Connecticut SIM: Health Information Technology

STATE OF CONNECTICUT

Strawman answers: discussion document

July 8, 2013

PROPRIETARY AND CONFIDENTIAL || PRE-DECISIONAL

Contents

- **Strawman answers (summary)**
- Details and supporting materials

Key questions for the design of a supporting HIT infrastructure for care delivery and payment innovation

For discussion in WG 4

- **A** What capabilities are required across key stakeholders (e.g., payers, providers, community agencies) to implement the target care delivery and payment model?
- **B** What are the current HIT capabilities of payers and within the statewide infrastructure that are relevant to the new care delivery and payment model?
- **C** What is the optimal level of payer infrastructure standardization across each component (e.g., data, analytics, pooling, reporting, portal)?
- **D** What is the best strategy to develop the required HIT capabilities?
- **E** What will be the pace of roll-out of the required capabilities throughout the state?

A What capabilities are required across key stakeholders to implement the target care delivery and payment model?

Category	Strawman answer	Typical tech pathway
Payer analytics complemented by **provider analytics**	▪ Tools for payers to analyze claims to produce payment-related analytics, including metrics for outcome, quality and cost ▪ Complemented by provider analytics based on clinical data	▪ Heavy **upfront development/ sourcing** followed by incremental enhancement
Provider-payer-patient connectivity	▪ Channels (e.g., portal) for providers and patients to access and submit information, data and analytics required to support care delivery and payment models	▪ Start **with basic or low tech solutions** to allow time for development or sourcing of tech-enabled enhancement
Provider-patient care mgmt. tools	▪ Provider tools (e.g., workflow, event management) to coordinate the medical services for a patient	
Provider-provider connectivity	▪ Integrated clinical data exchange among doctors, hospitals, and other health care providers through a secure, electronic network	▪ Dependent on state-specific **starting point and strategy in place**

SOURCE: HIT workgroup discussions

B What are the current HIT capabilities of payers and within the statewide infrastructure that are relevant to the new care delivery and payment model?

Category	Strawman answer
Payer analytics complemented by **provider analytics**	▪ Existing payer risk adjustment, performance analytics tools deployed as part of **PCMH/ACO pilots** ▪ All payers claims database efforts (**APCD**) led by AccessHealth CT (potential when established) ▪ Tools to analyze **clinical data** among some providers (e.g. ACOs)
Provider-payer-patient connectivity	▪ Payers' existing portals: – **Provider portals** that connect providers, health plans and practice management systems (e.g. Availity for Anthem) – **Patient portals** that allows enrollees to track claims and account activity, find doctors and services, access health advice and get answers to coverage questions (e.g., myCigna for Cigna) ▪ **AccessHealth CT** developing a patient portal to give comparison information for consumers on the Health Insurance Exchange
Provider-patient care mgmt. tools	▪ **DMHAS** managing a system of care for behavioral health populations that includes care management tools
Provider-provider connectivity	▪ **HITE-CT** promoting adoption of point-to-point connectivity tools (via direct messaging) for exchange of information between providers ▪ Large provider systems (e.g. Hartford Healthcare, Yale) with **localized health information exchange** solutions

C What is the optimal level of payer infrastructure standardization across each component (e.g., data, analytics, pooling, reporting, portal)?

Category	Strawman answer
Payer Analytics (complemented by **provider analytics**)	**Standardized but not consolidated** ▪ Highly **standardized** metrics/analytics/reports created by payers' **independent** infrastructure ▪ Potential to leverage All Payer Claims Database (**APCD**) when established ▪ Claims-based analytics complemented by **provider analysis of clinical data** to better manage quality of care delivery and outcomes ▪ For provider analytics, leverage **existing metrics** (e.g., meaningful use) to minimize operational complexity/ disruption and allow for comparisons across systems
Provider-payer-patient connectivity	**Mostly consolidated across payers** ▪ Need for **a single portal** for providers to access information from and submit metrics to **multiple payers** thus reducing operational complexity and user confusion
Provider-patient care mgmt. tools	**Following common guidelines but not consolidated** ▪ Providers **committed** to adopting care management process/technology but having **flexibility** to select vendors/solutions independently ▪ Potential options: – Develop population health **how-to manual** and/or **training** that includes application of HIT capabilities (e.g. using excel to risk stratify the population) – Provide **minimum set of technology** to enable provider care management – **Pre-qualify vendors** or develop a **shared services model** to simplify the evaluation and procurement process while giving providers access to enhanced care management tools
Provider-provider connectivity	**Standardized but not consolidated** ▪ Exchange of health information between providers is a **key enabler** of a population health model ▪ **SHIP/SIM** needs to stay connected with **HITE-CT** as it facilitates provider-provider connectivity: – Focus currently on accelerating adoption of **direct messaging** that will enable point-to-point exchange of health data – Eventual goal to transition to a clearing house model for health information exchange between provider groups (**HIE**)

SOURCE: HIT workgroup discussions

D What is the best strategy to develop the required HIT capabilities?

Category	Strawman answer
Payer analytics complemented by **provider analytics**	▪ Begin with building on **payer's own population health analytics** and continue to establish the full set of tools required in the end state ▪ In the longer term, look to **leverage APCD** to provide system level analytics that informs public health policy and consumer facing analytics that allows for cost/quality comparison across payers/providers
Provider-payer-patient connectivity	▪ **Select and scale a single existing provider portal** for use across multiple payers ▪ Leverage AccessHealth CT and APCD patient portal to promote **consumer engagement** efforts ▪ Potentially develop state relationships with 3rd party patient engagement tool vendors (e.g. Castlight, Truven Health Analytics etc.)
Provider-patient care mgmt. tools	▪ **Educate and inform** (near term): Set adoption requirements and provide information/coaching to adopt technology and/or source services ▪ **Create marketplace** (potential option for medium term): Pre-qualify vendors and pre-negotiate discounted pricing ▪ **Develop shared services** (potential option for long term): Create a state-wide solution for all providers in the state to 'plug-in' to
Provider-provider connectivity	▪ **Follow HITE-CT strategy:** evolution from adoption of point-to-point connectivity tools (via direct messaging) towards health information exchange via a clearing house model (HIE)

SOURCE: HIT workgroup discussions

What will be the pace of roll-out of the required capabilities throughout the state?

Category	SIM Timeframe		Beyond SIM
	Stage 1 (1 year)	*Stage 2 (2-3 yrs)*	*Stage 3 (3+ yrs)*
Payer analytics complemented by **provider analytics**	Reporting based on foundational analytics (patient attribution, risk stratification, risk adjusted cost comparison, quality/utilization metrics)	Enhanced analytics that identify high priority patients for targeted intervention(care gaps analyses, alert generation)	System level public health/epidemic analyses; patient 360° view enabled by integration of claims and clinical data
Provider-payer-patient connectivity	Multi-payer online portal for providers to receive static reports; basic patient portal to allow consumers to enter quality metric data	Bi-directional provider-payer portal with data visualization, patient engagement/transparency tools	HIE-enabled bidirectional communication and data exchange
Provider-patient care mgmt. tools	Define provider workflow changes required to improve care coordination; provide manual/education that details options and applications for supporting technology	• Pre-qualify vendors and health information service providers with pre-negotiated, discounted pricing • Potentially develop a shared-service model that providers can plug-into to avail of enhanced care management tools	
Provider-provider connectivity	Promote point-to-point connectivity via scalable protocol such as direct messaging	Facilitate interoperability between local implementations of health information exchange[1] solutions	Potentially integrate state-wide Health Information Exchange[1]

1 HITE-CT will drive adoption of provider-provider connectivity tools and eventual creation of a state-wide health information exchange

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The care delivery work group is proposing a population health model to capture sources of value along the stages of health (1/2)

Sources of value

- Primary prevention (general population)
- Primary prevention (pregnant women/newborns)
- Secondary prevention/ early detection
- Selection of provider types and care setting
- Effective diagnosis and treatment selection
- Care coordination/ chronic disease
- Provider productivity

Core components of a population health model

1. Understanding of ongoing needs of patient population
2. Enhanced access to care (structural and cultural)
3. Team-based, coordinated, comprehensive care
4. Patient engagement
5. Evidence-informed clinical decision making
6. Performance management

The care delivery work group is proposing a population health model to capture sources of value along the stages of health (2/2)

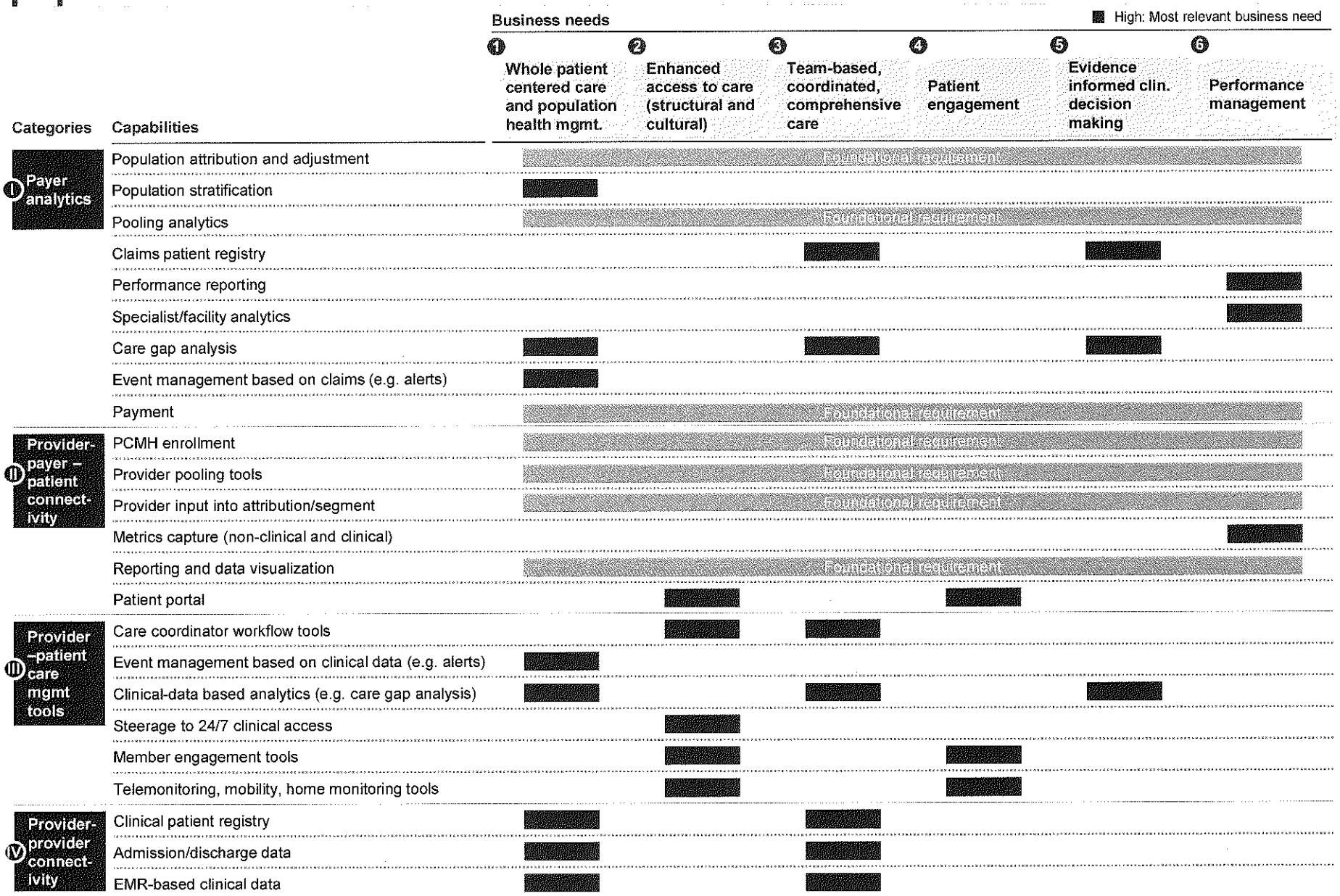
	Description	Source: Care Delivery Workgroup
1	**Whole-person-centered care and population health mgmt.**	▪ Understand the **whole-person context**, i.e. the full set of medical, social, behavioral, cultural, and socioeconomic factors that contribute to a consumer's health ▪ Assess and document consumer risk factors to stratify consumer population and **identify high-risk consumers** for early interventions
2	**Enhanced access to care (structural and cultural)**	▪ Provide consumers **access to culturally and linguistically appropriate routine/urgent care** and clinical and mental health advice **during and after office hours** ▪ Provide care to consumers that is **accessible in-person or remotely** (e.g. clinic visits, telephonic follow-up, video-conferencing, email, website, community/ home-based services) ▪ Improve **financially accessibility** of care (e.g., minimal co-pays)[1]
3	**Team-based, coordinated, comprehensive care**	▪ Leverage **multi-disciplinary teams** and enhanced **data sharing** to improve care planning, diagnosis, treatment, and consumer coaching ▪ Ensure consumer adherence to care plan and **successful care transitions** across care settings and care disciplines (e.g., medical, social, behavioral)
4	**Consumer engagement[2]**	▪ Appropriately **educate and encourage consumers** to engage in healthy behaviors and reduce risky behaviors ▪ Encourage consumers to partner with the provider to **follow-through on care plans**, and administer self-care as needed
5	**Evidence-informed clinical decision making**	▪ Make decisions on clinical care that reflect an in-depth, up-to-date understanding of **evidenced-based care** reflecting clinical outcomes and cost-effectiveness
6	**Performance management**	▪ Collect, integrate, and **disseminate data for care management and performance reporting** on cost and quality effectiveness of care ▪ Use performance and consumer experience data to identify opportunities to **improve and compare performance** with other providers

1 Specific interventions to improve financially accessibility will be determined on a payer by payer basis
2 Specific consumer-incentives will be a payer-specific decision to be defined by each participating payer for their population

SOURCE: AAHC, NCQA, Joint Commission, URAC, Agency for Healthcare Research and Quality, Arkansas design grant, team analysis

Capabilities in each category map to the business needs set out by the population health model

HIGHLY PRELIMINARY



Source: HIT Workgroup

Payer analytics

I Payer analytics	Description
i Population attrib-ution and adjust.	▪ Claims-based analytics to attribute patients to PCMH and adjust PCMH's PMPM and gain sharing based on patients' claim history
ii Population stratification	▪ Claims-based analytics used to segment a PCMH's patient population based on expected utilization of health resources, and help providers identify patients most likely to benefit from increased care coordination
iii Pooling analytics	▪ Claims-based analytics to determine overall population risk and adjusted total cost of care for a group of providers forming a PCMH
iv Claims patient registry	▪ Registry of patients attributed to each PCMH, associated patient claims, and series of analytics used to identify patients by disease state, recent utilization, etc.
v Performance reporting	▪ Analytics and reports to determine and share provider performance in program – based on quality, cost, and utilization metrics
vi Specialist/facility analytics	▪ Analytics to provide facts on specialist and facility performance across quality cost and utilization metrics
vii Care gap analysis[1]	▪ Claim analytics to identify gaps in care
viii Event mgmt. (e.g., alerts)[1]	▪ Alerts issued based on recent events (e.g., discharge from hospital) or care gap analyses (e.g., two claims submitted for drugs with serious interactions)
ix Payment	▪ Analytics and systems used to calculate PCMH shared savings and make payment

1 May be performed by care coordination systems

Source: HIT Workgroup

Provider-Payer-Patient connectivity

II Provider-Payer - Patient Connectivity	Description
i PCMH enrollment	▪ Web-based form that allows provider to enter information about themselves and express interest in/signup to participate in the PCMH program
ii Provider pooling tools	▪ Web-based tool that allows providers to explore population size, risk mix, and shared savings potential from partnering with other providers to form a PCMH
iii Provider input into attribution/ segment	▪ Web-based tool that allows providers to provide input on patient attribution / segmentation for PCMH
iv Metrics capture (non-clinical and clinical)	▪ Web interface that allows providers to input clinical and non-clinical information used for performance reporting
v Reporting and data visualization	▪ Web interface that gives providers access to static reports and ability to visualize underlying data claims and / or clinical data dynamically
vi Patient portal	▪ Channels/interfaces (e.g., web, apps) for patients to perform one or more of the above activities

Source: HIT Workgroup

Provider care management tools

(iii) Provider-patient care mgmt. tools

	Description
(i) Care coordinator workflow tools	▪ Set of tools to help care coordinators better coordinate patient care (e.g. identify care opportunities and implement the most appropriate intervention, facilitate patient outreach throughout care process)
(ii) Event management based on clinical data (e.g., alerts)	▪ Clinical analytics used to send provider alerts when patient requires intervention (e.g., vaccination reminders) and automatically create follow-up activities with data and activity dependences
(iii) Clinical-data based analytics (e.g., care gap analysis)	▪ Clinical data-based analytics to identify gaps in care (e.g., missing cholesterol screening for patient with cardiac disease)
(iv) Steerage to 24/7 clinical access	▪ Telephone support (or other channels) for patients to get 24/7 clinical advice from providers who have access to the patient's clinical history
(v) Member engagement tools	▪ Set of tools to send reminders / updates through email, text message, or mail to select patient populations at appropriate times (e.g., timely reminder for annual eye visit)
(vi) Telemonitoring, mobility, home monitoring tools	▪ Remote monitoring capabilities for patients with select diseases (e.g., wireless scale for CHF patients)

Provider-provider connectivity

IV Provider-provider connectivity

	Description
i Clinical patient registry	▪ Searchable data store that collects and integrates data from all available sources in HIE (and other data stores) and makes information available in a push or pull format
ii Admission/dis-charge data	▪ Web (and potentially API) based tool that supports either direct data entry or batch upload of admission and discharge data to be input by hospitals daily. Fields may include patient ID, patient name, admit and discharge dates, major procedures, and admitting diagnosis. Information to be exchanged daily with either payers or provider portal
iii EMR-based clinical data	▪ API based communication that supports exchange of all clinical information contained in EMRs

Source: HIT Workgroup

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In the first workshop we identified a number of existing assets in CT that could be leveraged in HIT infrastructure design (1/2)

eHealth Connecticut

- Implement electronic health records (**EHR**) systems, assist and track progress to meaningful use
- Educate health care and human service providers about the use of technology to enhance quality and efficiency

Health Information Technology Exchange of Connecticut (HITE-CT)

- Implement and operate statewide health information exchange (**HIE**) utility

Office of Health Reform and Innovation

- Implement All-Payer Claims Database (**APCD**)

Access Health CT

- Implement a portal that facilitates an online insurance marketplace where residents of the state can compare plans, apply and enroll in a health plan

University of Connecticut

- Implement Connecticut Health Information Network (**CHIN**) for research and policy development

Source: HIT Workgroup

In the first workshop we identified a number of existing assets in CT that could be leveraged in HIT infrastructure design (2/2)

State agencies (DMHAS, DSS, DCF, DDS etc.)

- Cross agency
  - Implement and operate Connecticut Agency Data Exchange (**CONN-ADE**) for cross-agency case management
- DSS
  - Web-portal (**ConneCT**) where residents can understand benefits they get from the Connecticut Department of Social Services including health care coverage
  - Eligibility Management system (**EMS**)
  - Connecticut Child Support Enforcement system (**CCSES**)
- DPH
  - Electronic Vital Records System (**EVRS**)
  - Laboratory Information Management System (**LIMS**) – provider interface
  - Connecticut Immunization Registry & Tracking system (**CIRTS**) – provider interface
  - Public Health Information network Messaging (**PHINMS**) for electronic laboratory reporting – provider interface
- DMHAS
  - Provider quality and performance data repository for private non-profit (**DDaP**) and state (**Avatar**) providers

Capital Community College

- Educate workforce on health information technology

Source: HIT Workgroup

Existing health-related data sources and systems in Connecticut

State resources

- Claims data
  - State employees (OSC data across Anthem & United) — 45K - 200K enrollees
  - Medicaid population (DSS claims database) — 410K Medicaid enrollees
- Provider Licensure data — 8,000 Physicians, 9,000 AHPs
- Public health registries — CT Population
  - Birth, death
  - Immunization records
  - CT Tumor registry
- DMHAS behavioral health population — 160K patients
- ChimeData (CT Hospital Association) — 31 million patient encounters dating back to 1980
- United Way 211 (referral search) — Database of 4,600 agencies providing over 48,000 programs

Private resources

- EHRs — 35-40% Primary Care and specialists have EHRs (>30 types)
- HIEs — Several regional HIEs exist
  - Danbury, Hartford HealthCare, Middlesex, Yale, CCMC, VA
  - HIE's do not readily interface with each other
  - No HIEs cross state lines except VA

- Existing assets focused on subsets of the population
- Varied levels of completeness/quality

SOURCE: HIT Workgroup discussions, literature and web review

A number of ongoing and past initiatives assess linkages among the different HIT systems in the state

CONNECTICUT DATA COLLABORATIVE

Connecticut Data Collaborative

- The Connecticut Data Collaborative is a collaborative public-private effort to improve the quality of and access to policy-related data in the state
- The Collaborative is developing CTData.org as a central portal where all Connecticut organizations and residents can access a wide range of data from federal, state, local and private sources relating to the health, well-being and economy of the residents of the State of Connecticut

OHRI: Health Information Technology Workgroup (2012)

- The work group compiled a white paper presenting a rationale for and a recommendation to the CT Health Care Cabinet in support of a rational State Health Information Technology investment strategy
- As part of this effort, the work group assessed HIT capabilities across stakeholders (payers, providers, state agencies and consumers) in the state and existing linkages between them

SOURCE: HIT Workgroup discussions, literature and web review, OHRI HIT WG Report 2012

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Options for infrastructure/technology across stakeholders

Option	Description	Rationale
Mostly consolidated	All stakeholders using/sharing same infrastructure and technology	▪ Cost synergies from scales across multiple payers ▪ Reduced operational complexity and confusion for the users (e.g., provider portal) ▪ Foundational requirements for state-wide initiatives (e.g., HIE)
Standardized but not consolidated	Standardized output agreed-upon by all stakeholders with independent execution and delivery	▪ Output consistency (e.g., payment calculation, quality metrics, provider reports) required for state-wide roll out ▪ Stakeholder complexities associated with shared infrastructure
Not standardized or consolidated	No standardization of output; no technology/ infrastructure sharing or consolidation	▪ Cross-stakeholder variation does not impact solution consistency ▪ Stakeholders unable/unwilling to standardize

The work group discussed three models of standardization/consolidation across stakeholders

Mostly consolidated
Standardized but not consolidated
Not standardized or consolidated

Example options for standardization (not exhaustive)

Workgroup consensus on appropriate option for Connecticut

Components	Standardized output
Provider-Payer-Patient connectivity	
Payer analytics	
▪ Reporting	
▪ All other tools/ capabilities	
▪ Data	
Provider-Patient Care Mgmt. Tools	
Provider – provider connectivity	

Source: HIT Workgroup

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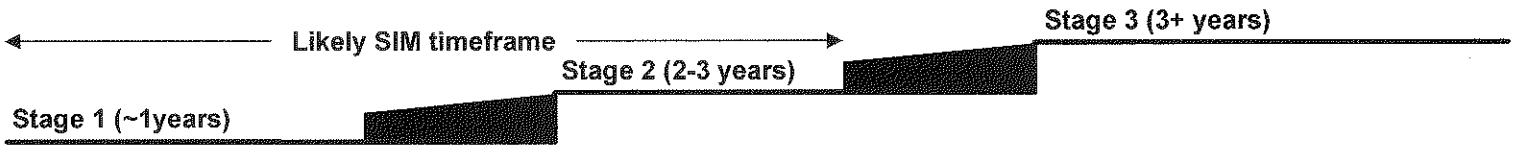
In staging HIT capability development, the work group recommended a framework to help prioritize efforts

HIT capabilities need to be placed onto a staged roadmap based on:

- **Value:** foundational requirements and high impact capabilities need to be prioritized and developed early
- **Current maturity:** existing capabilities need to be leveraged at earlier stages
- **Time to develop/implement:** high complexity technology solutions should roll out at later stages to allow for sufficient lead time for development
- **Interdependency:** critical enablers for other capabilities needs to be prioritized for earlier development

Source: HIT Workgroup

A typical staged approach to roll out technology was used as a starting point in discussing a proposed HIT capability roadmap for Connecticut



	Initial launch Meet minimum requirements rapidly through lower tech/cost solutions without interrupting day-to-day operations	**Scaling up** Build tech-enabled solutions to further enhance information transparency and capture most value	**Optimized value and efficiency** Complete system-wide connectivity to maximize efficiency of care
I Payer Analytics	▪ Automated **claims-based algorithms** for foundational analytics: – Episodes – Patient attribution, stratification and pooling – Performance and payment	▪ Enhanced analytics that identifies high priority patients for **targeted intervention:** – Care gaps analyses – Alert generation	▪ **System level** public health/epidemic analyses ▪ **Patient 360** view enabled by integration of claims and clinical data
II Provider - payer – patient connectivity	▪ **Multi-payer online** portal for providers to download static electronic performance reports ▪ **Patient-facing technology** providing transparency and/or engagement with payers/providers	▪ **Bi-directional** portal that allows data exchange between payers and providers ▪ Continuous enhancement of **patient-facing technology**	▪ **HIE-enabled** bidirectional communication and data exchange
III Provider-patient care mgmt. tools	▪ **Low-tech** care management support, e.g., : – Excel list of disease specific high risk/cost patients – Care management training modules/playbooks	▪ **Certified** care management vendors and/or workflow tools ▪ **Local EMR** data integrated into care management tool	▪ Enhanced **care management** tools: – Automated patient comm – Direct linkage to payer alert – 24/7 clinical acces ▪ **Remote monitoring and tele-medicine**
IV Provider-provider connectivity	▪ **Low-tech** solutions (e.g., telephone) to allow information exchange between providers to deliver care to same patient	▪ **Admission/discharge** data sharing between hospitals and PCPs	▪ **Clinical patient registry** ▪ **HIE-enabled** bidirectional communication and data exchange

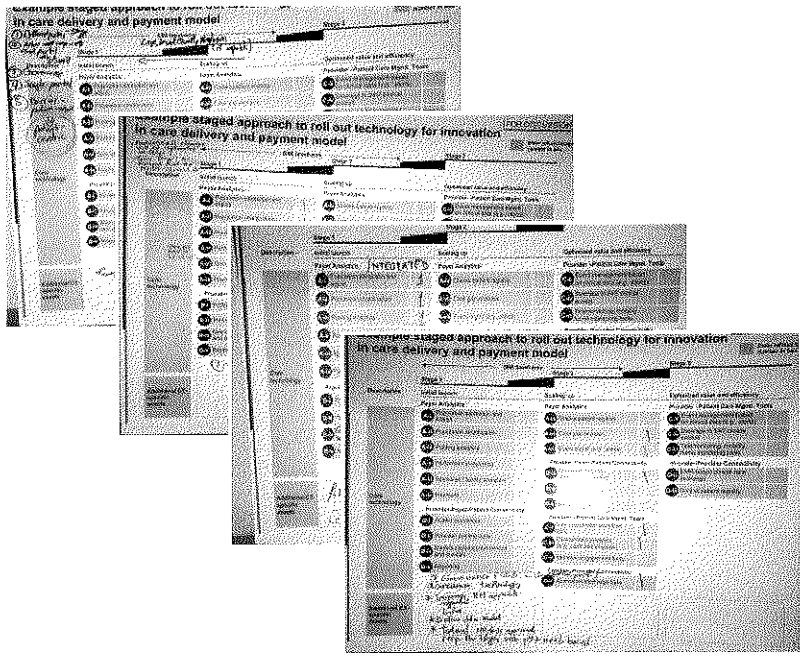
Source: HIT Workgroup

The sample HIT capability roadmap was refined based on CT-specific considerations during the second work group meeting

HIT capability roadmap

During the second work group the team:

- Broke out to review the HIT capability road map proposed by the initial hypothesis
- Refined the roadmap based on CT specific considerations (e.g., existing HIT assets and capabilities)



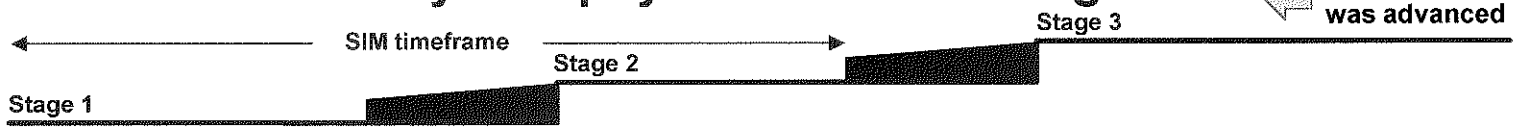
Takeaways

- Need to build in **flexibility** to support different flavors of the population health model
- Must incorporate different paths for provider groups at different stages in their adoption of technology
- Should prioritize based on
  - How **foundational** is a capability to the long-term HIT goals?
  - Where does the capability need to reside **(centralized/distributed)**?
  - How feasible is it that the capability can be developed in the short-term?
- Metrics that enable a population health care delivery model rely on **clinical** more than claims data
- Early **consumer engagement** is critical to adoption
- **DMHAS** is already managing a system of care for behavioral health populations that includes some advanced HIT infrastructure components

Source: HIT Workgroup

Timing to deploy certain HIT capabilities was advanced based on existing capabilities and care delivery and payment innovation goals

Indicates timing was advanced



Description	Initial launch	Scaling up	Optimized value and efficiency
Core technology	**Payer Analytics** I-i Population attribution and adjust. I-ii Population stratification I-iii Pooling analytics I-vi Specialist / facility analytics I-v Performance reporting I-ix Payment **Provider-Payer-Patient Connectivity** II-i PCMH enrollment II-ii Provider pooling tools II-iv Metrics capture (non-clinical and clinical) II-v Reporting and data visualization II-vi Patient portal **Provider –Patient Care Mgmt. Tools** III-i Care coordinator workflow tools	**Payer Analytics** I-iv Claims patient registry I-vii Care gap analysis I-viii Event mgmt (e.g., alerts) **Provider-Payer-Patient Connectivity** II-iii Provider input into attribution/ segment II-v Data visualization **Provider –Patient Care Mgmt. Tools** III-iii Clinical-data analytics (e.g., care gap analysis) III-v Member engagement tools **Provider-Provider Connectivity** IV-ii Admission/discharge data IV-iii EMR-based clinical data exchange	**Provider –Patient Care Mgmt. Tools** III-ii Event management based on clinical data (e.g., alerts) III-iv Steerage to 24/7 clinical access III-vi Telemonitoring, mobility, home monitoring tools **Provider-Provider Connectivity** IV-i Clinical patient registry

Need infrastructure to risk-stratify consumers and prevent disease onset in high-risk consumers

Metrics that enable a population health care delivery model rely on clinical more than claims data

Analysis of clinical data in conjunction with claims data, while complex, is critical to long-term success of care delivery and payment innovation

CT's desire to engender a whole-person centered approach to care will demand that consumers are effectively engaged early

Limited implementation of these tools already exist with certain providers (particularly behavioral health) and could be leveraged for the SIM effort

Source: HIT Workgroup