

Vermont Universal Transfer Protocol Project Charter

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Vermont Universal Transfer Protocol Project Charter

1.0 Project Overview

This Charter is a roadmap for the next phase (Phase Two) of the Universal Transfer Protocol (UTP), which has the ultimate goal of extending the ability of diverse service providers to share data electronically with each other in a timely, standardized fashion across the continuum of care.

Achieving this goal requires both creation of standardized data element sets for communication among all service providers, and reliable, technology-based mechanisms to exchange this information electronically.

The UTP is a set of iterative processes that enables the creation and updating of shared, interoperable data sets, common standards for information exchange, and performance metrics. It provides the foundation for improved communication among providers and coordination of services across a continuously evolving service system. Consistent with its origin in Phase One within Long Term Services and Supports/Home and Community Based Services (LTSS/HCBS), Phase Two UTP adds additional service sectors, along with the individual and immediate caregivers, to the vision of connecting all parts of the system through information exchange.

These iterative processes can be applied at any scale (practice, network, system, ACO, region or service sector). They can also be applied to any type of service provider. It is an example of a modular approach to create modular data sets to support common high value exchanges anywhere in the system. This approach makes it easier to match scale to available resources, and it offers the flexibility to pilot and test on a small scale before full deployment.

Phase Two builds on Phase One deliverables to continue the development of the UTP by the following:

1. Adding new service providers as participants in developing UTP by expanding participation by Long Term Services and Support/ Home and Community Based Service Providers (LTSS/HCBS) and adding Behavioral Health (BH), Hospital and Office Based providers (HOB), Long Term and Post Acute Care providers (LTPAC).
2. Identifying new high value activities and supporting data elements, based on the tested Phase One design processes and interviews with new provider types, to create a comprehensive LTSS/HCBS data set.
3. Harmonizing of the data elements, so that each element has the same meaning for each service provider in order to create a standardized and interoperable data set.
4. Developing, testing, and scaling the HIT technologies and workflow processes required to exchange these data elements.

Expected benefits of the project are:

1. Better predict the costs and timeline required to create an interoperable data set for use by all service providers.
2. Determine which models of organization are cost effective.
3. Determine the most effective methodology for linking individuals, HCBSPs and other providers to exchange standardized and interoperable data.
4. Improve information exchange and coordination of services among providers through the use of standardized, interoperable, electronically exchanged data sets
5. Provide data to help determine the optimal deployment of information exchange mechanisms to link all service providers based on the needs of those providers,
6. Determine the most effective technologies for linking individuals, LTSS/HCBS providers and other groups of service providers
7. Measure savings from improved information exchange as an offset for future investments
8. Improve care and obtain information with which to plan subsequent phases.

At the end of Phase Two Vermont will have improved information exchange and coordination of services for LTSS/HCBS, LTPAC, HOB, and BH providers through the use of standardized and interoperable data sets and electronic exchange.

2.0 Project Approach

2.1 Build on Phase One to Inform Design of Phase Two

This Charter is a roadmap for the next phase (Phase Two) of the Universal Transfer Protocol. The UTP is comprised of four interrelated parts:

1. A process to identify a set of standardized, interoperable and reusable data elements required by service providers to do their work effectively and efficiently.
2. Rules that govern the communication, transmission and exchange of these data elements.
3. Methods to continuously refine these elements and rules.
4. Performance metrics for the exchange of the data.

Phase Two builds on the five month Phase One UTP project (See [UTP Project Phase One Final Report](#)) which developed and tested a modular, iterative process to identify essential data elements needed to support high value activities identified by LTSS/HCBS providers. Phase Two will continue to support enhancement of the LTSS/HCBS data set as LTSS/HCBS providers are involved in the care of nearly every individual with complex care needs regardless of age or comorbidities. Phase Two will also expand to other provider sectors.

As we learned in Phase One, currently communication among providers at transitions of care is deficient in the following ways:

1. Personal profiles and the goals of the individual and their caretakers are not typically part of the medical record, although they are routinely part of LTSS/HCBS records.
2. The referring entity is often not aware of the data needs of the receiving entity. Significant time is spent finding missing information.
3. Significant time is spent identifying the agencies and providers involved in the person's care. Duplication of effort is frequent because there are no mechanisms to alert providers about any care and support efforts already underway.
4. There is a gap between providers' job titles and the work they actually do. Providers are not necessarily aware of each other's real roles in patient care.
5. There are no mechanisms to alert the provider network about changes in status, such as emergency room visit, hospital admission, hospital discharge or assignment of a new case manager. It is not infrequent for care plans and medication regimens to be unreconciled, duplicative, and potentially harmful.
6. There is little ability to use IT to solve these issues. Entities that have their own systems find that it is not easy to communicate with other entities. Bi-directional exchanges are rare. Read-only access represents a major advance. Most entities do not have electronic data systems and instead rely on paper based exchange.

In Phase Two, a modular approach will be used to develop the standardized, interoperable data element set for use by all service providers, and to put into place the HIT infrastructure to support the exchange of those data elements.

2.2 Integrate with the ACTT Projects 1 and 2

Project 1

UTP and Project 1 will closely align their work, in particular:

- Working with VITL to ensure that accurate and complete data is transferred among providers.
- Working with agencies to build a data dictionary that sets the structure for data elements to ensure that data is accurate and complete.
- Defining data workflows (such as: who touches the data, how does it get completed) to make sure that all agencies are collecting data in a consistent and uniform manner.
- Designing systems so that there is a single point of access, a common interface to the VHIE.

Project 2

UTP and Project 2 will closely align their work, in particular:

- Assessing the state of automation and current technologies available to exchange data.
- Understanding existing HIT capabilities to manage clinical information and to be interoperable with VHIE.
- Looking outside of Vermont at other states and at the federal level to understand the solutions that exist and are being worked on elsewhere.

2.3 Expand to Additional Health Care Sectors

We recommend that UTP continue to be developed with LTSS/HCBS and be expanded into the following sectors : BH, HOB, LTPAC. The process for engaging additional service sectors is the same; and the ultimate outcome of the UTP development process will be the same regardless of the order in which service sectors are engaged. While this is so, we do recommend that once the LTSS/HCBS data set is largely completed, the next sector to involve be BH (see Section 3, Objective 2 for more detail).

The next steps for building the Universal Transfer Protocol involve applying the components of the UTP to the information exchanges within that sector using the following workflow:

1. Form strategic and implementation teams.
2. Identify the types of exchanges that are a strategic priority due to volume, cost, risk to individuals.
3. Compare the interest, ability, resources and leadership available between the options that meet the strategic requirements.

4. Identify potential participants; consider region, discipline, entity type.
5. Engage participants and ask them to identify others until most significant participants have been contacted to participate.
6. Recruit existing groups and significant participants to collaborate in the development process.
7. Work with these participants to identify the high value activities that correspond to their needs and the data elements needed to support those activities.

2.4 Identify Essential Data Elements

The approach to identify the essential data elements starts with the identification of the high value activities they must support. High value activities are information exchanges that are essential for the service providers to do their work, such as: Request for Service. Through an iterative survey process (see [Section 3-c ii of the Final Report](#)), this list is expanded and refined until it accurately reflects the requirements of all service providers.

Once the high value activities are identified, the providers are asked to identify the data elements that are essential and enable them to perform each activity. [This link](#) is an example of the methodology used to iteratively identify the data elements required. Responses to the survey are collected and newly identified elements added to the data set. The conclusion of this iterative process is a final review by all providers to ensure that the data set is complete and meets the providers' needs for this specific high value activity. This process is repeated for each high value activity until the master data set, the one that contains all the data elements required by all the high value activities, is created. However, to ensure interoperability within and across sectors, the elements must be standardized through a process called *harmonization* (see [Section 4.4](#)).

The harmonization tasks are as follows:

1. Harmonize the resulting data sets with the [CMS Data Dictionary and the CDA Release 2 2013](#) to be compliant with Consolidated CDA exchange standards.
2. Harmonize the sets of data elements within each sector.
3. Aggregate the sector data element sets and harmonize them to create a single master data element set.
4. Reconcile the meaning of specific data elements identified by each sector.
5. Reconcile the meaning of specific data elements identified by providers between sectors as data sets become available.
6. Reconcile the meaning of specific data elements shared by all sectors.
7. Establish a feedback process to enable each sector to apply the standardized data elements within their exchange processes.

2.5 Define Rules of Data Element Exchange

The second process is to create the rules that govern the exchange of these data elements. This is an agreement among the various service providers regarding their mutual responsibilities to each other. These rules stipulate the content that is expected for a particular exchange, the interval within which the data are expected to be sent, the format of the exchange and that the exchange will use a mutually determined and reliable mechanism.

2.6 Define and Apply Performance Measures for the Exchange of Data

The final step in the UTP process is to collect, analyze and report performance measures for the exchange of the data. For paper based exchanges this requires ongoing review of a sample of exchanges to determine completeness, timeliness, proper format and reliable exchange. For fully electronic exchanges using standardized and interoperable data, these measures can be collected automatically because they are derived from the data exchanged in the process of care. These performance reports become the basis of ongoing process improvement.

2.7 Approach to Technology

The discovery of the essential data elements will progress in parallel with the identification of the appropriate strategies for transferring these data elements among service providers. As these sets of data elements evolve, it will be appropriate to pilot their exchange in parallel. Given the wide variety of users and the different levels of IT capability and resources, determining the optimal mix of HIT interventions will require discovery, pilots and then deployment at scale. It is likely that several different approaches (see Section 3, Objective 6) will be deployed to close all of the gaps.

3.0 Project Objectives

The objectives of Phase Two are

1. Finalize a comprehensive LTSS/HCBS data element set.
2. Engage Additional Care/Service Sectors to extend UTP.
3. Apply UTP Phase One data development processes to Behavioral Health (BH), Hospital and Office Based Providers (HOB), and Long Term and Post Acute Care (LTPAC) to identify an initial data set to support high value activities.
4. Test the exchange of harmonized data elements using HIT solutions.
5. Determine an approach to enabling the electronic exchange of data elements.

Objective 1: Finalize a comprehensive LTSS/HCBS data element set

The Phase Two work will continue with LTSS/HCBS providers and expand to include:

1. Identification of and engagement with major service providers within this sector, in additional geographies.
2. Identification of additional high value activities.
3. Identification of additional data elements to support those activities.
4. Identification of additional data elements requested by the individual and caretakers (the [individual/Caregiver One Pager](#)).
5. Harmonization of the expanded data set with the CMS Data Dictionary and the C-CDA 2013 Update.

Objective 2: Engage Additional Care/Service Sectors to extend UTP

Extend the UTP to additional care sectors: Behavioral Health (BH), Hospital and Office Based providers (HOB), and Long Term and Post Acute Care (LTPAC) providers. While work in each sector can proceed sequentially or in an overlapping manner (depending on available resources), we recommend that the sector to be engaged following the work with LTSS/HCBS be BH. The work with this sector will expand the list of data elements in important directions. We base this recommendation on the following:

1. Many individuals with complex medical and functional needs also have a behavioral health issue.
2. Unmanaged behavioral health issues are a significant contributor to failed care plans and additional cost.
3. Unmanaged behavioral health issues complicate the management of complex clinical issues.
4. The vocabulary with which to exchange these issues with other parts of the care/service system is poorly developed.
5. Behavioral health providers with access to certified EHRs are able to exchange standardized documents with other (mostly medical care) providers but not with providers who do not have EHRs.
6. Information exchange technology has not extended beyond the certified EHRs.
7. There is a significant overlap between the information required by behavioral health providers and by LTSS/HCBS providers. In the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), Axis IV covers environmental and psychosocial issues and Axis V covers function.

Objective 3: Apply UTP Phase One data development processes to Behavioral Health (BH), Hospital and Office Based Providers (HOB), and Long Term and Post Acute Care (LTPAC) to identify an initial data set to support high value activities.

The UTP processes for each sector are

1. Within the sector identify potential participants by region, discipline, entity and program.
2. Identify key participants and ask them to identify others until most significant participants have been contacted to participate.
3. Recruit existing groups and significant participants to collaborate in the development process.
4. Initiate the development process with the groups who have demonstrated the commitment to work on the project.
5. Work with these participants to develop a set of high value activities.
6. Based on these high value activities, identify the data elements needed to support them.
7. Develop pilots to test exchanges.

Objective 4: Test the exchange of harmonized data elements using HIT solutions

Once the data sets have been defined and harmonized, they will need to be tested through an actual data exchange sequence. The exchange will not only test the data, it will serve to highlight the workflows that need to be developed to ensure the appropriateness of data exchanged and the timeliness of the exchange.

1. Starting within and between LTSS/HCBS and BH, but extending to other sectors as well, create pilots to test the exchange of essential data elements between selected providers for different high value activities.
2. Measure performance metrics and impact on reducing the time spent finding missing information.
3. Pilot the exchange of a single high value data set (e.g. list of all providers engaged with the individual) with all engaged providers in each sector.
4. Develop a list of process issues.
5. Simultaneously deploy HIT pilots (as described in the next objective)

Objective 5: Determine an approach to enabling the electronic exchange of data

There is currently no single solution to achieve electronic exchange of standardized and interoperable data to support transitions of care and coordination of care. Across the spectrum of service providers there are widely different exchange needs, different levels of IT sophistication, different business cases and different levels of resources to acquire,

deploy and maintain any system. There are three different, but not mutually exclusive, approaches to be applied, under the guidance of Vermont's technology leaders, to identify the most cost effective solution.

Start with an HIE-based strategy using the C-CDA standard to take advantage of the extensive investment through Meaningful Use. Leverage the certified EHRs of HOB and BH providers to exchange CDA documents and add that capability to LTSS/HCBS and LTPAC so that all service providers are linked using VHIE

1. Leverage VHIE as the information highway.
2. Identify and implement low cost options to enable LTPAC, LTSS/HCBS and any other providers without sophisticated EHRs to exchange CDA documents with HOB and Behavioral Health care providers who use certified EHRs through VHIE. (This capability is in pilot in MA using "SEE" an open source, JAVA based software that uses standardized data elements for transitions of care using the Direct Protocol to exchange documents)
3. Leverage the power of CDAs to perform queries, report quality data, convey advanced directives, use decision rules to automatically review a standardized document to notify sites to schedule tests and appointments, automatic notifications of team members regarding change of status.
4. Extend the use of CDAs beyond the Meaningful Use Eligible Providers to other members of the care team using currently available HIE access processes.

In parallel, as the HIE strategy is being tested, review the existing Vermont IT infrastructure to find opportunities to link different providers to currently existing Vermont databases, particularly those that can provide data to support high value exchanges.

1. Build on ACTT Project 1 to explore mechanisms to exchange behavioral health information.
2. Expand the the use of the State's online social service assessment data base to other parts of the continuum, create a shared assessment data set.
3. Expand the capability of the Vermont Prescription Monitoring System (VPMS) to VHIE and from there to any agencies that can link to VHIE.
4. Investigate ways to link existing electronic data bases and expand access.
5. Begin with unidirectional information sharing which, even by itself, provides a benefit. Then expand to bidirectional exchange as able.
6. Investigate creating a repository for state and federally mandated assessments which could be shared.

A longer term approach rests on the rapidly emerging work on Application Based Interface (API) solutions which exchange data in a far simpler fashion than currently possible using CDA document exchange.

1. Use FHIR (Fast Health Information Resources) applications to connect LTSS and LTPAC providers using mobile devices.
2. Use FHIR based applications to connect individuals and caretakers.

Each of these approaches will solve a problem for one of the sectors, but none of these approaches will address all of the issues of all of the sectors. Because the goal is to achieve interoperable exchange across all sectors, all of these approaches will be required even though none provides a global solution. A modular approach offers both flexibility and the opportunity to pilot and test on a small scale before full deployment.

Vermont will leverage the findings of ACTT projects One and Two to review the existing technologies, data elements and exchange processes, and the technical readiness of providers, and ensure that these elements are leveraged in UTP Phase Two. Vermont will also identify the business and workflow requirements the existing technologies support and determine what can be adopted for UTP Phase Two and what the gaps are. Once the gaps are identified, additional business and workflow requirements can be defined. For a list of the pros and cons of each of these three approaches see [Appendix 2](#).

4.0 Project Scope

4.1 In Scope

1. All activities listed in the Objectives Section are in scope.
2. All activities needed to develop data sets and the processes for exchange for LTSS/HCBS, for BH, HOB, and LTPAC providers.
3. All activities to initiate and test a process to harmonize these data sets including a review of currently available processes.
4. All activities needed to establish the organization structures for doing the work of Phase Two, for maintaining communication with stakeholders, and for beginning to create the organization for the ongoing maintenance of UTP.
5. All activities needed to enable the electronic exchange of data.

4.2 Out of Scope

1. Anything not listed as being in scope

4.3 Phase Two Project Deliverables

1. **Outputs from UTP design activities:**
 - a. A comprehensive LTSS/HCBS data set that supports an expanded list of high value activities.

- b. A draft data set that supports communication by the individual and immediate caretakers with providers ([The “One Pager”](#)).
- c. A draft data set identified by services providers from additional sectors that supports communications within that sector.
- d. A tested process to harmonize data elements that can be scaled and used in any service sector.
- e. An internally harmonized data set for each sector.
- f. A harmonized draft data set for elements used in common by the sectors
- g. A grid showing status of UTP work in every tile ([see Section 3-c i in the Phase One Final Report for the grid description](#))
- h. Scheduled reports on entities actively participating in UTP development and use.
- i. Scheduled reports based on a consolidated list of high risk activities under consideration.
- j. Scheduled reports based on a consolidated list of data elements under consideration.
- k. Scheduled reports based on a consolidated list of reconciled data elements
- l. Technology pilot evaluation reports and recommendations
- m. Technology recommendations incorporated into plans for moving pilots to scale

2. Measures to assess the cost and effectiveness of the UTP processes and requirements:

- a. Evaluation of the cost and effectiveness of setting up a work group to oversee data set development and harmonization.
- b. Evaluation of the cost and effectiveness of the UTP approach to develop exchange standards among sectors.
- c. Evaluation of the cost and effectiveness of the harmonization process.
- d. More accurate estimates of the cost of maintaining and managing this process to inform planning for the next phases.

3. Service System Performance measures

- a. Data on the financial impact of standardized data exchange within LTSS/HCBS on the cost of providing services by removing non-value added work.
- b. Preliminary data on the financial impact of standardized data exchange within the additional service sectors on the cost of providing services.
- c. Comparison of costs to provide services when the process of information exchange changes.
- d. Report of system performance based on
 - i. completeness of data exchanged
 - ii. timeliness of the exchange

- iii. use of an acceptable format
- iv. use of a reliable exchange process

4.4 Organizations Affected

UTP will affect many agencies and partners. Examples follow:

ADRC
BIAV
DAIL
DCF
DMH
DVHA
VA
VCIL
VITL
VNA
Bi-State
ACOs
AAA's
Blueprint
Behavioral Health entities
Others, to be determined

5.0 Project Estimated Effort/Cost/Duration

5.1 Estimated Cost

Because of the specialized nature of the UTP work, we believe that subject matter experts will be required for much of the work of Phase 2.

Costs will vary depending on

1. How long it takes to “productionize” the rules and methodology for generating data elements and protocols.
2. How much time the various stakeholders and partners are able to carve out for UTP work.
3. How long it actually ends up taking to create and add data elements

Bearing the above in mind, the spreadsheet below estimates costs for this project.

Line Item	Cost	Hours per	Unit	# Units	\$/hour	Total hours
SME Services						
Methodology and design	\$30,000.00	10	month	12	250	120
Documentation/web content	\$30,000.00	10	month	12	250	120
Interviews	\$40,000.00	2	Interview	80	250	160
Project Management	\$30,000.00	10	month	12	250	120
Meetings (virtual and face to face)	\$48,000.00	16	month	12	250	192
Data Management	\$18,000.00	12	month	12	125	144
Other IT SMEs	\$30,000.00	20	month	12	125	240
Research	\$15,000.00	5	month	12	250	60
Collaboration with feds and other states	\$12,000.00	4	month	12	250	48
Communication with Stakeholders	\$24,000.00	8	month	12	250	96
Web site development	\$10,000.00	40	year	1	250	40
Web site management	\$18,000.00	6	month	12	250	72
Financial oversight	\$12,000.00	4	month	12	250	48
Other Personnel						
Estimated costs for state staff	\$100,200.00	167	month	12	50	2004
Project admin person	\$30,000.00	100	month	12	25	1200
Other Expenses			Units	\$/Unit	# Units	
Travel	\$20,000.00		Trip	20	1000	
Transcriptions	\$2,000.00		Transcriptions	20	100	
Provider incentives	\$20,000.00		Incentives	40	500	
Total estimated cost	\$489,200.00					
Contingency 10%	\$48,920.00					
Total Estimated Cost with Contingency	\$538,120.00					

5.2 Estimated Project Oversight Cost

Included in the "state staff" line item in the table.

5.3 Amendment to Estimated Cost

No Amendments

5.4 Estimated Duration

There will be multiple coverage expansions, of which Phase Two will be the first. Phase Two is projected to last 12 months.

6.0 Project Assumptions/Constraints

6.1 Budgeting/Costing Assumptions

- The UTP Project Teams are the primary planning and operations structure, the action team, for this project. It is staffed by the Vermont state leader (described above) and the Vermont state employees who may be assigned to this project, and the subject matter experts who are engaged by the State.
- The cost of subject matter experts will be \$2000 per day.
- The fully loaded cost of all FTEs who are state employees will be \$600 per day.

6.2 Additional Assumptions

- There will be a senior level Vermont project champion who is accountable for the success of the UTP project. This person will have expertise on some aspect(s) of the work, and be directly involved in planning, decision making, and brokering connections for all aspects of the project.
- Providers will be open to participating.
- Providers will be supported to participate if needed.
- External IT tools, such as Google, Basecamp, and Wordpress, will be used as needed.
- The state will participate in setting up a Project Strategy Team to ensure that the project work is interwoven into related ongoing initiatives.
- Vermont will establish an organization model for the ongoing development and adoption of the UTP.
- Vermont's HIT community will be engaged early in Phase Two to support strategic decision making and implementation.

6.3 Constraints

- Availability of state staff
- The knowledge, experience, and influence of a seasoned Vermont product champion on the UTP project will be needed in order for UTP to become ingrained in the healthcare communication and technology efforts.
- Availability of provider staff.

7.0 Project Risks

- The critical participants (e.g. hospitals, ACOs, the payors, technology partners and others) and communities in the Vermont healthcare landscape do not find time to work on UTP.
- Qualified subject matter experts are unable to be engaged.
- Front line service providers do not have sufficient time in addition to their usual work activities to participate in the UTP development process.
- There is a significant gap in time before Phase Two begins; and the momentum built in Phase One wanes, requiring significant effort to re-establish connections with providers whose initial enthusiasm may turn to skepticism.
- Failure to provide adequate high level Vermont leadership and advocacy for the project.
- Project loses funding.
- Failure to develop a common vision among leadership, technology experts and service providers of what the project is and what it's goals are.
- The volunteer work teams are unable to attract enough participation to complete the required tasks.
- Harmonization as a process is too labor intensive for volunteers and requires direct financial support.
- The current barriers to information exchange from behavioral health (42 CFR www.samhsa.gov/HealthPrivacy) significantly limit the usefulness of the information that can be exchanged with LTSS/HCBS.
- IT leadership is unable to find low cost interventions as pilots.
- Maintaining alignment with federal decisions on transitions of care, meaningful use, and organization of social data is too difficult.
- Change management activities -- to foster adoption of UTP and to embed UTP into the work practices of providers -- do not occur.

8.0 Project Management

The UTP Project will be managed by the UTP Strategy team (see below).

The day to day operations of the project will be managed by the coordination/implementation team (see below).

The UTP Phase Two project will be managed in in the following way(s):

- A senior state-wide project sponsor will be named.
- A project manager will be assigned by the state.
- Subject matter experts will be procured and contracts signed.
- Participation in workgroups (strategy and operations) will be solicited and membership finalized.
- A kick off meeting will be conducted by the project manager and the project sponsor and will include state leadership and workgroup members,
- A project plan will be developed within 30 days of Phase 2 kickoff. The plan will address:
 - A final scope statement confirming the participants, data sets, and technology development included in the project.
 - An organization structure including identifying workgroup membership, responsibilities and time commitment.
 - A list of Phase Two deliverables (subject to change)
 - A detailed timeline that identifies work steps and deliverable due dates
 - Final resource requirements.
 - Final approved budget.
- A meeting schedule and group charge will be developed for each workgroup
- Reporting needs and schedule will be determined.
- Communication strategy and methods will be finalized.
- Regular and ad-hoc status reports will be provided to stakeholders.
- A list of risks and issues will be maintained and reported.
- The schedule and budget will be regularly monitored.
- Quality indicators will be developed and reported throughout the project
- Project outcomes will be reported.
- Post project review will be conducted and results reported.

9.0 Project Organization

Two teams form the project organization structure:

9.1 Strategy Team

This team makes recommendations and reviews project priorities and directions so that UTP progresses in alignment with state objectives and with other kindred projects, such as those working on data quality, data dictionary, exchange technology. This team also brokers connections to other stakeholders within state government and the provider communities. This team will also have the authority to make recommendations to the state about new functions, resources, and funding that may be required to support UTP and to situate UTP as a key part of Vermont's healthcare system. Members of this team should include the senior Vermont state project leader who is accountable for the project, at least one UTP SME, and at least one IT SME, members of other related initiatives, influential and engaged providers from different healthcare sectors, and a patient/caregiver representative who is also knowledgeable about healthcare issues.

9.2 Coordination/Implementation Team

This team is responsible for project operations. This team designs and implements the processes necessary to achieve the objectives of UTP. This team manages the network of provider and community relationships essential to project success. In addition, this team maintains the ongoing lists of UTP high value activities and data elements and participates in pilots to develop and harmonize them. Members of this team include the senior Vermont state leader (or his or her representative), the subject matter experts, administrative support, rotating members of the provider sector as needed.

9.3 Long Term UTP Governance

In order for UTP to adapt to changing needs and to become integrated into Vermont's healthcare systems, a long-term organization structure needs to be established. The activities of this organization structure include:

- Working with sectors of state government and healthcare initiatives to ensure that UTP is incorporated into the overall healthcare system and securing funding and resources, as needed.
- Developing processes to continually improve UTP:
 - Maintain sets of data elements.
 - Maintain sets of high value activities.

- Inform each provider sector and agency that UTP has been updated and is available for reuse.
- Harmonize data elements. (Harmonization is the process of creating unambiguous data elements by identifying elements which have different interpretations by different service providers and establishing a common, shared meaning).
- Expand the functionality of the im21 website to enhance the communication strategy.

10.0 Communications Plan

UTP requires participation from the individuals and providers it serves. The UTP communication strategy provides access routes to their opinions, in an ongoing way. A successful community strategy is built on a communication strategy that is transparent, accessible, and customized to the needs of the participants. The UTP communication strategy addresses the needs of three stakeholder groups:

10.1 UTP Website

A Vermont specific UTP website (e.g. <http://im21-utp-Vermont.com>) will be established that serves as central location for two streams of communication to coincide.

- One stream represents those who are involved in designing and operationalizing the UTP. This stream publishes deliverables such as lists of high value activities and data elements, surveys, updates at the State and national levels, posts on UTP relevant topics.
- The other stream of communication comes from Vermonters. This communication can include responses to posts and surveys, comments on current high value activities and data elements, stories related to transitions of care and the UTP, questions, recommendations, etc.

10.2 UTP Collaborators - Bi-Weekly Updates

The design and deployment of the UTP rests on collaborations between the team responsible for delivering the UTP and the many state-wide provider/client/caregiver consortia and agencies involved in transitions of care and care coordination efforts (e.g. ADRC, the Learning Collaboratives, the Clinical Councils, the ACOs, the AAAs). These stakeholders clearly recognize the common ground they share with the UTP and make an investment in the UTP:

- They recognize that part of their ability to coordinate care is dependant on the communication infrastructure the UTP provides.
- In order to maintain engagement and alignment, these stakeholders and the UTP project team need to participate in regular updates in which they discuss key UTP issues and challenges.

Some of the content of these bi-weekly updates is posted on the public website to elicit further engagement and discussion.

10.3 UTP Participants: Interviews, roundtables, surveys

The credibility, accuracy, and usefulness of the UTP is dependant on the direct involvement of providers; and the recommendations of patients, clients, and caregivers. In other words, the entire spectrum of people and entities involved in care transitions and care coordination (including patients and families) needs to directly participate in the creating, testing, iterating, improving, and deploying of the UTP:

- The input of these stakeholder is obtained through in depth interviews, roundtable discussions, and surveys.
- This information is reviewed by the UTP implementation team. It informs the content of the UTP and the methodology for exchanging data.
- Some of the people and agencies involved at this level become key design stakeholders and participate in the bi-weekly communication.

11.0 Project Approvals

To be determined

Appendix 1 -- UTP Phase Two Timeline

Q1 Tasks

- Interviews in four sectors (LTSS/HCBS, Behavioral Health (BH), Hospital and Office Based (HOB) providers, and LTPAC)
- Establish a Strategic Team and Implementation Team and initiate monthly (virtual) meetings
- Establish UTP website to communicate decisions, information, actions; and serve as a forum for hot issues
- Establish data repositories
- Source and engage technology partner(s)

Q1 Milestones and Deliverables

- Technology partner contract signed
- Expanded draft high value activities, data elements -- LTSS
- Draft high value activities, data elements -- Behavioral Health
- Monthly Implementation Team Updates -- LTSS and BH
- Q1 Project Review of what is working and where improvement is needed
- Preliminary technology scope statement

Q2 Tasks

- Expand interviews in HOB and LTPAC
- Implementation Team -- Organizes monthly requests to strategic team to take action on harmonization of LTSS and Behavioral Health
- Organize/formalize stakeholder networks
- Conduct business and workflow requirements analysis
- Update technology strategy

Q2 Milestones and Deliverables

- Expanded draft high value activities, data elements -- Behavioral Health
- Initial draft from Harmonization team LTSS/BH
- Q2 Project Review
- Updated technology strategy

Q3 Tasks

- Complete interviews
- Produce report on activities to date and constituencies who have participated
- Produce data sets

- Establish high value activities, refines data elements
- Get buy-in from strategic team to harmonize data elements for sector data set for use by all providers
- Harmonize data elements as available
- Sectors begin communication process to educate users re information standards
- Initiate pilots for specific exchanges

Q3 Milestones and Deliverables

- Lists of high value activities and data elements from all active sectors
- Expanded list of harmonized data elements
- Results of exchange pilots
- Draft plan to scale pilots
- Q3 Project Review

Q4 Tasks

- Strategic Team and Implementation Team develop Phase 3 Charter
- Write UTP implementation design document

Q4 Milestones and Deliverables

- Expanded list of harmonized data elements
- Results of information exchange pilots
- List of measured improvements in efficiency, quality of care, and inclusion of patients and caregivers in data element creation
- UTP implementation design document (including data elements and technology)

Appendix 2 -- Technology Considerations

Approach 1:

HIE-based strategy using the C-CDA standard. Leverage the certified EHRs of HOB and BH providers to exchange CDA documents and add that capability to LTSS/HCBS and LTPAC so that all service providers are linked using VHIE

The advantages of this approach are

- There are over a dozen pilots across the country exchanging CCD and CDA documents including care plans among “non Eligible Providers”:
 - -MA IMPACT Go-live was February 2015
 - Implement C-CDA R2.0 Transfer Summary
 - -NY Downstate Coordination Project Go-live was Nov 2013
 - Implemented Care Plan
 - -GSI Health ‘Brooklyn Health Home Consortium’ Go-live was March 2014
 - Implemented Care Plan
 - -Veterans Health Administration September 2014
 - Demonstration of Care Plan
 - -Other Vendor Demonstrations of C-CDAR2.0 (draft)
 - CCITI-NY: Transfer Summary
 - Datuit: Care Plan
 - Healthwise: Care Plan
 - Lantana ‘SEE’ tool: Care Plan
 - Care at Hand: Care Plan
 - “Healthy Weight Plan”: Care Plan
- The VHIE is built and running.
- CDAs are the current document exchange standard and will be the document exchange standard for many years to come.
- Low cost (ie. non-EHR based) access to an HIE is being tested now, requires internet access and little training or support.
- Software is available to pilot at minimal cost
- The Direct Protocol provides options for connecting users without EHRs.
- Hospitals and Physicians are already using this platform to exchange standardized and structured data.
- Software is available to convert MDS and OASIS data into CDA format which leverages assessment data that currently is limited to SNFs and Home Health Agencies respectively (KeyHI Transform)
- Vermont doesn’t need to build new capability as much as expand access.

The disadvantages of the first approach are

- No one is currently communicating with LTSS (or beyond Meaningful Use Eligible Providers) at scale.
- Pilots have not yet created applications that are fully debugged and ready for use.

Approach 2:

In parallel, as the HIE strategy is being tested, review the existing Vermont IT infrastructure to find opportunities to link different providers to currently existing Vermont databases, particularly those that can provide data to support high value exchanges.

The advantages of this approach are

- Much of the infrastructure already exists.
- Improved exchange could come from changing access policies and not require significant IT investment.
- Cost is probably lower.
- It provides some immediate benefit while other approaches mature.

The disadvantages of this approach are

- It moves information but does not significantly improve connectivity.
- It will not provide a broad solution.

Approach 3:

A longer term approach rests on the rapidly emerging work on Application Based Interface (API) solutions which exchange data in a far simpler fashion than currently possible using CDA document exchange.

The advantages of this approach are

- It is suitable for mobile platforms (tablets).
- Hardware costs are low.
- Building APIs is easier than building EHRs.
- APIs are easily customizable.
- APIs can be built to exactly match the needs of the providers.
- It is possible that the 42 CRF requirements could be met with an API that prevents further distribution of a behavioral health document.
- Pilots are underway with some proprietary applications to link LTSS and other service providers.

The disadvantages of the this approach are

- FHIR is not yet a mature standard.
- There are no fully developed APIs that have been tested at scale.
- There will be a delay, although pilots are possible.

Appendix 3 -- Glossary of Terms and Acronyms

Term (Acronym)	Definition
ACO	Accountable Care Organization. A medicare designated health care organization characterized by a payment and care delivery model that seeks to tie provider reimbursements to quality metrics and reductions in the total cost of care for an assigned population of patients
Axis IV	Psychosocial and environmental problems that impact psychiatric diagnosis and treatment
Axis V	Global assessment of functioning based on the clinician's assessment
ACTT	Advancing Care through Technology, a consortium of providers sponsoring three related projects under Vermont's SIM (State Innovation Model) grant.
ACTT Project 1	ACTT Project 1 is a suite of three sub-projects related to improving data quality at Vermont's Designated Developmental and Mental Health agencies, implementing EHR systems at five special service agencies, and implementing a Data Warehouse for Behavioral Health data.
ACTT Project 2	ACTT Project 2 is an HIT adoption survey and data planning project for LTSS providers. It also includes updates to prior HIT/HIE studies done for Behavioral Health providers in 2011, Home Care providers in 2012, and Long Term Care providers in 2013.
BH	Behavioral health providers including hospital based, office based and those engaged in specialized programs such as substance abuse
CDR	Clinical Data Repository. A real time database that consolidates data from a variety of clinical sources to present a unified view of a single patient. http://en.wikipedia.org/wiki/Clinical_data_repository
C-CDA	Consolidated Clinical Data Architecture. A standard to specify the encoding, structure and semantics for the exchange of

	electronic documents containing health care information, supports the CCD standard
CCD	Continuity of Care Document . A standard intended to specify the encoding, structure and semantics of a patient summary clinical document for exchange.
C-CDA 2013 Update	Major addition to the C-CDA document types and templates adding data elements essential for LTPAC and Longitudinal Coordination of Care
CMS	Centers for Medicare and Medicaid Services, federal agency with oversight of Medicare and Medicaid
CMS Data Dictionary	Common data set used by CMS in claims, regulations, and mandated reporting
Data Feed	Also known as “interface”, refers to the transfer of data in structured format between computer systems.
DSM-V	Diagnostic and Statistical Manual of Mental Disorders, the latest release by the American Psychiatric Association which serves as a universal authority for psychiatric diagnosis.
EHR	Electronic Health Record, a systematic collection of electronic health information about an individual patient or population in digital format
Harmonization	The process of developing a common set of data specifications and data element definitions for data elements from different sources
HIE	Health Information Exchange The electronic movement of health-related information among organizations according to nationally recognized standards.
HIT	Health Information Technology . The application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision making (Brailer, & Thompson, 2004).
HL7	Health Level 7. An international standards organization that develops and publishes voluntary consensus technical standards for HIT. www.hl7.org . Also used to refer to a widely used health messaging standard developed by the HL7 organization.

HIT	Health Information Technology is the comprehensive management of health information across computerized systems exchange between consumers, providers, government and quality entities, and insurers.
HOB	Hospital and Office Based Providers specifically physicians, mid level providers and licensed professionals
Longitudinal Health Record	A comprehensive clinical summary of a patient-based clinical experience, as opposed to the encounter-based, or provider-based records of the past.
LTPAC	Long Term and Post Acute Care providers including nursing facilities, inpatient rehabilitation facilities, long term acute care hospitals, home health agencies and hospice agencies
LTSS/HCBS	Providers of Long Term Services and Supports and Home and Community Based Services which enable individuals to remain at home
MDS	Minimal Data Set, federally mandated assessment tool used in nursing facilities
OASIS	The Outcome and Assessment Information Set (OASIS) is a group of data elements that: <ul style="list-style-type: none"> •Represent core items of a comprehensive assessment for an adult home care patient; and •Form the basis for measuring patient outcomes for purposes of outcome-based quality improvement
“One Pager”	A set of standardized data elements identified by the individual and/or immediate caretakers to inform other service providers about the individual’s priorities, goals, and issues of importance
PCMH	Patient Centered Medical Home. A healthcare setting that facilitates partnerships and coordination between individual patients, and their healthcare providers. Recognition of a healthcare organization as a PCMH requires meeting specific criteria established by the National Committee for Quality Assurance (NCQA).
Plan of care (POC)	A document specifying how much and what types of home health care the doctor believes the patient needs. It is a requirement for Medicare home health benefits.
Structured data	Electronic health record information which is divided into discrete fields and may be enumerated, numeric or codified.

Use Case	A general sequence of interactions between one or more uses and the system. Describes a function of the system in terms of a sequence of interactions between an user and a system.
UTP	Universal Transfer Protocol is a set of iterative processes that enables the creation and updating of shared, interoperable data sets, common standards for information exchange, and performance metrics pertaining to the exchange of responsibility for providing services.
VHIE	Vermont Health Information Exchange , the state health information exchange platform.
VITL	Vermont Information Technology Leaders. A 501(c)(3) non-profit organization that assists Vermont health care providers with adopting and using health information technology to improve patient care. VITL operates the exclusive statewide health information exchange network in Vermont.