



Connecticut SIM: Health Information Technology

STATE OF CONNECTICUT

HIT work group discussion
June 17, 2013

Agenda for HIT work group meeting #3

Identify existing HIT capabilities in CT

Evaluate HIT capabilities that will enable components of new care delivery model

Align on level of standardization and explore options to develop necessary capabilities

Develop execution plan that builds off existing capabilities

Agenda for today

- Discuss goals for today's meeting, share progress from other work groups, review synthesis from second work group meeting *20 min*

- Align on Connecticut's HIT capability roadmap that has been refined based on discussions during the last work group *10 min*

- Discuss level of HIT infrastructure standardization/consolidation across stakeholders *20 min*

- Consider aspects of HIT infrastructure and capability development where Connecticut could strive to be distinctive; introduce ongoing and potential HIT initiatives that could be differentiators for Connecticut *60 min*

- Align on next steps *10 min*

Today's points for review and discussion

Review



- **Progress** from SHIP, care delivery and payment work groups
- **Synthesis of second work group** discussion
 - Need to focus on 'must-have' HIT capabilities
 - Care delivery and payment group inputs will continue to drive prioritization
 - Leveraging existing assets is particularly relevant for CT
 - CT HIT design while pragmatic should still seek to be distinctive

Align



- **HIT capability roadmap** refined based on inputs from the previous work group
- **Level of standardization/consolidation of capabilities across payers** that will inform implementation plan
- Aspect of HIT infrastructure and capability development where **CT could strive to be distinctive**

We have outlined a vision for care delivery and payment innovation in Connecticut

Establish a whole-person-centered health care system that promotes value over volume, eliminates health inequities for all of Connecticut, and improves affordability

- Understanding and consideration of the needs of a whole-person that impact health
- Integration of primary care, behavioral health, population health, consumer engagement, oral health, and community support
- Shared accountability for total cost that controls the cost of health care and ensures quality health care
- Increased access to the right care in the right setting at the right time
- Migration to workforce and HIT capabilities that promote workforce efficacy and support the goals of the new care delivery and payment models
- Supported by Medicaid, Medicare, and private health plans alike

The care delivery and payment work groups are beginning to flesh out the implications of a population health model for Connecticut

 Details follow

Care delivery work group

- **The care delivery work group met on the 10th of June to discuss:**
 - barriers identified in last care delivery work group meeting
 - Elements of population health model which address these barriers
 - Specific interventions within each element of the population health model
- **Next meeting on 6/17/2013 (Tonight)**

Payment work group

- **Convened on 5/20/2013**
 - At its second meeting, the payment work group aligned on a set of principles that will guide our payment design decisions
- **Next meeting on 6/17/2013 (Tonight)**



At its last meeting, the care delivery work group defined a set of interventions mapped to the six components of a population health model

Description

<p>1 Whole-person-centered care and population health mgmt</p>	<ul style="list-style-type: none"> 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
<p>2 Enhanced access to care (structural and cultural)</p>	<ul style="list-style-type: none"> 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
<p>3 Team-based, coordinated, comprehensive care</p>	<ul style="list-style-type: none"> 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)
<p>4 Consumer engagement²</p>	<ul style="list-style-type: none"> 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
<p>5 Evidence-informed clinical decision making</p>	<ul style="list-style-type: none"> Make decisions on clinical care that reflect an in-depth, up-to-date understanding of evidenced-based care reflecting clinical outcomes and cost-effectiveness
<p>6 Performance management</p>	<ul style="list-style-type: none"> 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

BREAKOUT GROUP: Whole person centered care and population health management – interventions POSTER

1 Whole-person-centered care and population health management

- 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 identify high risk consumers

Behaviors/processes	Structures
<ul style="list-style-type: none"> The practice identifies consumers with specific conditions, including high-risk or complex care needs and conditions related to health behaviors, mental health or substance abuse problems The practice identifies vulnerable consumer populations The practice assesses and documents consumer risk factors The practice assesses consumer/family self-management abilities The practice assesses and provides or arranges for mental health/substance abuse treatment The practice gives referrals, in appropriate cases, to nonmedical services such as housing and nutrition programs, domestic violence resources and other support groups The practice uses strategies to address stresses that arise in the workplace, home, school etc. 	<ul style="list-style-type: none"> The practice has the capability to collect demographic and clinical data for population management

SOURCE: AAHC, ACA, CT Public Health Committee, Joint Commission, NCQA, URAC

Detailed Care Delivery work group materials are posted on the CT SIM website:
<http://www.healthreform.ct.gov/ohri/cwp/view.asp?a=2742&q=334902>

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



At its last meeting, the payment work group discussed a set of principles that will guide our payment design decisions

Guiding principles for payment reform

- Variation in payment model should be based on the needs of the whole-person, not the needs of the health system
- Payment model should complement and enable the care delivery model
- Providers should be rewarded for effective behaviors (quality and cost)
- If successful, providers will be held accountable for elements within the scope of provider control
- Payment model must be financially sustainable
- Payment model should help improve – not detract from – consumer access and health equity
- The payment model should leverage and be complementary to ongoing initiatives in Connecticut
- Payment model should be aligned across payers

Detailed Payment innovation work group materials are posted on the CT SIM website:
<http://www.healthreform.ct.gov/ohri/cwp/view.asp?a=2742&q=334904>



In the last meeting, discussions focused on how to prioritize HIT capabilities that would enable a population health model

Takeaways

Need to focus on 'must-have' HIT capabilities

Care delivery and payment group inputs will continue to drive prioritization

Leveraging existing assets is particularly relevant for CT

CT HIT design while pragmatic should still seek to be distinctive

- The needs of a population health model continue to evolve and no two implementations are identical
- Resource and time constraints demand a **pragmatic** approach to HIT design that incorporates foundational elements while retaining the **flexibility** to serve stakeholders at different points on the technology adoption curve
- The care delivery work group is highlighting **interventions** that will enable a **whole-person** centered population health model in Connecticut
- The payment work group is prescribing quality measurements (**metrics**) that will be used to hold providers **accountable** in such a care delivery model
- Connecticut has already initiated HIT efforts to better facilitate the exchange of claims and clinical data (**APCD** and **HITE-CT**)
- **DMHAS** is already managing a system of care for behavioral health populations that includes some advanced HIT infrastructure components
- There are aspects of HIT design where CT could seek to be **distinctive**:
 - Make consumer engagement a foundational element of HIT design
 - Improve provider-provider connectivity to give whole-person context to providers and limit cost of care
 - Explore innovative models to provide support services that are critical to a population health model (e.g. Provider care mgmt. tools)

FOR TODAY: Review refined HIT capability roadmap, discuss level of standardization, and discuss potential distinctiveness

Agenda for HIT work group meeting #3

Identify existing HIT capabilities in CT

Evaluate HIT capabilities that will enable components of new care delivery model

Align on level of standardization and explore options to develop necessary capabilities

Develop execution plan that builds off existing capabilities

Agenda for today

- Discuss goals for today's meeting, share progress from other work groups, review synthesis from second work group meeting *20 min*

- **Align on Connecticut's HIT capability roadmap that has been refined based on discussions during the last work group** *10 min*

- Discuss level of HIT infrastructure standardization/consolidation across stakeholders *20 min*

- Consider aspects of HIT infrastructure and capability development where Connecticut could strive to be distinctive; introduce ongoing and potential HIT initiatives that could be differentiators for Connecticut *60 min*

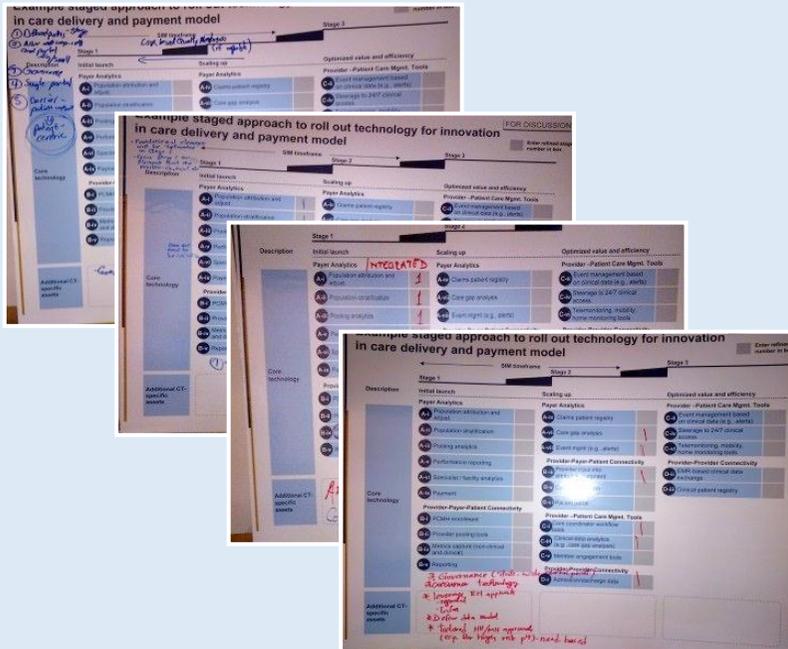
- Align on next steps *10 min*

Connecticut's HIT capability roadmap that has been refined based on discussions during the last work group

HIT Capability roadmap

During the last work group meeting 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)

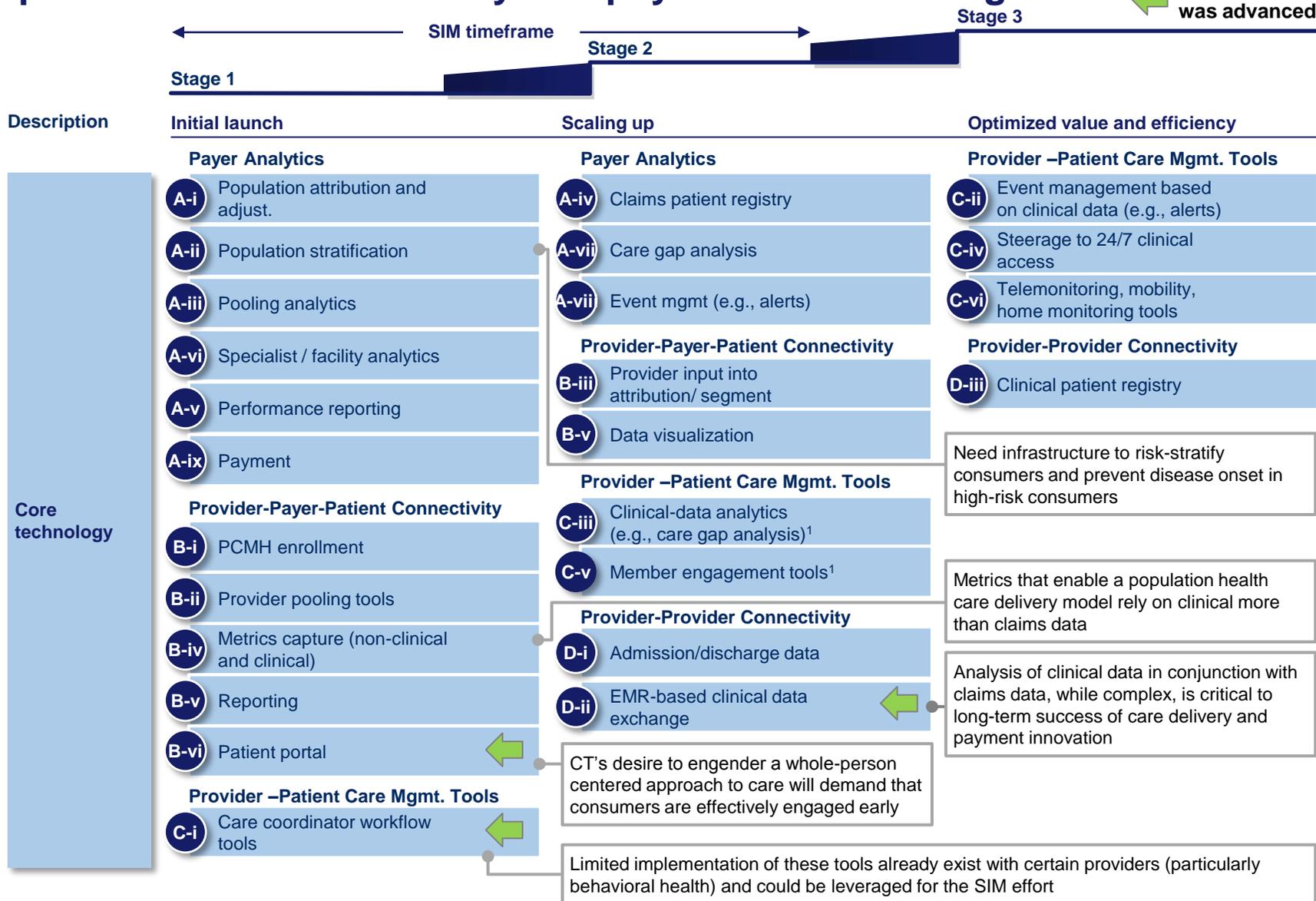


Takeaways

- 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

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

← Indicates timing was advanced



¹ While local implementation exists (e.g. DMHAS), availability at initial launch will depend on scalability/flexibility in design

Agenda for HIT work group meeting #3

Identify existing HIT capabilities in CT

Evaluate HIT capabilities that will enable components of new care delivery model

Align on level of standardization and explore options to develop necessary capabilities

Develop execution plan that builds off existing capabilities

Agenda for today

- Discuss goals for today's meeting, share progress from other work groups, review synthesis from second work group meeting *20 min*

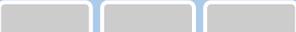
- Align on Connecticut's HIT capability roadmap that has been refined based on discussions during the last work group *10 min*

- **Discuss level of HIT infrastructure standardization/consolidation across stakeholders** *20 min*

- Consider aspects of HIT infrastructure and capability development where Connecticut could strive to be distinctive; introduce ongoing and potential HIT initiatives that could be differentiators for Connecticut *60 min*

- Align on next steps *10 min*

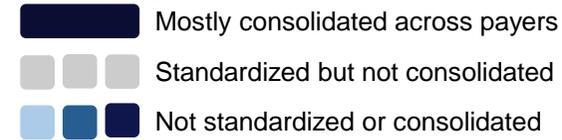
Options for infrastructure/technology across multiple payers

Option	Description	Rationale
 <p>Mostly consolidated across payers</p>	<p>All payers using/sharing same infrastructure and technology</p>	<ul style="list-style-type: none"> ▪ 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)
 <p>Standardized but not consolidated</p>	<p>Standardized output agreed-upon by all payers with independent execution and delivery</p>	<ul style="list-style-type: none"> ▪ Output consistency (e.g., payment calculation, quality metrics, provider reports) required for state-wide roll out ▪ Stakeholder complexities associated with shared infrastructure
 <p>Not standardized or consolidated</p>	<p>No standardization of output; no technology/ infrastructure sharing or consolidation</p>	<ul style="list-style-type: none"> ▪ Cross-payer variation does not impact solution consistency ▪ Payers unable/unwilling to standardize

Extent of standardization/consolidation proposed will depend on the degree of technology adoption and fragmentation among stakeholders

Components	Description	Illustrative examples
Provider-Payer-Patient Connectivity	<ul style="list-style-type: none"> ▪ Give providers access to performance information and metrics for their practice ▪ Allow patients to interact and communicate with their healthcare providers 	Develop single portal and standardized reporting format to reduce operational complexity and user confusion
Payer Analytics	Analytics and reports to determine and share provider performance in program – based on quality, cost, and utilization metrics	Separate data, analytics and report generation given complexity of consolidating payer data and infrastructure in 3 years
Provider- Patient Care Management Tools	Set of tools to support care coordinators and care managers	Set minimum requirements for technology and give providers options/flexibility to choose between vendors/tools
Provider-Provider Connectivity	Sharing health information among doctors, hospitals, and other health care providers through a secure, electronic network	Facilitate Health Information Exchange (HIE) where possible and provide alternative scalable and affordable solutions for practices of all sizes (e.g. Direct messaging)

3 core models to support care delivery and payment innovation technology and capabilities



Example options for standardization (not exhaustive)

Components

Provider-Payer-Patient connectivity

Payer analytics

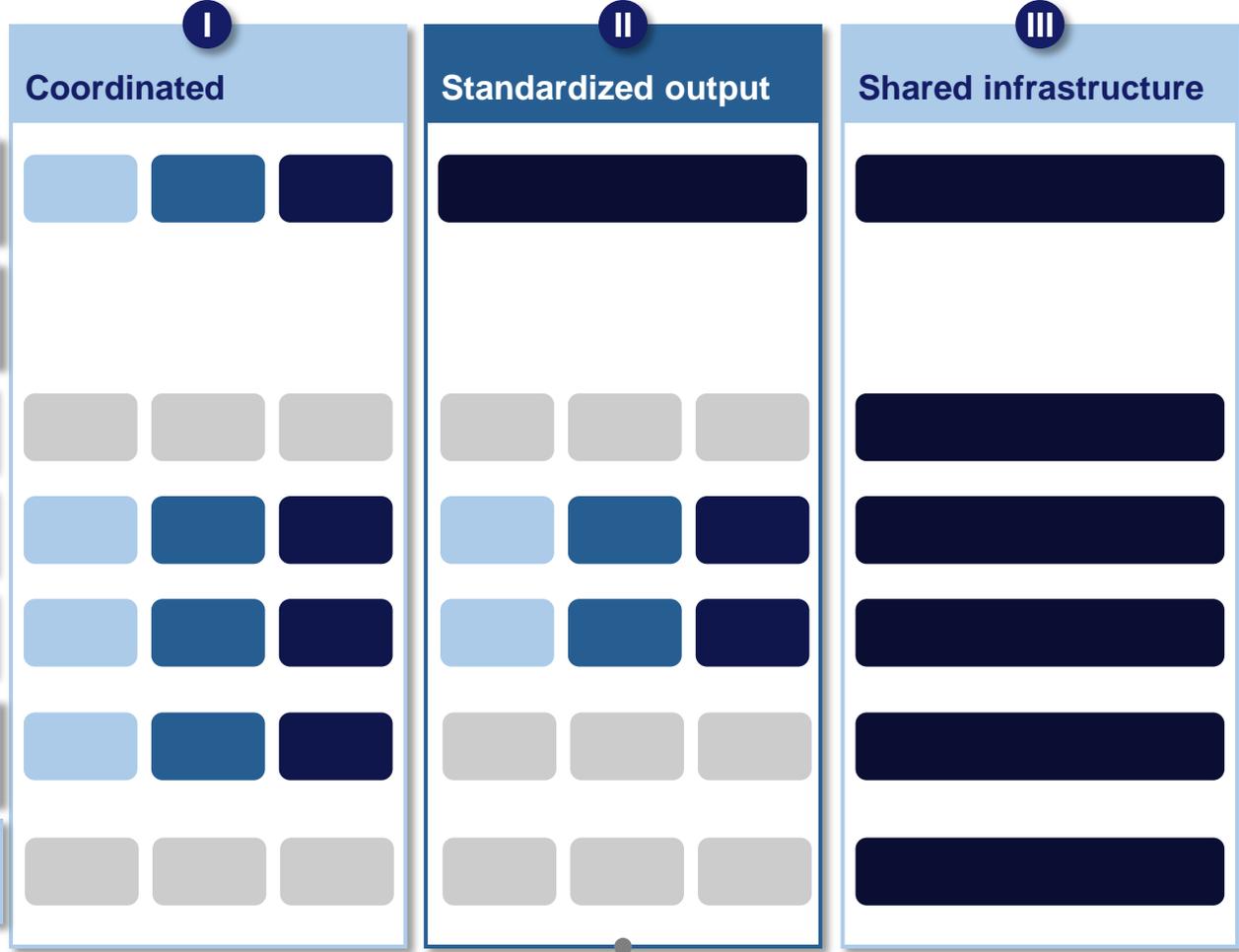
- Reporting

- All other tools/capabilities

- Data

Provider-Patient Care Mgmt. tools

Provider – provider connectivity



- Is this a suitable option for Connecticut?
- If not, how would you refine it?

Agenda for HIT work group meeting #3

Identify existing HIT capabilities in CT

Evaluate HIT capabilities that will enable components of new care delivery model

Align on level of standardization and explore options to develop necessary capabilities

Develop execution plan that builds off existing capabilities

Agenda for today

- Discuss goals for today's meeting, share progress from other work groups, review synthesis from second work group meeting *20 min*

- Align on Connecticut's HIT capability roadmap that has been refined based on discussions during the last work group *10 min*

- Discuss level of HIT infrastructure standardization/consolidation across stakeholders *20 min*

- **Consider aspects of HIT infrastructure and capability development where Connecticut could strive to be distinctive; introduce ongoing and potential HIT initiatives that could be differentiators for Connecticut** ***60 min***

- Align on next steps *10 min*

CT HIT design while pragmatic should still seek to be distinctive

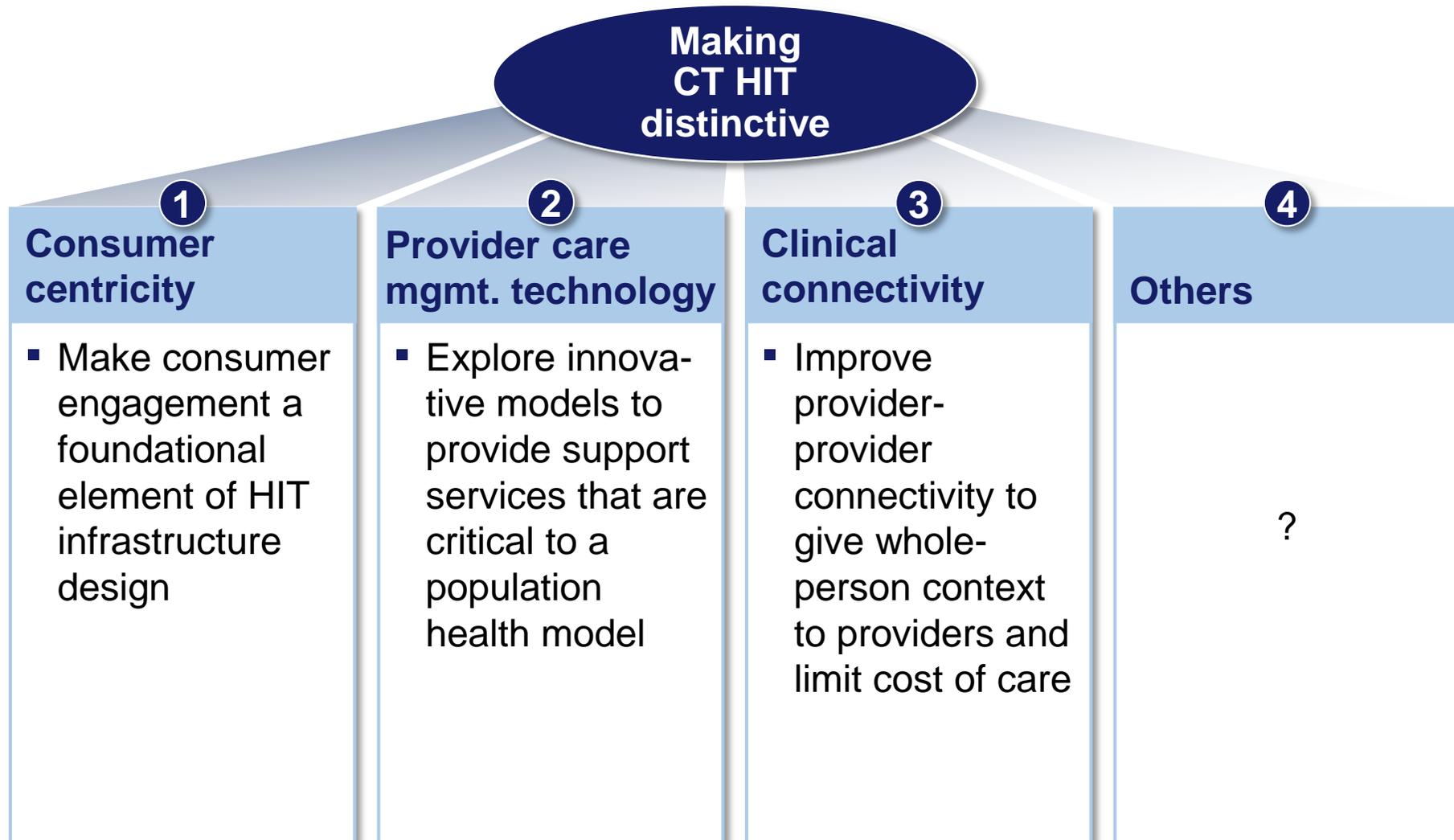
Need for differentiation

- CMS Innovation Center for SIM testing grant will likely be competitive
- HIT solution needs to be tailored to Connecticut's unique situation to accelerate impact
- Highlighting aspects of the HIT solution where CT will strive to be distinctive will help focus investment decisions

Potential elements of distinctive HIT solutions

- **Innovate**
 - Leverage recent advances in technology (e.g. data mining) to speed up CT's progress along the HIT capability curve
- **Accelerate adoption**
 - Focus on aspects of infrastructure design that would allow CT to accelerate stakeholder adoption
- **Bridge highest priority gaps**
 - Prioritize those HIT components that will help bridge the most critical and complex gaps in the system

During the last meeting, the work group highlighted aspects of HIT infrastructure design where CT could seek to be distinctive



1 Connecticut could choose to invest in consumer centric technology that facilitates a whole-person centered approach to care

NOT EXHAUSTIVE

3 potential options to develop the technology

- Consumers are critical stakeholders and decision makers when creating a whole-person centered population health model
- Consumers can benefit from transparency and tech-enabled coaching to:
 - Understand **cost** of care/prescriptions
 - Compare **quality/cost** of providers
 - Receive health-related **educational** information
 - Access to **wellness** programs



Options	Descriptions
<ul style="list-style-type: none"> ▪ Proprietary tools developed by payers 	<ul style="list-style-type: none"> ▪ Capabilities in place for certain payers ▪ Potential for CT state-wide implementation through sourcing, sharing or integration
<ul style="list-style-type: none"> ▪ Specialized technology vendors    	<ul style="list-style-type: none"> ▪ Emerging market with a combination of large analytics vendors and newer startups
<ul style="list-style-type: none"> ▪ CT home-grown solution 	<ul style="list-style-type: none"> ▪ High degree of customizability but likely costly and lengthy development ▪ Could leverage existing capabilities within the state

2 Connecticut could play a role in accelerating the adoption of care management technology among provider groups

NOT EXHAUSTIVE

Benefits of provider care mgmt. technology

Advanced tools can help care teams (physicians, AHPs, care coordinators, and case managers) better manage patient populations

- Identify care opportunities and implement the most appropriate intervention
- Efficiently prepare for patient encounters and better manage follow-up care
- Facilitate patient outreach throughout the care process

Barriers to adoption

- Technology is continuously evolving
- While a variety of off-the shelf solutions are available to providers, their interoperability is limited
- Every provider's needs are different and customization is key to adoption
- Vendors may not be able to serve smaller provider groups at reasonable prices due to lack of economies of scale

3 potential roles the State could play

- **Prescribe adoption policy and provide information about available technology and service providers**



- **Prescribe adoption policy, pre-qualify vendors and pre-negotiate discounted pricing**



- **Prescribe adoption policy and leverage existing capabilities to create a home-grown solution hosted on the 'cloud' for all providers in the state to 'plug-in' to**



3 Connecticut has ongoing initiatives to promote the exchange of information between providers

Impetus from the HITECH Act

The Health Information Technology for Economic and Clinical Health (HITECH) Act "...designed to work together to provide the necessary assistance and technical support to providers, enable coordination and alignment within and among states, establish connectivity to the public health community in case of emergencies, and assure the workforce is properly trained and equipped to be meaningful users of EHRs."

<http://healthit.hhs.gov/>

Office of the National Coordinator was charged with implementing the HITECH Act

Health Information Technology Extension Program

\$706 million

Provide technical assistance and guidance to accelerate adoption of EHRs by providers

State Health Information Exchange Cooperative Agreement

\$564 million

Establish HIE capabilities for providers and hospitals

Education and Workforce

\$118 million

Provides health IT ed and curriculum at CC Competency examinations

Health Center Beacon Award

\$8.4 million

Strengthen health IT infrastructure and exchange capabilities

Connecticut Funding from ONC and CMS for implementing the HITECH Act

Implemented by DSS CMS – EHR Incentive Program

- Incentives for adoption of Certified EHR Technologies
- Medicaid- **\$104.7 million**
- Medicare -**\$50.4 million**

Implemented by Regional Extension Program Health Information Tech Extension Program

Provide technical assistance to accelerate adoption of EHRs by providers **\$6.4 million**

Implemented by HITE-CT & DPH State Health Information Exchange Cooperative Agreement

Establish HIE capabilities for providers and hospitals **\$7.3 million**

Implemented by Capitol CC Education and Workforce

Provides health IT education and curriculum at CC Competency examinations

Review aspects of HIT infrastructure and capability development where Connecticut could strive to be distinctive

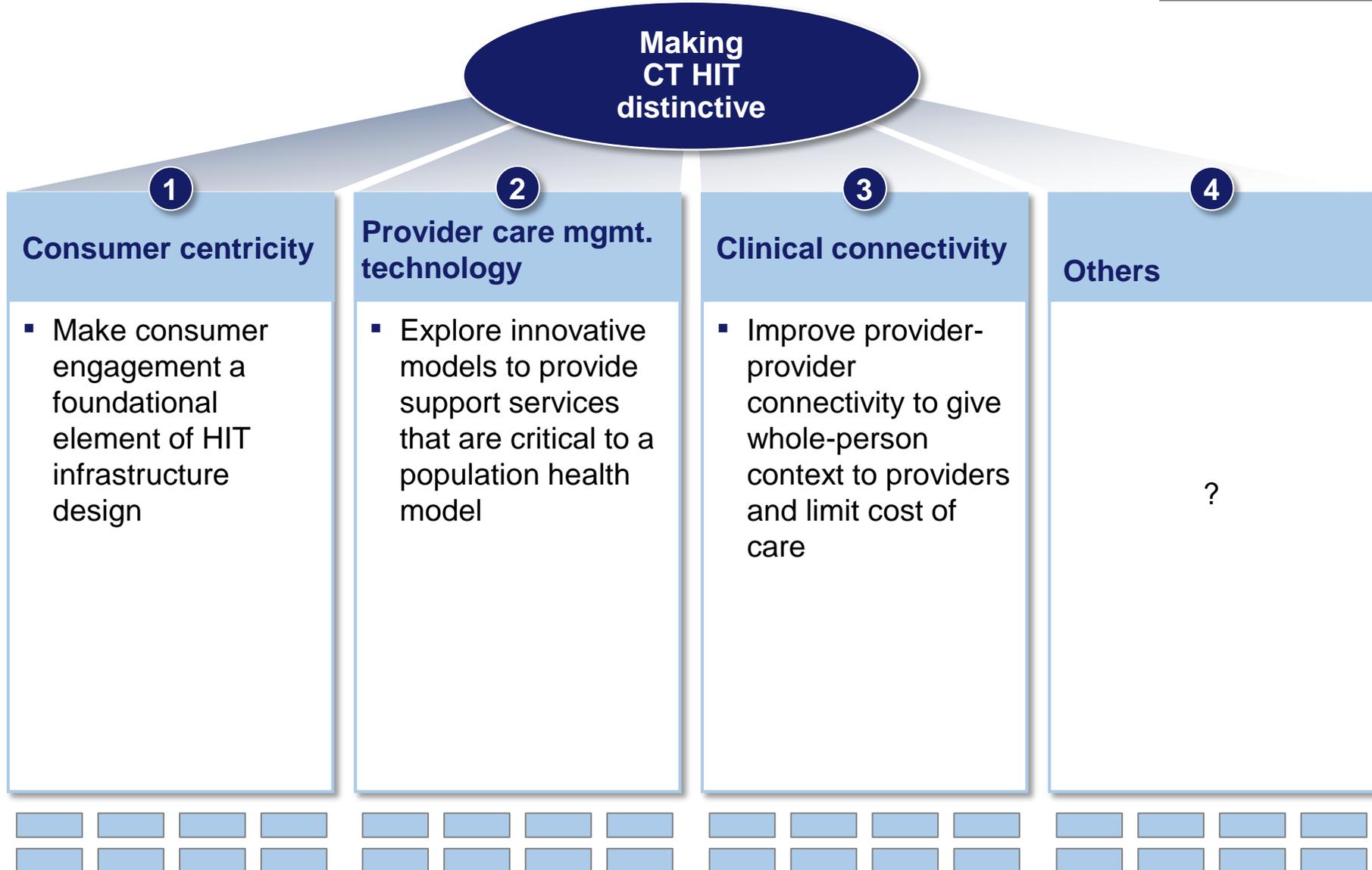
Breakout exercise instructions

- **Breakout (15 min):** Break out into 4 groups. Each group has one poster and everyone has a pen:
 - Spend 5 minutes to think individually
 - Add to the poster other aspects of HIT infrastructure design where you think CT could seek to be distinctive
 - Assign your 10 votes to across the different aspects of HIT infrastructure design to indicate where you believe CT should focus
 - Discuss your votes as a smaller group to share and refine the thinking
- **Group debrief (5 min):** Each group to report out synthesis for full team discussion
 - Were there any other aspects of HIT design that your team felt CT could seek to be distinctive?
 - Which two aspects received the most votes on your team?
 - What was the team's rationale in favoring these aspects?



How could CT seek to be distinctive in HIT infrastructure design

FOR DISCUSSION



Break out group debrief session

- Were there any other aspects of HIT design that your team felt CT could seek to be distinctive?
- Which two aspects received the most votes on your team?
- What was the team's rationale in favoring these aspects?

Agenda for HIT work group meeting #3

Identify existing HIT capabilities in CT

Evaluate HIT capabilities that will enable components of new care delivery model

Align on level of standardization and explore options to develop necessary capabilities

Develop execution plan that builds off existing capabilities

Agenda for today

- Discuss goals for today's meeting, share progress from other work groups, review synthesis from second work group meeting *20 min*

- Align on Connecticut's HIT capability roadmap that has been refined based on discussions during the last work group *10 min*

- Discuss level of HIT infrastructure standardization/consolidation across stakeholders *20 min*

- Consider aspects of HIT infrastructure and capability development where Connecticut could strive to be distinctive; introduce ongoing and potential HIT initiatives that could be differentiators for Connecticut *60 min*

- **Align on next steps** *10 min*

Next steps for HIT work group

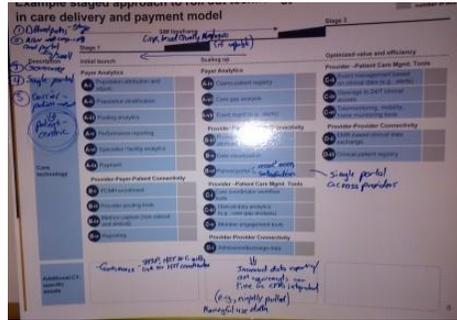
Meeting	Objectives/decisions
1 st meeting (5/20)	<ul style="list-style-type: none">▪ Understanding of HIT capabilities that will be required across key stakeholders under new care delivery and payment models▪ Criteria and approach to assess payer and health system capabilities
2 nd meeting (6/3)	<ul style="list-style-type: none">▪ Understanding of current HIT capabilities and linkages across stakeholders (e.g. patients, payers, providers) in CT and how these could be leveraged in the proposed design▪ Evaluation of required HIT capabilities under new care delivery model▪ Initial view on potential models for HIT standardization
3 rd meeting (6/17)	<ul style="list-style-type: none">▪ Strawman for HIT standardization across key components▪ Options to develop required capabilities (e.g., public utility vs. proprietary solutions, build vs. buy)▪ Potential sequencing of required capabilities (e.g., feasibility, cost, day-one need)▪ Early assessment of costs of implementing required capabilities
4 th meeting (7/1)	<ul style="list-style-type: none">▪ Early assessment of costs of implementing capabilities per roadmap▪ Strawman budget▪ Assessment of potential funding sources
5 th meeting (7/15)	<ul style="list-style-type: none">▪ Finalized budget▪ Finalized funding sources

Appendix



Summary of break out discussions during the last HIT work group (1/2)

BREAK OUT GROUP 1



- HIT infrastructure design should be based on a set of general guidelines that build in flexibility to support a variety of flavors of the population health model
 - The needs of a population health model continue to evolve and no two PCMHs are identical
 - Any effort that is customized to a specific PCMH or ACO model today may be less flexible in time as these models evolve
 - The system should incorporate different paths for providers at different stages in their adoption of technology

BREAK OUT GROUP 2



- **How foundational is a capability to the long-term HIT goals?**
 - HIT capabilities that enable other capabilities should be prioritized in the first stage of the roadmap
 - e.g.: A consumer identifier to link consumer data across different sources (payers, providers, public resources)
- **Where does the capability need to reside (centralized/distributed)?**
 - HIT capabilities that need to reside centrally to enable effective governance and easy access should be prioritized in the first stage of the roadmap
 - Conversely, capabilities that are better owned by individual stakeholders, given how these stakeholders are incented, need not be developed in the first stage
- **How feasible is it that the capability can be developed in the short-term?**
 - Certain HIT capabilities, while desirable in the long term, may not be feasible to develop so that they deliver value in the short term
 - These capabilities should not be prioritized in the first stage of the roadmap (e.g. development of a patient portal while important for consumer engagement may be an overly-ambitious goal for initial launch)

Summary of break out discussions during the last HIT work group (2/2)



BREAK OUT GROUP 3

- **Metrics that enable a population health model rely on clinical and claims data**
 - ACOs in CT are measured on 33 key performance indicators (KPIs), 22 of which are quality based and can be derived only from clinical data (EMRs)
 - Of the 11 remaining KPIs, while the utilization metrics can be derived from claims data, the rest depend on patient input (customer satisfaction data)
- **Connecticut needs an APCD-equivalent for clinical data to more robustly support payment reform**
 - The development of an All Payers Claims Database for CT was initiated in the 2012 legislative session and implementation activities are ongoing.
 - Connecticut does not yet have an equivalent for clinical data although HITE-CT is an effort in that direction
 - Access to a consumer’s clinical data across sites of care will be enable providers to compile a minimum set of reports conveniently and accurately thus supporting payment reform (e.g. payment incentives for care coordination or reduction in health inequities)

BREAK OUT GROUP 4

- **DMHAS is already managing a system of care for behavioral health populations that includes some advanced HIT infrastructure components**
 - Payer analytics: Care gap analysis, Event management
 - Provider-Payer-Patient connectivity: Provider input into attribution by segment
 - Provider-Patient Care Management tools: Care coordinator workflow tools, clinical data analytics (care gap analysis)
- **Broader HIT efforts could leverage these assets and adopt DMHAS design**
 - Managing care coordination efforts across the state
 - Governance structures and consumer technology
 - Data models for information flow

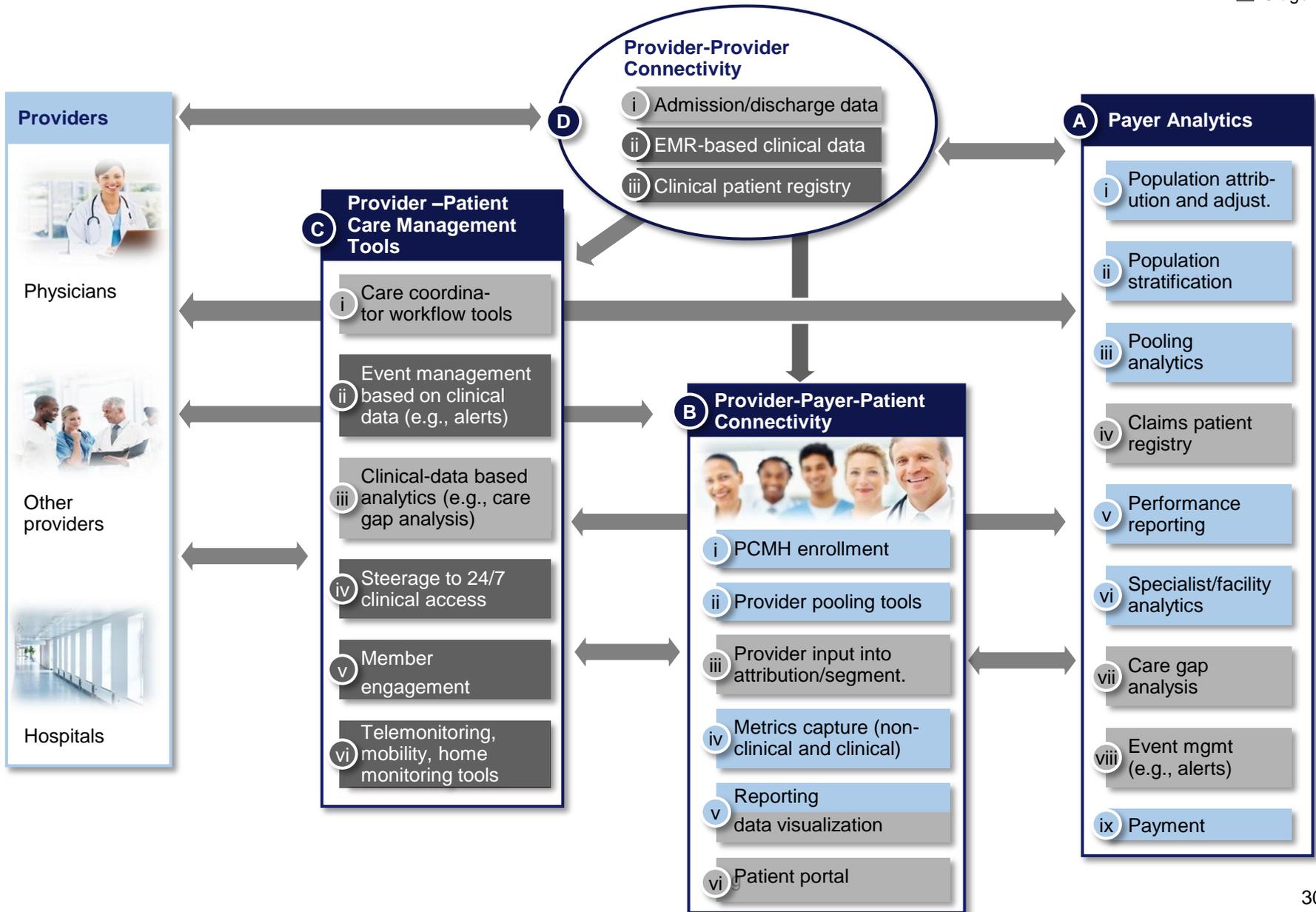


Categories of HIT capabilities across stakeholders that are required for care delivery and payment innovation

Category	Description	Typical tech pathway
A Payer analytics	<ul style="list-style-type: none"> Tools for payers to analyze claims and produce payment-related analytics, quality/outcome/ performance metrics and make actual payment for episodes and population health 	<ul style="list-style-type: none"> Heavy upfront development/ sourcing followed by incremental enhancement
B Provider - payer - patient connectivity	<ul style="list-style-type: none"> Channels (e.g., portal) for providers and patients to access and submit information, data and analytics required to support care delivery and payment models 	<ul style="list-style-type: none"> Start with basic or low tech solutions to allow time for development or sourcing of tech-enabled enhancement
C Provider – patient care mgmt.	<ul style="list-style-type: none"> Provider tools (e.g., workflow, event management) and analytics to e.g., physicians, care managers) coordinate the medical services for a patient (focus on highest risk) 	<ul style="list-style-type: none"> Highly dependent on state-specific starting point
D Provider-provider connectivity	<ul style="list-style-type: none"> Integrated clinical data exchange among healthcare stakeholders, including the longitudinal patient registry that can be enabled by HIE 	

Typical solution architecture for payer and system infrastructure

- Stage 1
- Stage 2
- Stage 3



Payer analytics

A Payer analytics

Description

i Population attribution and adjust.

- Claim analytics to attribute patients to PCMH and adjust PCMH's PMPM and gain sharing based on patients' claim history

ii Population stratification

- Claim 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

- Claim 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, ect.

vA 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 identify specialist / facility that demonstrate the highest performance for treating a given condition

vii Care gap analysis¹

- Claim analytics to identify gaps in care (e.g., missing cholesterol screening for patient with cardiac disease)

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

Provider-Payer connectivity

B Provider-Payer Connectivity

Description

i PCMH enrollment

- Web-based form that allows provider to enter information about themselves and express interest in participating 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 react to 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

Provider care management tools

C Provider care management tools	Description
i Care coordinator workflow tools	<ul style="list-style-type: none"> Set of tools to help care coordinators prioritize patient outreach efforts based on patient demographic and disease state, urgency and complexity of issues, and overall value of intervention; also record care coordination activities/ interactions
ii Event management based on clinical data (e.g., alerts)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> Claim analytics to determine overall population risk and adjusted total cost of care for a group of providers forming a PCMH
iv Steerage to 24/7 clinical access	<ul style="list-style-type: none"> Telephone support for patients to get 24/7 clinical advice from providers who have access to the patient's clinical history
v Communication support tools	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Remote monitoring capabilities for patients with select diseases (e.g., wireless scale for CHF patients)

Provider-provider connectivity

D Provider-provider connectivity

Description

i Admission/discharge 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 (One entity will be responsible for parsing data by PCMH and their corresponding patient attribution)

ii EMR-based clinical data

- API based communication that supports exchange of all clinical information contained in EMRs

iii 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