If the Project is approved, the UVM Medical Center's other systems would be replaced with the Epic platform and the unified Epic-based EHR platform would be extended from UVM Medical Center, as the licensee, to three of the Network's other hospital affiliates (pp. 2 – 3).

> * * *

> The Project's establishment of a unified EHR will integrate clinical, registration, billing, scheduling, patient portal and insurance information into one system that will improve the patient experience of care while giving patients, their families and their providers access to consistent, timely and accurate information regardless of where their care is delivered. (p. 26)

> * * *

> With a unified EHR, the UVM Medical Center would not need to maintain expensive and complicated interfaces, as all data would be stored centrally and would not need to flow from one clinical system into another. (p. 30).

> * * *

> Epic has a program called Connect that is specifically geared towards the creation of a consolidated HIT system among distinct health care providers. The program permits a health care provider that licenses Epic (the "host provider") to extend full access to its Epic system to other hospitals, clinics and affiliated providers. By extending Epic, the host provider (UVM Medical Center, in our case) and partnering providers create a single health record for their patients, improving the patient experience and helping to promote collaboration, improve patient safety, reduce collective operational costs, improve analytics, and support seamless ambulatory and inpatient care across associated provider groups. (p. 25).

Since Epic will be a single instance and patient database, it will not be necessary for interfaces to be developed in order to share information within Epic between organizations. Interfaces will only be required for communication with applications that exist outside of the Epic environment. The costs for the development and implementation of these interfaces have been included in the TCO.

We hope that this letter answers any remaining questions that you have. If further information is needed, please do not hesitate to contact me.

Very truly yours,

Spencer R. Knapp, Esq.
General Counsel & Sr. Vice President