

Capture the right data, the same way, every time.



### Engineering a US standard for patient health record information

Standard Health Record

Our vision is to fundamentally shift how healthcare information is created. A well-executed Standard Health Record

(SHR) will move the health system towards an integrated, personalized, prevention-focused, and modernized system. The Standard Health Record addresses the national problem of health data interoperability by defining and implementing the core components of a

standard, digital health record that will

be used for US patients. The Standard Health Record is: A simple, computable spec that defines core human attributes for care

Understandable and verifiable by clinicians, patients, and algorithms Contains all the critical data needed to support patient identification, emergency and primary care Open source software Anchors the patient as the atomic unit Critical to solving healthcare semantic interoperability

#### care coordination by providing a common operating picture, advancing

the nation towards an integrated health

**Better Patient Outcomes** 

By defining the core components of a standard, digital health record for US

civilian, DoD, and VA patients, the SHR

will allow a single source of truth for

complete patient health data needed

for patient identification, emergency

care, and primary care. It will improve

system to modernize US health systems and processes. Patient ID **Patient** support **Emergency** Social &

environment

that accompany healthier lives. read the SHR white paper National interoperability Widespread SHR implementation will result in interoperability across

geographical locations and care settings. Health-related services

including telecare, clinical decision

be supported by SHR, improving

for collection, communication, and

health, disease surveillance, postapproval monitoring, and patient-

medical information to be stored,

accelerating secondary uses in public

healthcare access, quality, and

aggregation of patient data,

centered outcomes research.

support, and quality measurement will

uniformity. SHR provides the foundation

Patients, clinicians, and the American public will realize major benefits from

improved care coordination, reduction of medical errors, and decreased costs

#### specification while at the same time improving information transfer by providing rightly-defined data elements,

terminology mappings, and value sets.

By leveraging existing standards within the US and internationally, it will allow

transferred, and merged using the SHR

### **Timeline** 2016 Define the components of a standard, digital health record v01 Demonstrate a centralized, open source, pilot HIE with SHR for Massachusetts 2017

Conduct limited pilots using

Conduct a large scale trial in Massachusetts using Personal

Establish a new certification for

Health Information Exchanges,

based on the ability to store,

merge, and disseminate SHRs

Health Information

(certified HIE)

parties

2018

Personal Health Information (PHI)

Establish a DURSA (Data Use and Reciprocal Support Agreement) that permits SHRs to be passed

between HIEs and authorized

Work with Commonwealth of Massachusetts to establish digital healthcare policies, including an opt-out HIE policy

forward thinking in terms of meaningful health data interoperability and true

prototyping and defining the SHR, and

individuals and organizations that are

seek multidisciplinary collaboration with

populations.

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precision health for individuals and

We are in the early stages of

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# Capture the right data, the same way, every time.

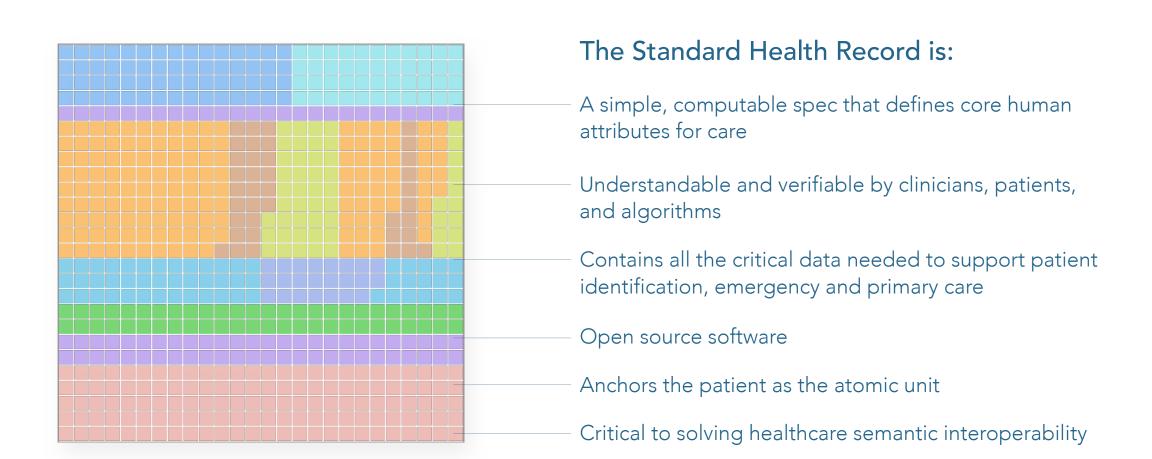


### Standard Health Record

Engineering a US standard for patient health record information

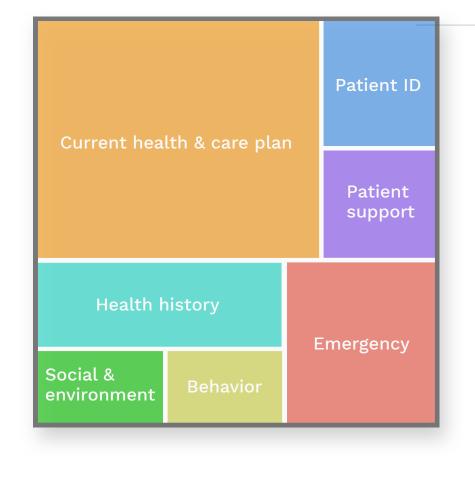
Our vision is to fundamentally shift how healthcare information is created. A well-executed Standard Health Record (SHR) will move the health system towards an integrated, personalized, prevention-focused, and modernized system.

The **Standard Health Record** addresses the national problem of health data interoperability by defining and implementing the core components of a standard, digital health record that will be used for US patients.



### Better Patient Outcomes

By defining the core components of a standard, digital health record for US civilian, DoD, and VA patients, the SHR will allow a single source of truth for complete patient health data needed for patient identification, emergency care, and primary care. It will improve care coordination by providing a common operating picture, advancing the nation towards an integrated health system to modernize US health systems and processes.



major benefits from improved care coordination, reduction of medical errors, and decreased costs that accompany healthier lives.

Patients, clinicians, and the American public will realize

read the SHR white paper

# National interoperability Widespread SHR implementation will result in interoperability across geographical locations and care settings.

2016

Health-related services including telecare, clinical decision support, and quality measurement will be supported by SHR, improving healthcare access, quality, and uniformity. SHR provides the foundation for collection, communication, and aggregation of patient data, accelerating secondary uses in public health, disease surveillance, post-approval monitoring, and patient-centered outcomes research.

By leveraging existing standards within the US and internationally, it will allow medical information to be stored,

transferred, and merged using the SHR specification while at the same time improving information transfer by providing rightly-defined data elements, terminology mappings, and value sets.

### Define the components of a standard, digital health record v01

**Timeline** 

Demonstrate a centralized, open source, pilot HIE with SHR for Massachusetts

Conduct limited pilots using Personal Health Information (PHI)

Conduct a large scale trial in Massachusetts using Personal Health Information

Establish a new certification for Health Information Exchanges, based on the ability to store, merge, and disseminate SHRs (certified HIE)

Establish a DURSA (Data Use and Reciprocal Support Agreement) that permits SHRs to be passed between HIEs and authorized parties

Work with Commonwealth of Massachusetts to establish digital healthcare policies, including an opt-out HIE policy

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We are in the early stages of prototyping and defining the SHR, and seek multidisciplinary collaboration with individuals and organizations that are forward thinking in terms of meaningful health data interoperability and

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true precision health for individuals and populations.

Home

**Record Initiative** 

care providers and individuals obtain

The Standard Health

Our vision is to fundamentally shift how

and use health information across multiple care settings to manage acute and preventive health. This shift begins by defining the content of a Standard Health Record (SHR) to be used by patients and care providers across the US. Populated by real-time, meaningful data, the SHR will empower individuals and care teams to collaborate, engage in shared-decision making, and achieve improved outcomes. The level of fragmentation present in the US healthcare system today has

patient safety and creating burden for

reached a point where it is jeopardizing patients and their caregivers. A wellexecuted SHR will move the health system past this reactive, fragmented model toward a longitudinal,

prevention-focused, and personalized

system that will increase quality and

reduce cost while addressing patient

needs. Rather than focusing on defining health

data exchange standards, the Standard

measurement units. This model provides

Health Record provides a model for

a common operational picture of the

patient, which eliminates many of the core challenges that have limited the realization of successful health data

standard content, values, and

exchange.

**MITRE Team** 

Harry Sleeper

Project owner

**Andrew Quina** 

Project leader

Mark Kramer

Mary Quilty

Kathy Mikk

Policy lead

Jay Walonoski

Synthea lead

Greg Quinn

domains.

scale.

Syntheticmass lead

Blue Ribbon Panel

The Standard Health Record (SHR)

initiative will derive critical value from

Ribbon Panel. The Panel will serve for

multiple years during the early stages of

representing clinical, patient advocacy, health information technology, health

represents a diverse collective of leaders

from areas such as nationally recognized

the guidance and support of a Blue

the initiative and contain experts

law and policy, and public health

Our growing list of supporters

provider organizations, health IT

vendors, insurance providers, clinical researchers, and government policy

to the successful establishment and

on a national as well as international

makers. Our collaborators are essential

adoption of the Standard Health Record

In addition to ongoing outreach efforts,

select collaborators will be invited to

join our Blue Ribbon Panel; making a multi-year commitment to evolve the

SHR's development by advising on its

Panel members will provide guidance and support to the SHR development

team in all aspects of carrying out the

mission, vision, and goals of the SHR initiative. The Panel will be supported

by, and have regular communication

with, the SHR development team. The

and outside the Panel membership to

November 2016 and will meet in full

each year of service the Panel will

development team to guide the

following year's objectives.

**Timeline** 

Nov 2016

meeting

Nov 2016

Nov - Jan 2017

Feb - Apr 2017

May 2017

three times a year. At the conclusion of

provide recommendations to the SHR

Full panel convened for initial

Official Blue Ribbon Panel working

The Panel will be convened in

Panel may form workgroups from within

concept, content, and direction.

Panel's Charge

carry out its charge.

SHR specification lead

Strategic communications lead

Panel member and SHR development team session Feb 2017 Full panel meeting

Panel member and SHR

Panel member and SHR

development team sessions

MITRE is committed to adhering to its

and trusted advisor working in the

public interest as a Federally Funded

MITRE is a not-for-profit organization

federal government. MITRE operate

organizations that assist the United

development centers sponsored by the

FFRDCs, federally funded research and

development centers, which are unique

technologies to solve national problems

Healthcare (CAMH) FFRDC, sponsored by the Centers for Medicare & Medicaid

Services (CMS), assists both the CMS

and the Department of Health and

The CMS Alliance to Modernize

Research and Development Center

(FFRDC) operator and partner

that operates research and

supporting the CMS Alliance to Modernize Healthcare (CAMH).

long-standing fiduciary role as a neutral

development team sessions

charter signed by members

Sep 2017 Panel delivers recommendations to the SHR development team

**About MITRE** 

Full panel meeting

May - July 2017

States government with Scientific research and analysis, Development and acquisition, and Systems engineering and integration. MITRE also has an independent research program that explores new and expanded uses of

in the public interest.

Human Services (HHS) in performing research and analysis on various topics that fall within the national health domain. As the CAMH FFRDC operator and partner, MITRE serves as an objective, independent advisor to CMS and HHS operating divisions. As the only broadly healthcare-focused FFRDC,

CAMH supports many of the complex

requirements that encompass the

business, policy, technology, and

operational interests across CMS and HHS. We are in the early stages of

analysis and critical thinking

seek multidisciplinary collaboration with individuals and organizations that are forward thinking in terms of meaningful health data interoperability and true

precision health for individuals and populations. shr-project-list@lists.mitre.org

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### The Standard Health Record Initiative

Our vision is to fundamentally shift how care providers and individuals obtain and use health information across multiple care settings to manage acute and preventive health. This shift begins by defining the content of a Standard Health Record (SHR) to be used by patients and care providers across the US. Populated by realtime, meaningful data, the SHR will empower individuals and care teams to collaborate, engage in shareddecision making, and achieve improved outcomes.

The level of fragmentation present in the US healthcare system today has reached a point where it is jeopardizing patient safety and creating burden for patients and their caregivers. A well-executed SHR will move the health system past this reactive, fragmented model toward a longitudinal, prevention-focused, and personalized system that will increase quality and reduce cost while addressing patient needs.

Rather than focusing on defining health data exchange standards, the Standard Health Record provides a model for standard content, values, and measurement units. This model provides a common operational picture of the patient, which eliminates many of the core challenges that have limited the realization of successful health data exchange.

### MITRE Team

Harry Sleeper	Project owner
Andrew Quina	Project leader
Mark Kramer	SHR specification lead
Mary Quilty	Strategic communications lead
Kathy Mikk	Policy lead
Jay Walonoski	Synthea lead
Greg Quinn	Syntheticmass lead

### Blue Ribbon Panel

The Standard Health Record (SHR) initiative will derive critical value from the guidance and support of a Blue Ribbon Panel. The Panel will serve for multiple years during the early stages of the initiative and contain experts representing clinical, patient advocacy, health information technology, health law and policy, and public health domains.

Our growing list of supporters represents a diverse collective of leaders from areas such as nationally recognized provider organizations, health IT vendors, insurance providers, clinical researchers, and government policy makers. Our collaborators are essential to the successful establishment and adoption of the Standard Health Record on a national as well as international scale.

In addition to ongoing outreach efforts, select collaborators will be invited to join our Blue Ribbon Panel; making a multi-year commitment to evolve the SHR's development by advising on its concept, content, and direction.

## Panel's Charge

Nov 2016  $\bigcirc$ 

the mission, vision, and goals of the SHR initiative. The Panel will be supported by, and have regular communication with, the SHR development team. The Panel may form workgroups from within and outside the Panel membership to carry out its charge.

Panel members will provide guidance and support to the SHR development team in all aspects of carrying out

following year's objectives.

Full panel convened for initial meeting

The Panel will be convened in November 2016 and will meet in full three times a year. At the conclusion of

each year of service the Panel will provide recommendations to the SHR development team to guide the

Nov 2016	Official Blue Ribbon Panel working charter signed by members
Nov 2016 - Jan 2017	Panel member and SHR development team session
Feb 2017	Full panel meeting
Feb - Apr 2017	Panel member and SHR development team sessions
May 2017	Full panel meeting
May - July 2017	Panel member and SHR development team sessions
Sep 2017	Panel delivers recommendations to the SHR development team

**Timeline** 

### MITRE is committed to adhering to its long-standing fiduciary role as a neutral and trusted advisor working in

About MITRE

the public interest as a Federally Funded Research and Development Center (FFRDC) operator and partner supporting the CMS Alliance to Modernize Healthcare (CAMH).

MITRE is a not-for-profit organization that operates research and development centers sponsored by the federal government. MITRE operate FFRDCs, federally funded research and development centers, which are unique organizations that assist the United States government with Scientific research and analysis, Development and acquisition, and Systems engineering and integration. MITRE also has an independent research program that explores new and expanded uses of technologies to solve national problems in the

public interest. The CMS Alliance to Modernize Healthcare (CAMH) FFRDC, sponsored by the Centers for Medicare & Medicaid Services (CMS), assists both the CMS and the Department of Health and Human Services (HHS) in performing research and analysis on various topics that fall within the national health domain. As the CAMH FFRDC operator and partner, MITRE serves as an objective, independent advisor to CMS and HHS operating divisions. As the only broadly healthcare-focused FFRDC, CAMH supports many of the complex analysis and

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critical thinking requirements that encompass the business, policy, technology, and operational interests across

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