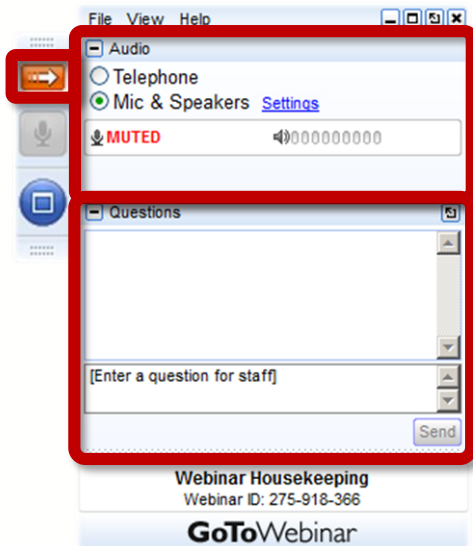




Leveraging Your eHealth Exchange Connection for a Life Insurance Use Case

Participant Spotlight: Missouri Health Connection & Clareto

How Do I Participate?



Your Participation

Open and close your control panel

Join audio:

- Choose "Mic & Speakers" to use VoIP
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Submit questions and comments via the Questions panel

Note: Today's presentation is being recorded and will be provided within 48 hrs

Problems or Questions? Contact Dawn Van Dyke
dvandyke@sequoiaproject.org or 703.864.4062

Today's Presenters



Angie Bass, MHA
CEO
Missouri Health Connection



Stephen Hrinda
VP, Data Solutions
Clareto



Jay Nakashima
Executive Director
eHealth Exchange

Agenda

- eHealth Exchange Updates
- Missouri Health Connection & Clareto Case Study
- Discussion

Ready To Be In The Spotlight?

**Volunteer to share your case study with
eHealth Exchange Participants
Email Administrator@ehealthexchange.com**

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Networking Reception
@ Interop Showcase
Feb 13th, 4 – 6 p.m.



Leveraging Your eHealth Exchange Connection for a Life Insurance Use Case

Prepared for:

eHealth Exchange Webinar with Missouri Health Connection

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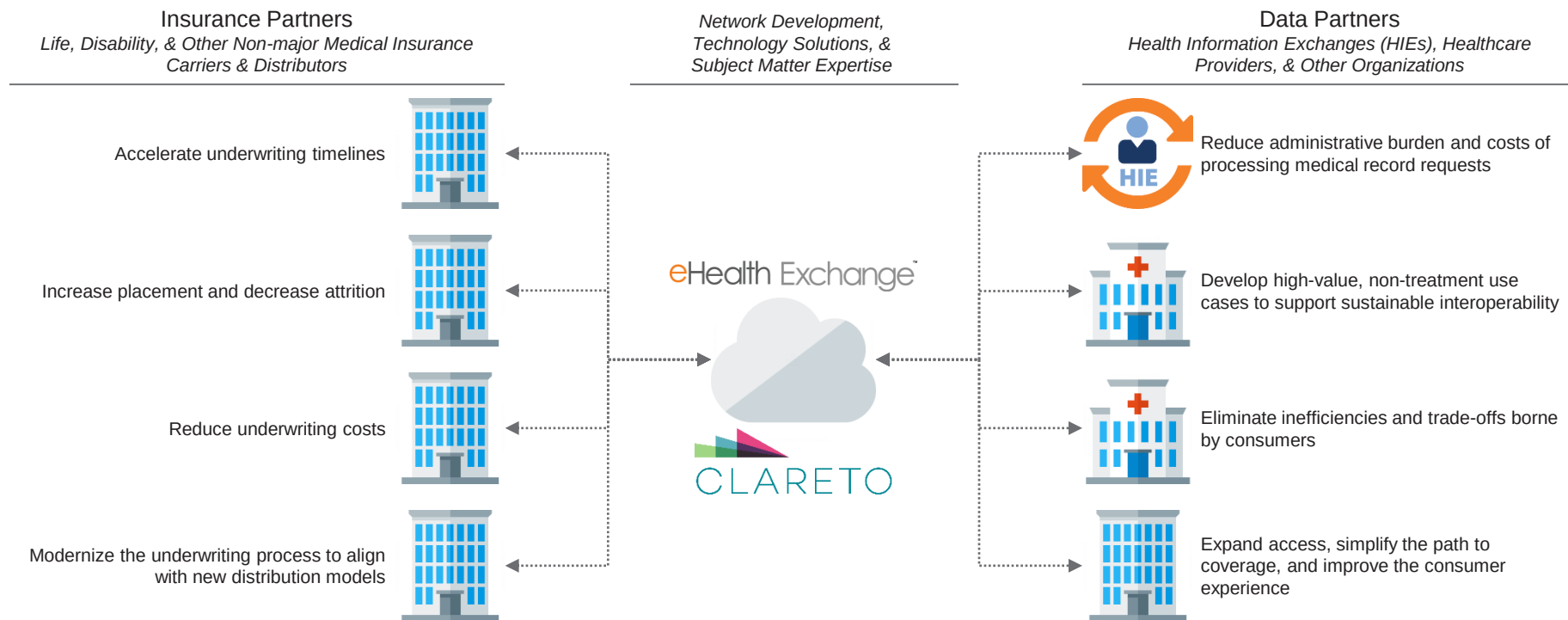
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I. Use Case Introduction

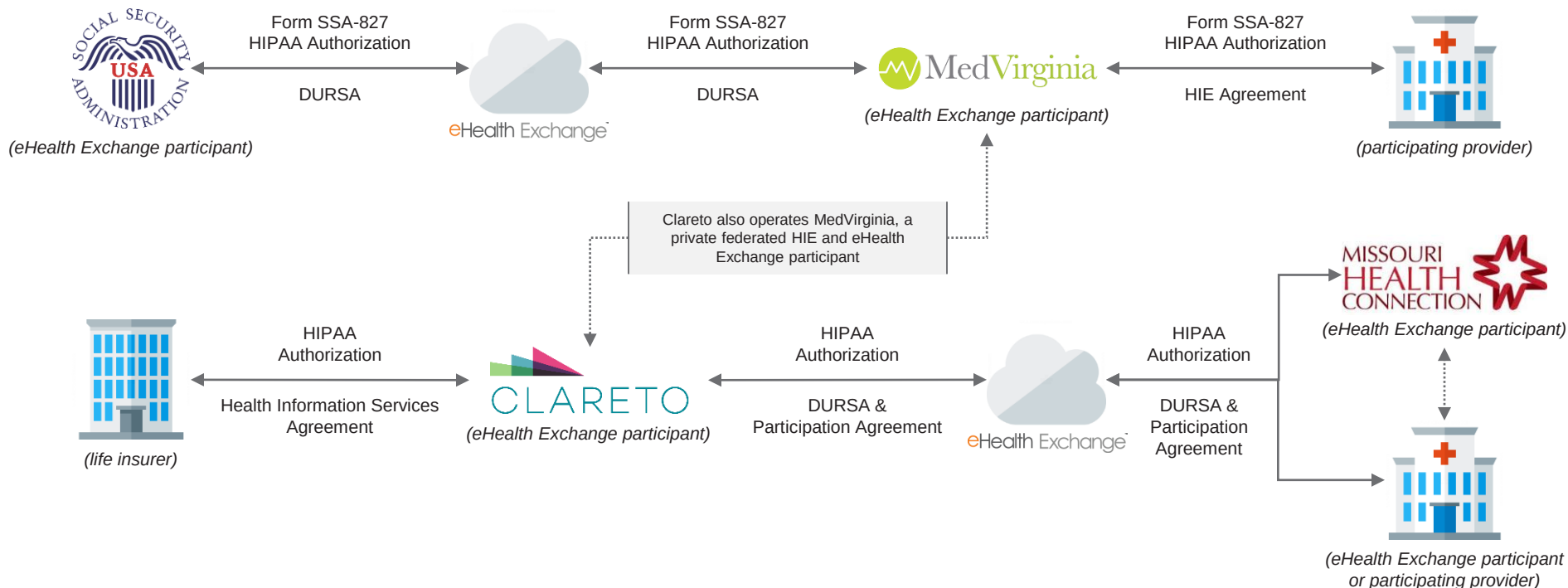
Life Insurance Use Case Introduction

eHealth Exchange enables the exchange of electronic health data, pursuant to HIPAA-compliant authorizations, to support life insurance underwriting and related use cases.



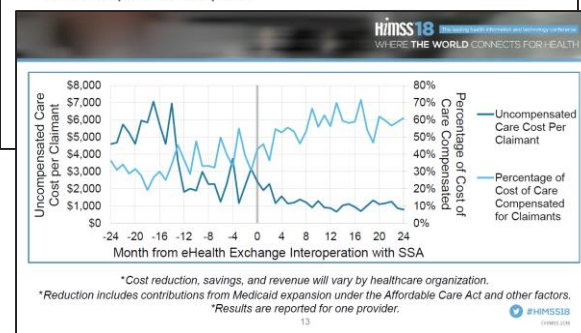
Authorized Electronic Release of Health Information

Extending an established precedent to an emerging opportunity.



Authorized Electronic Release of Health Information

Demonstrating proof-of-concept and validating stakeholder benefits.





II. Life Insurance Overview

State of the Life Insurance Market

Declining ownership, widening protection gap.

60M

Number of American households (48%) lacking adequate life insurance coverage (with an average gap of \$200,000)

38M

Number of American households (30%) remaining completely uninsured

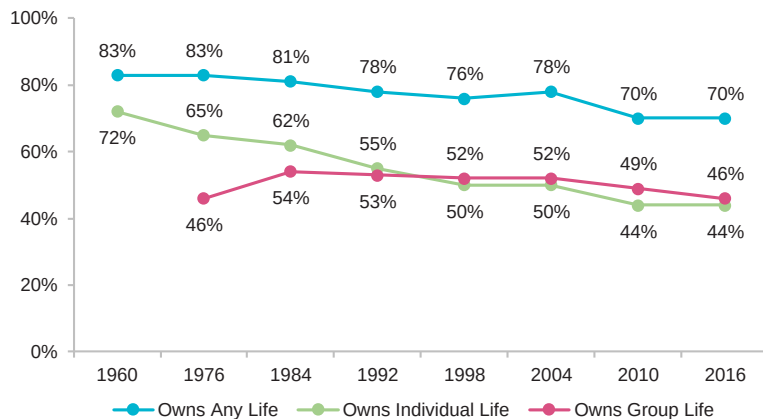
3.0

Years of household income replaced by average total coverage (50% of households would feel the financial impact of the loss of the primary wage earner in a year or less)

80%

Percent of Americans that over-estimate the cost of life insurance (by an average of more than 3x)

Life Insurance Ownership Rates – Selected Years from 1960-2016



Distribution Inefficiencies



Operational Inefficiencies



\$25 Trillion U.S. Mortality Protection Gap

State of the Life Insurance Market



Distribution gets “disrupted,” underwriting turns to electronic health data.

Ladder Secures \$30M In Series B Funding To Fuel Expansion

The company has rolled out across the nation and launched the Ladder API



NEWS PROVIDED
Ladder →
Jan 10, 2018, 09:01

Bestow Raises \$15 Million in Series A Financing

New financing fuels national expansion of a leading insurtech platform



NEWS PROVIDED
Bestow Inc. →
May 21, 2018, 09:01

Ethos Secures \$11.5M Financing Led by Sequoia to Build a Life Insurance Company People Love

Officially launching today, Ethos makes life insurance accessible, affordable and simple to close the coverage gap for millions of Americans



NEWS PROVIDED
Ethos →
Jun 14, 2018, 07:00

Fabric Announces \$10M Round and Continues Rapid Growth

Series A Round Led by Bessemer Venture Partners and Includes RGAC



NEWS PROVIDED
Haven Life →
Jun 19, 2018, 05:01

Haven Life acquires online insurance broker Quilt

Haven Life Insurance Agency, LLC and Quilt, Inc. will be working together to bring innovative annuity products to the marketplace.



NEWS PROVIDED BY
Haven Life →
Aug 08, 2018, 08:00 ET



WHAT IF EVERYONE HAD EASY ACCESS TO HIS MEDICAL RECORDS?

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After more than a decade of online shopping and online banking, online access to medical records for patients is finally entering health care's mainstream. Here US and UK health care providers now have the technology to gather patient medical information electronically, and to provide patients with online access to that information.

For both the US and UK, this represents significant change. In the US, technology to enable patients to access their records currently covers 94% of the population. Historically, doctors had feared data protection issues and therefore blocked patients from accessing their records. Attitudes, however, have been changing.

Since April 2015, doctors in England have given online access to their Summary Care Records (SCRs) to 55 million patients (97% of the population). Although SCRs currently store limited information—allegations, medicines taken and adverse reactions to any medications—this access is a significant step forward and shows commitment from health professionals to allow patients greater access to their own medical data.

In addition, since being re-elected in early 2015, the UK government has reiterated its ambition to give every patient in the country online access to full health records, including details of even consultation, prescriptions and test results, by 2018. If this ambition is met, life insurance applicants in the UK will have online access to their medical records within the next 3-5 years.

In the US, health care records have been computerized for decades. In 2016, President George W. Bush laid out a 10-year plan to promote the development and adoption of electronic health records, with the goal that every American would have an electronic health record by 2019. Bush's plan was the Office of the National Coordinator for Health Information Technology's (ONC) vision.

ON THE RISE vol. 32, n.1 (2016)

Electronic Health Records – what they are and how they affect life and disability insurance underwriting?

The advent of electronic health records (EHRs) brings to mind a story I like to tell. I was developing a solution for an automated underwriting rules engine 10 years ago when the IT director brought up a point during dinner. He said, “My underwriters really like your medical records. Well, I need them in an electronic data format with a dedicated field containing diagnostic codes. They told me, ‘I know it will happen, in our electronic, but it will not be due to what we are doing with automated life insurance underwriting.’” Nine years on all these years later and due to such factors as the Affordable Care Act, automation, the focus on patient rights and wellness, we are almost there. EHRs can provide what my IT friend was looking for and will be a huge step forward for our industry as we look to improve the customer experience, reduce costs, and increase efficiency.

This paper will define important terms related to EHRs, provide insight into components and content, and identify the steps needed to use this tool leverage this data for faster and better risk assessment.

What are EHRs and what information do they contain?

Electronic health records, “a real time patient health record with access to evidence-based decision support systems, and the ability to facilitate decision making,” according to the Office of the National Coordinator for Health Information Technology.

Implementation of EHRs by health care providers serves a dual purpose: to improve the level of care provided to the patient and to better manage the reimbursement for services rendered.

The New Underwriting Paradigm

Carrier Options

Executive Summary
Dave Doran, who heads up SCOR's Veloxia solution for middle market business, outlines the challenges involved in developing new underwriting platforms that automatically assess mortality risk without traditional medical evidence. He presents development options available to life insurers with a warning: it's not easy.

By Dave Doran
Senior Vice President
Value-Added Solutions
ddoran@scor.com

Electronic health records (EHR) – a rich source of historical medical data – will bring about a more radical paradigm shift in how we sell and underwrite life insurance. These changes are not in the far-off future. Companies can take steps today to leverage existing technology and third party data and prepare for the really big advancements down the road.

When underwriting reform became a fixed topic at industry meetings a few years ago, some dismissed it as a topic of the day. But it has proven to be much more than that. Today life insurers from niche players to mainstream companies are taking steps to change the underwriting process. And the support – or mandate – for these initiatives often comes from the highest levels of the company.

It's not easy... As companies explore the options for building technology and data-driven platforms, they quickly learn that these projects are big and costly, hard to build and even harder to maintain on a long-term basis. Just keeping up with new and changing prescription drugs requires an enormous commitment.) From a financial, human and intellectual capital perspective, few companies are positioned to build and maintain these new and innovative systems by themselves.

So where can a carrier turn? Basically, there are four options: build in-house, work with a software company, work with a data vendor, work with a reinsurance partner. Each option has its pros and cons, which are outlined here.

These projects are big and costly, hard to build, and even harder to maintain

Pros	Cons
• Requires significant resources and investment	• Maintaining a complex
• Requires for vendor connectivity and management, disaster recovery and security	• Complex with other high value projects
• Costs can only be spread over carrier's portfolio	

Pharmacy records: with a reinsurance partner. Each option has its pros and cons, which are outlined here.

House

Real property of underwriting

Change changes

Electronic Health Records – what they are and how they affect life and disability insurance underwriting?

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EHRs contain patient history, doctor's notes, diagnoses and treatment plans. The EHR may include medical test images (CT, X-ray, MRI), pathology reports or lab results. EHRs only contain information generated after the patient's medical history. Previous medical history will be back coded into the medical record unless it is noted as a past medical history by the physician.

Sensitive medical information such as psychiatric notes and drug or alcohol histories may not be included. A separate order and authorization may be required in order to obtain this information.

Patient portals, designed for ease of patient access, are websites that provide access to a patient's medical history. There are various offering services which allow EHR data for insurers by ingesting into a patient portal and providing an electronic authorization. The amount of information available on the portal is often less than the full EHR.

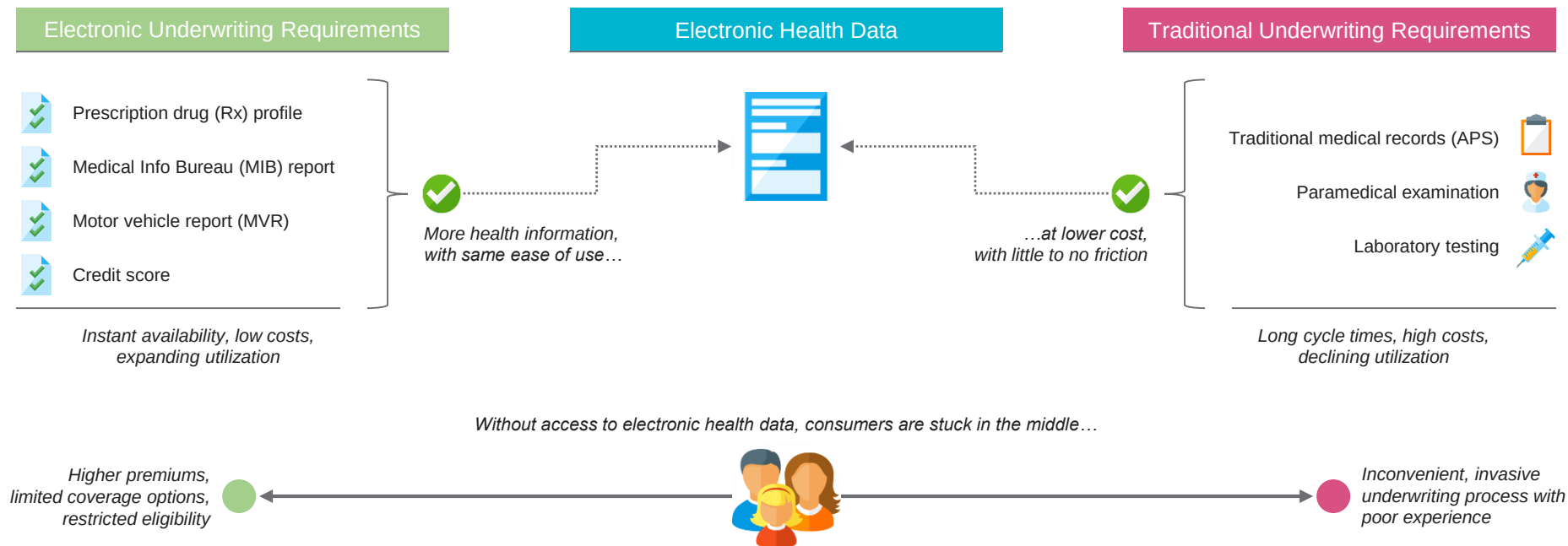
Ownership of the EHR is murky at best. While the information is owned by the patient, the media itself is owned by the providers and the electronic platform is owned by the vendor. All have a vested interest, including a financial stake.

Hit rates, provider perception and the current status of EHRs.

The health care provider perspective is very interesting in that 63 percent of doctors believe EHRs improve documentation, 70 percent say EHRs decrease face-to-face time with patients, 39 percent state they improve collections for elective services, and 38 percent feel they “waste patient services.”

The Solution: Electronic Health Data

Positioning electronic health data to bridge the gap on the underwriting continuum and improve the performance of all underwriting models.





III. Strategic Considerations

Non-treatment use cases can still be mission-aligned.

HIE Benefits: “The Usual Suspects”

- Improve **patient safety** by reducing medication and medical errors;
- Increase **efficiency** by eliminating unnecessary paperwork and handling;
- Provide caregivers with clinical decision support tools for **more effective care and treatment**;
- Eliminate **redundant or unnecessary testing**;
- Improve **public health reporting and monitoring**;
- Engage **healthcare consumers** regarding their own personal health information;
- Improve **healthcare quality and outcomes**; and
- Reduce **health related costs**.

Validated by SSA Health IT program

Research shows increasing interest among consumers for speed, ease and transparency in the life insurance purchasing process, including an evolving trend to buy online

Life insurers maintain long-term relationships with members, and are increasingly focused on member engagement and longitudinal risk management (vs. underwriting risk)

2017 Insurance Barometer Study Reveals That Consumers Want Transparent Life Insurance Buying Options

Seventh annual study from Life Happens and LIMRA shows simplified underwriting and easy-to-understand offerings are key to getting consumers the coverage they know they need, but don't have

ARLINGTON, Va. and WINDSOR, Conn., April 25, 2017 /PRNewswire/ -- American consumers expect the life insurance industry to remain innovative and continue to meet their needs and preferences, according to the 2017 Insurance Barometer Study. The study finds that 70 percent of Americans who would consider purchasing life insurance would be interested in doing so without a physical exam, also known as simplified underwriting.*

* For this survey, simplified underwriting is defined as making use of publically available data for risk classification decisions for life insurance pricing, enabling purchase without requiring blood and fluids for medical testing.

John Hancock Leaves Traditional Life Insurance Model Behind to Incentivize Longer, Healthier Lives

BOSTON, Sept. 19, 2018 /PRNewswire/ -- Starting today, in a departure from the traditional life insurance business model, all John Hancock life insurance policies will come with Vitality – a behavior change platform that rewards customers for the everyday steps they take to live longer, healthier lives. Built on the convergence of behavioral economics and consumer technology, John Hancock Vitality policies incentivize healthier choices linked to physical activity, nutrition and mindfulness.

The results are compelling. To date, worldwide Vitality policyholders have shown to:

- Live 13-21 years longer than the rest of the insured population ²
- Generate 30 percent lower hospitalization costs than the rest of the insured population ²

While John Hancock Vitality policyholders:

- Take nearly twice as many steps as the average American ³
- Have logged more than three million healthy activities including walking, swimming, and biking ⁴
- Engage with the program approximately 576 times per year – compared to customers with traditional insurance, who engage with their life insurance company one or two times per year on average ⁴

Policy benchmarking validates new use cases with stakeholders.

Summary of eHealth Exchange Approved Use Cases

- ✓ **Treatment / Care Coordination**
Enables access to critical information (e.g., test results, medication history, allergy info, immunizations) and makes available to providers when patient is transferred
- ✓ **Responder Only Profile**
Enables other networks (e.g., release of info, companies, and SAAS model vendors) to respond to queries from eHealth Exchange Participants on behalf of their client
- ✓ **Military/Veteran Health**
DoD and VA exchange active service members and veterans' records to provide government and private caregivers with up-to-date medical histories
- ✓ **Authorized Release of Information – Disability Determination**
Social Security Administration requests claimant records electronically to make disability determinations. Cuts down claims processes from months to days
- ✓ **Quality Reporting for the End Stage Renal Disease Program – CMS**
Enables dialysis centers to send quality data to CMS to assure that individuals with End Stage Renal Disease receive the highest quality of care

Summary of eHealth Exchange Approved Use Cases (2)

- ✓ **Immunization**
Enables the push of immunization data for treatment purposes (this is not related to immunization registries)
- ✓ **Authorized Release of Information – Consumer Access to Health Information**
Enables clinical exchange between patient and provider (e.g. via a Personal Health Record (PHR))
- ✓ **Encounter Alerts**
Enables event notification of clinical encounters to patient associated care team members
- ✓ **Prescription Drug Monitoring Program (PDMP)**
Enables exchange of PDMP data
- ✓ **Electronic Lab Reporting (in support of public health)**
Enables electronic lab reporting to public health agencies
- ✓ **Syndromic Surveillance**
Enables syndromic surveillance reporting to public health agencies

Summary of eHealth Exchange Approved Use Cases (3)

- NEW** **Authorized Release of Information – Life Insurance (Approved by CC on 12/7/16)**
Enables life insurance companies to request copies of an individual's medical records for the purposes of making a determination for life insurance benefits
- NEW** **RSNA Image Share Use Case (Approved by CC on 11/15/16)**
Enables organizations to share images via the eHealth Exchange.

Life Insurance Use Case Summary

Permitted Purpose:

- Previous analysis by legal counsel determined that this use case is very similar to the SSA use case for disability determination and falls under the DURSA Permitted Purpose of Authorization as noted below:
 - “Uses and disclosures pursuant to an Authorization provided by the individual who is the subject of the Message or such individual's personal representative as described in 45 C.F.R. § 164.502(g) of the HIPAA Regulations.”

Workflow

1. An individual submits an application for life insurance with a life insurance company
2. The individual completes authorization form for his/her clinical records to be obtained by the life insurance company for verification purposes
3. The life insurance company as a Participant User, sends a query on behalf of the individual to the providers that they have identified along with the HIPAA-compliant authorization
4. The query is facilitated through an eHealth Exchange Participant to other eHealth Exchange Participants
5. The eHealth Exchange Participant responds to the request and provides a CCD back

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Wants and needs don't have to be mutually exclusive.

What the market demands...

- ✓ Simple, unified workflow
- ✓ High hit rates
- ✓ Instant availability
- ✓ No special authorizations / requirements
- ✓ No patient usernames / passwords
- ✓ No / low friction for consumers
- ✓ No / low adverse selection risk
- ✓ Electronic data (not just electronic delivery)

What has to be true first...

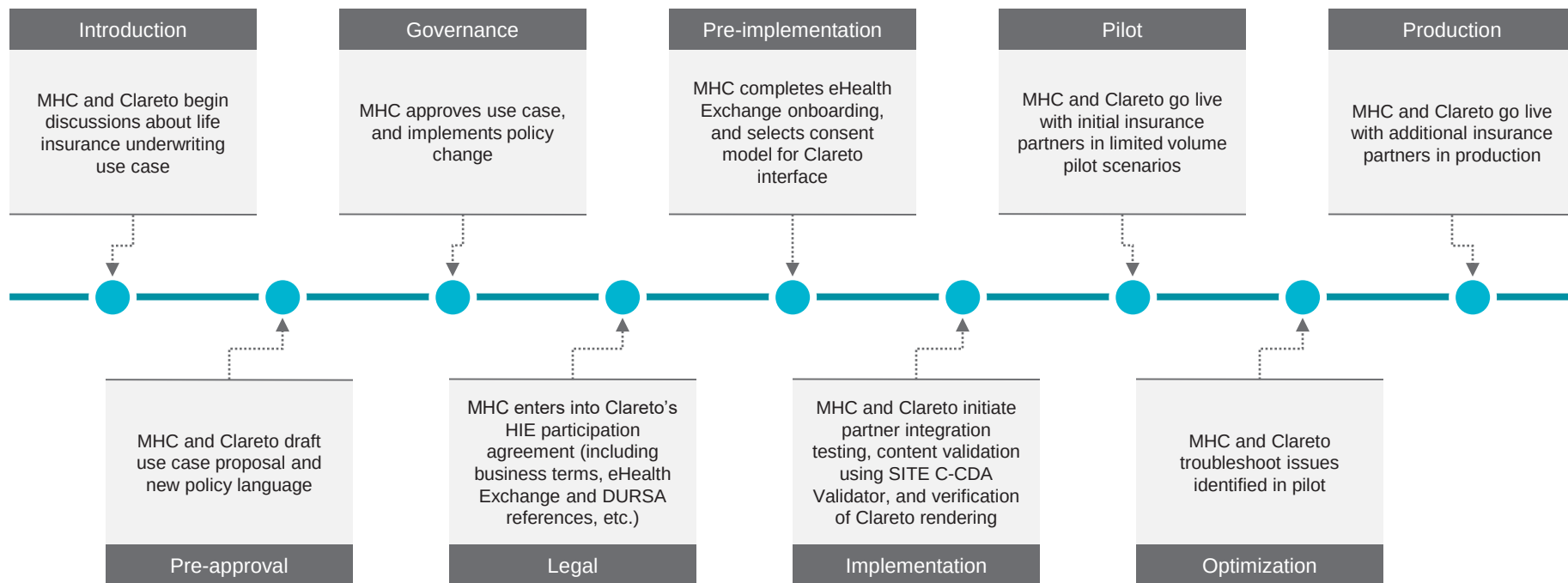
- ✓ Trust
- ✓ Common ground – technical, legal, security (eHealth Exchange)
- ✓ Right individual, right authorization, right record, right recipient
- ✓ Implementation optionality
- ✓ Separate MedVirginia OID (for TPO) and Clareto OID (coverage only)
- ✓ Safety net (special rules for insurance users)
- ✓ No data persisted or used for any other purpose
- ✓ Full reporting and auditing (at transaction level)



IV. MHC Case Study

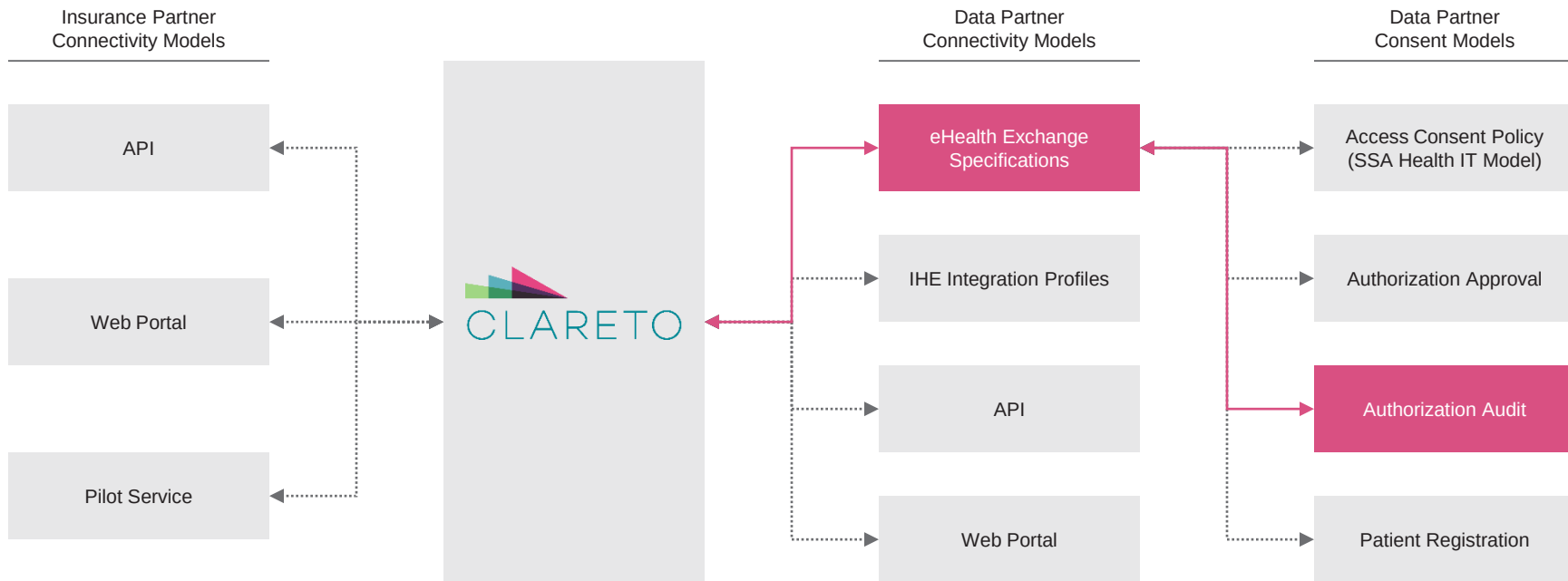
Timeline

MHC and Clareto have collaborated across a spectrum of policy, legal, technical, and business activities to advance the life insurance underwriting use case.

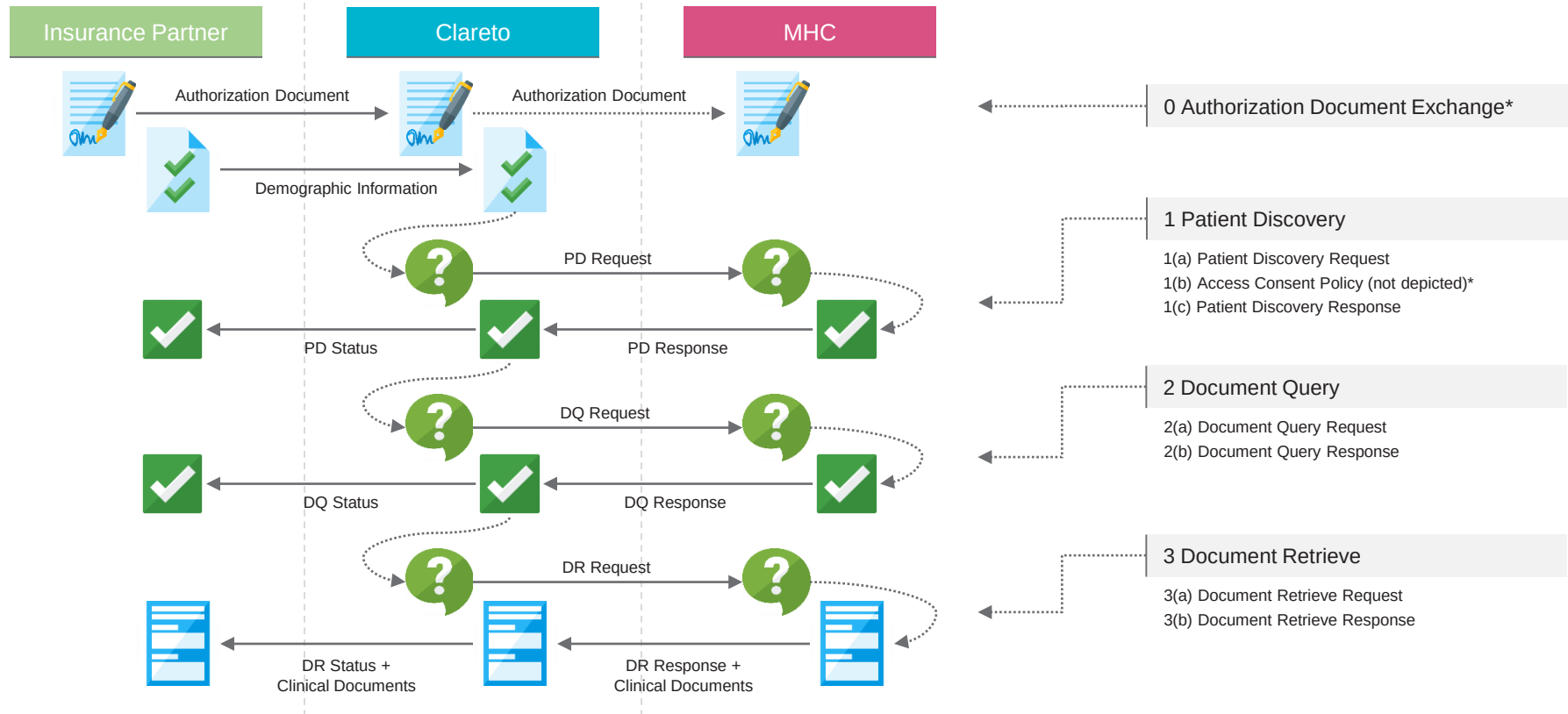


Implementation Model

MHC established an interface with Clareto via eHealth Exchange, and selected a consent model that satisfied its policy requirements and reduced technical lift.



Data Exchange Sequence of Events



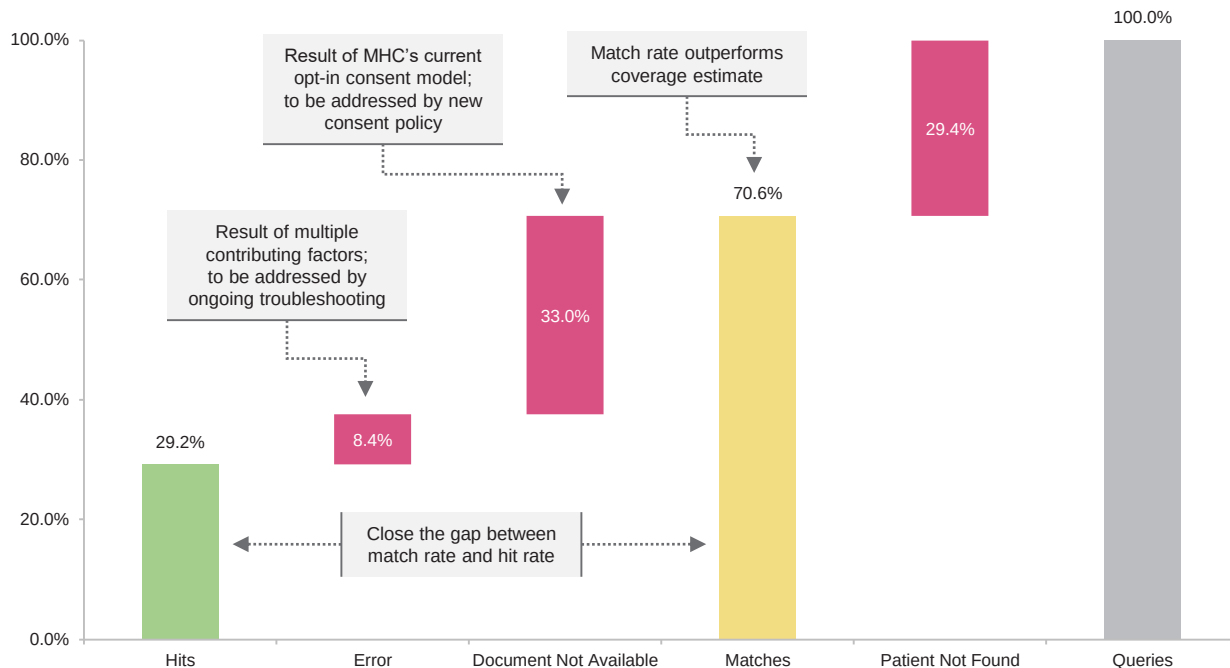
* Authorization document available for retrieval in band or via alternative consent models

- Design pilot study with MHC and insurance partner(s)
- Sample 100 to 1,000+ cases
 - Define gender mix, age groups, geographic distribution, product type, face amount, etc.
- Analyze results with stakeholders
 - Measure hit rates across large sample and by geography
 - Conduct chart reviews against underwriting-specific data abstraction template
 - Test multiple underwriting use cases simultaneously (at least 3 and up to 6)
 - Acquire multiple underwriting decisions / ratings on each case (at least 2 and up to 8)
 - Track multiple underwriting outcome measures for each case (at least 2 and up to 6)
- Review findings
 - Data partners: hit rates, data availability, and opportunities for improvement
 - Insurance partners: multiple approaches to maximize value of electronic health data
- Identify opportunities to build momentum

MHC Pilot Results

Summary			
Geography	Missouri residents only		
Population	6,113,532		
Cases (n =)	1,984		
Organization	MHC	Est. Coverage	66.9%
Findings			
Error	Moderate – multiple causes (DR failure, connection timeout, invalid characters)		
Document Not Available	High – patient found but documents not available (patient has not opted in with MHC)		
Patient Not Found	Consistent with coverage estimate		
Regions	Cases	Match Rate	Hit Rate
St. Louis	34.9%	75.6%	41.6%
Kansas City	24.2%	62.0%	15.0%
Springfield	8.2%	82.2%	49.7%
Joplin	2.6%	73.1%	11.5%
Columbia	2.5%	67.3%	16.3%
Jefferson City	2.1%	69.0%	23.8%
CapeGirardeau	1.9%	60.5%	2.6%
Other	23.5%	69.1%	24.2%

Based on nearly 2,000 cases and feedback from insurance partners, MHC and Clareto adopted a data-driven approach to identify opportunities for improvement, align on priorities, and implement fixes as necessary.



MHC and Clareto will continue working together to optimize their connection.

Issues resolved to date...

- ✓ Configure for OID (Clareto), purpose of use (coverage), and user role (insurance specialist)
- ✓ Update UDDI and certificates in validation environment
- ✓ Permit date range, livingSubjectID, and resourceID in PD request
- ✓ Add MHC OID as providerOrganization in PD response
- ✓ Use multiple test patients with partial records to validate content
- ✓ Transition unhandled consent issues from DR response to DQ response
- ✓ Exclude empty documents

Opportunities for improvement...

- ✓ Pending implementation of new consent policy
- ✓ Ongoing triage and management of low-frequency DR errors (multiple causes, may be persistent or temporary in nature)

Example Insurance Partner Pilot Results

Results across multiple use cases confirm the value proposition to life insurers – faster cycle times, lower costs, high hit rates, and favorable cost-benefit ratios.

- Use Case #1: replacement of another underwriting requirement
 - Sufficient to make an underwriting decision for >50% of cases without additional information
 - Room for substitution rate to increase further without adversely impacting mortality experience
 - Verdict: move to production with follow-up on broader sample to replicate results

- Use Case #2: replacement of another underwriting requirement
 - Not a perfect substitute for data elements normally obtained
 - Nearly all cases received the same rating with traditional requirement and new data
 - Verdict: conduct larger, holistic follow-up study to determine implementation rules

- Use Case #3: augmentation of an existing underwriting process
 - Uncovered meaningful unpriced mortality risk in ~20% of cases
 - Opportunity to expand eligibility to larger share of applicant population
 - Verdict: operationalize immediately and continue studying in parallel

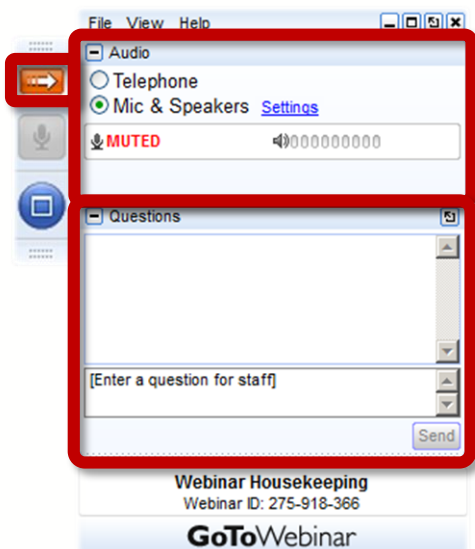


V. Key Learnings

What we've learned so far...

- Know your customers (and their priorities)
- A rising tide lifts all boats – engaging national customers requires national participation
- One size does not fit all – need multiple connectivity and consent models to address variability in vendor capabilities, policy requirements, and participant experience
- Stack use cases (SSA, life insurance) with common denominators (patient authorization) to maximize near-term ROI, long-term opportunity of policy changes, technical investments
- It's possible to over-estimate technical lift – test first, plan second
- Importance of triage approach, pattern recognition, and data-driven continuous improvement to establish and maintain connections
- Use federal partners for technical benchmarking and tie-breaking
- Cross-pollination between industries creates uncommon value

Discussion & Questions



Angie Bass, MHA
CEO
Missouri Health Connection



Stephen Hrinda
VP, Data Solutions
Clareto



Thank you for your time.

For more information, please contact:

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