



HIMSS19 調査報告

2019 年 6 月

標準化推進部会
国際標準化委員会

目次

はじめに	3
1. 出張者、日程	4
1.1. 出張者	4
1.2. 日程	4
1.3. 次回日程（参考）	4
2. HIMSS19 全体概要	5
3. テーマ別報告	6
3.1 Opening Keynote	6
3.2 医療政策動向	8
3.3 精密医療とゲノミクス	12
3.4 Blockchain	15
3.5 Cybersecurity	29
3.6 Registry	33
3.7 Evidence-based Digital Medicine	42
3.8 HIMSS Interoperability Showcase	46
3.9 Closing Keynote	52

4. 教育セッション一覧	55
4.1 表 1 トピック分類とセッション件数	55
4.2 表 2 セッション ID 順教育セッション一覧	57
4.3 表 3 トピック分類別教育セッション一覧	101
5. 略語集	146
おわりに	151

はじめに

標準化推進部会・国際標準化委員会

委員長 岡田 真一

HIMSS19 は、2019 年 2 月 11 日から 2 月 15 日の 5 日間、フロリダ州オーランドの Orange County Convention center で開催されました。

例年通り 45,000 人以上の参加者、1,300 以上の出展企業、300 を超える教育セッションという世界最大規模のヘルスケア IT 学会・展示会です。

JAHIS では例年グローバルの視点から、HIMSS 視察を定点観測として実施しています。本年も 4 名の有識者による調査を実施いたしました。



本報告書において、このような米国におけるヘルスケア IT の最新動向や熱気を少しでも感じ取って頂き、会員各社における事業の一助となれば幸甚です。

2019 年 6 月

1. 出張者、日程

1.1. 出張者

岡田 真一（標準化推進部会・国際標準化委員会委員長）

稲岡 則子（標準化推進部会・国際標準化委員会委員）

田口 剛（標準化推進部会・国際標準化委員会委員）

中野 直樹（標準化推進部会・国際標準化委員会委員）

1.2. 日程

開催日程：2019 年 2 月 11 日～15 日

開催場所：Orange County Convention Center,
9800 International Drive, Orlando, FL 32819

1.3. 次回日程（参考）

開催日程：2020 年 3 月 9 日～13 日

開催場所：Orange County Convention Center,
9800 International Drive, Orlando, FL 32819

2. HIMSS19 全体概要

「はじめに」章にも掲載の通り、HIMSS19 は参加者数 45,000 人以上、出展企業数 1,300 以上、教育セッション数 300 以上と、例年通り活況なものでした。

今年の HIMSS も、先端的な手法や技術の活用によるヘルスケア領域での DX（Digital Transformation）の推進に関して、米国を中心としたノウハウ・事例のセッションや企業展示が活発に行われていました。

本報告書では、多岐に渡る内容の内、特に医療政策の動向や精緻医療とゲノミクス、Blockchain、Cybersecurity、症例集積 DB もしくは患者レジストリ、デザイン思考等による Patient Engagement/Value-based care への取り組み、相互運用性の推進につき、動向を掲載しています。

HIMSS は米国を中心としたヘルスケア領域での ICT 利活用を取り扱う世界最大の活動体であり、最新の動向や事例、ノウハウ、そして今後の方向性について情報が集積される場です。この場で展開された情報を様々なビジネス等で活用されますことを祈念致します。

3. テーマ別報告

3.1 Opening Keynote



図表 3.1-1 HIMSS19 Opening Keynoteセッション開始の様子

HIMSS19のテーマは“Champions of Health Unite（健康医療一体化のチャンピオン）”ですが、このセッションはクイーンの「伝説のチャンピオン」を含む楽曲のパフォーマンスで力強く始まりました。

最初の講演者メイヨクリニックCIOのChristopher Ross氏は、彼自身ががん患者として治療を経験したことが、彼の組織が“Patient Journey（ペイシエント・ジャーニー；患者の治療の道のり）”の改善や患者のより良いアウトカムを提供するために直面しているチャレンジへの取り組みに影響を与えていることに触れていました。そして、医療提供者の組織や技術者は、Patient Journeyの向上のためにテクノロジーを利用することに注力しており、その重要性を強調していました。



図表 3.1-2 メイヨクリニック CIO Christopher Ross氏

次にHIMSS CEO、Hal Wolf氏が登壇し、最初に米国のみならず、他の諸国での課題である、高齢化、慢性疾患の負担、行動に結びつく情報の欠如、資金調達、要求の厳しい消費者、スタッフ不足等に触れました。そして、ビジョンとして、患者・消費者中心の、すべての人が最善のケアにアクセスできる世界の実現を掲げていました。



図表 3.1-3 HIMSS CEO Hal Wolf氏

パネルディスカッションは、写真右から、モデレータのHIMSS CEO Hal Wolf氏、パネリストの初代米国CTOでCareJourney社長のAneesh Chopra氏、元ナショナル・コーディネータのKaren DeSalvo氏、保健福祉省長官とユタ州知事を務めたMichael Leavitt氏、CMS(Centers for Medicare & Medicaid Services) 管理者のSeema Verma氏の5名で行われました。プログラムに掲載されていたテーマは“Will Consumer-Directed Exchange Disrupt the Healthcare Marketplace? 消費者主導の(情報)交換はヘルスケア市場を混乱させるか？”でした。

このKeynoteセッション前日にCMSから新しいルールに関する提案が発表され、パブリックコメントの募集が開始されました。その提案はヘルスデータへの患者のアクセスや相互運用性を推進するもので、内容としては、健康情報の流通をブロックすることに対してのペナルティ警告、FHIRを利用することや、APIを利用した相互運用性の確保に関するものです。

パネルでは、医療情報技術/デジタルヘルスをテコにして、患者や市民各人が自分たちができる最善のケアにアクセスできることにつながるということで、今回のCMSのルールは好意的に捕らえられており、公的保険者のみならず、民間を巻き込んだ今後の推進が期待されています。また相互運用性の規格を統一することでコストの削減につながるとの言及もありました。



図表3.1-4 HIMSS19 Opening Keynoteセッションのパネルディスカッション

出典：<https://www.himssconference.org/education/keynote-speakers>

3.2 医療政策動向

「患者を中心とした医療」の加速化

HIMSS19 の初日にあたる 2/11、米国保健社会福祉省（HHS）が医療情報に関する新しい規制案を提案しました。「2020 年までに政府の被保険者が、医療費・診療情報への即時電子アクセスできるようにする」というものです。

[出所]

<https://www.hhs.gov/about/news/2019/02/11/hhs-proposes-new-rules-improve-interoperability-electronic-health-information.html>

HHS Proposes New Rules to Improve the Interoperability of Electronic Health Information

「HHS が電子医療情報の相互運用性を改善するための新しい規則を提案」

これは昨年の HIMSS で CMS(Centers for Medicare & Medicaid Services) administrator の Seema 氏による「診療データを患者に返す。データは患者のものだ」という宣言を実行したものです。(※) 今回の Opening Keynote もこの話題を中心としたディスカッションでした。

翌日 2/12 の CMS administrator の Seema 氏の講演は HHS の発表の経緯や意義を説明するものでした。以下に講演内容を抜粋して紹介します。



図表 3.2-1 Seema Verma 氏

[出所]Session#87 Interoperability and Patient Engagement

Seema Verma Administrator, Centers For Medicare & Medicaid Services

(※) トランプ政権ではオバマケア廃止を提唱しており、今回の活動も「オバマケアのリフォームの一環である」と宣伝していますが、個人にデータの主権を渡すという考えは、2010 年に当時のオバマ大統領が、オープン性の高い政府と消費者保護を目的として、全米国民が自分の個人データに簡単かつ安全にアクセスできるようとして始めた My Data Initiatives に基づくものであり、Blue Button もその活動の一つであることを書き添えておきます。

[出所]

<https://obamawhitehouse.archives.gov/blog/2016/03/15/my-data-empowering-all-americans-personal-data-access>

My Data: Empowering All Americans with Personal Data Access

今回の規制案の背景

「メディケア受給者の 17%が 6 つ以上の慢性疾患を抱えており、そのグループへの支出だけで全メディケア支出の半分以上を占めています。このような状況の原因の一部は償還の根本的な欠陥に起因しています。現在の医療システムは複雑・不透明で、患者に分かりにくいものになっています。患者が自分の健康についての判断を下す際に、医療の質や価格、医療記録にアクセスできないということが、国全体を健康にし、医療費を下げる機会を奪っています。医療記録のデータ提供は紙や fax や CD-ROM

ではだめです。しかしこれまでのシステム更新のような高価なテストは繰り返しません。責任の押し付け合いはもう充分です。」

"MyHealthEData"



「MyHealthEData は患者が自らの医療・健康データを管理することで患者のヘルスケアジャーニーにおいてそのデータが役に立つようにします。患者にその力を与えるための取り組みです。2/11 の発表は昨年からの MyHealthEData の活動をベースにしています。相互運用性を推進して患者のアクセス向上、シームレスなデータ交換、およびケア調整の向上を目指す CMS の取り組みのひとつです。」

"Blue Button2.0"

「昨年 HIMSS では、メディケア受益者向けの最初の開発者向けオープン API である Blue Button 2.0 を発売しました。Blue Button Sandbox アカウントを持つ開発者は現在 1,500 人を超えており、本番環境で API を使用している Blue Button アプリは 18 個になりました。Blue Button 2.0 を使うことで、約 4000 万人のメディケア受益者が請求データに



アクセスできるようになりました。メディケア、メディケイドだけでなく、連邦政府と関係するヘルスケア計画での利用を提案しているので、Blue Button をアクセスする人は、2020 年までに、現在の 4000 万人に加えて 8500 万人の患者がアクセスするようになるでしょう。」

退院プロセスの改善

「患者が入退院・移転する際には、医療施設が患者ケアチームの医療者に電子的に通知することも提案に含めています。これは患者とケアチームの退院プロセスに関する改善であり、小さいけれども重要な第一ステップです。」

ACO（Accountable Care Organization）との情報共有

「FHIR Bulk Spec を使用して メディケアの請求データを ACO と共有するプロジェクトを開始しました。ACO 参加者の請求データを一括形式で共有することができますようになります。」

将来展望

「最終的には、私たち全員が協力して、ヘルスケアシステム全体に情報のシームレスな流れを促進する必要があります。出生時に健康・医療記録が作成され、自身の診断や治療に使われるだけでなく、研究者がアクセスすることで何百万人もの命を救うことができる治療法を開発することができるかもしれません。データと知識こそが患者の人生を変えることができ、持続可能なヘルスケアシステムの軌跡を変えることができるのです。」

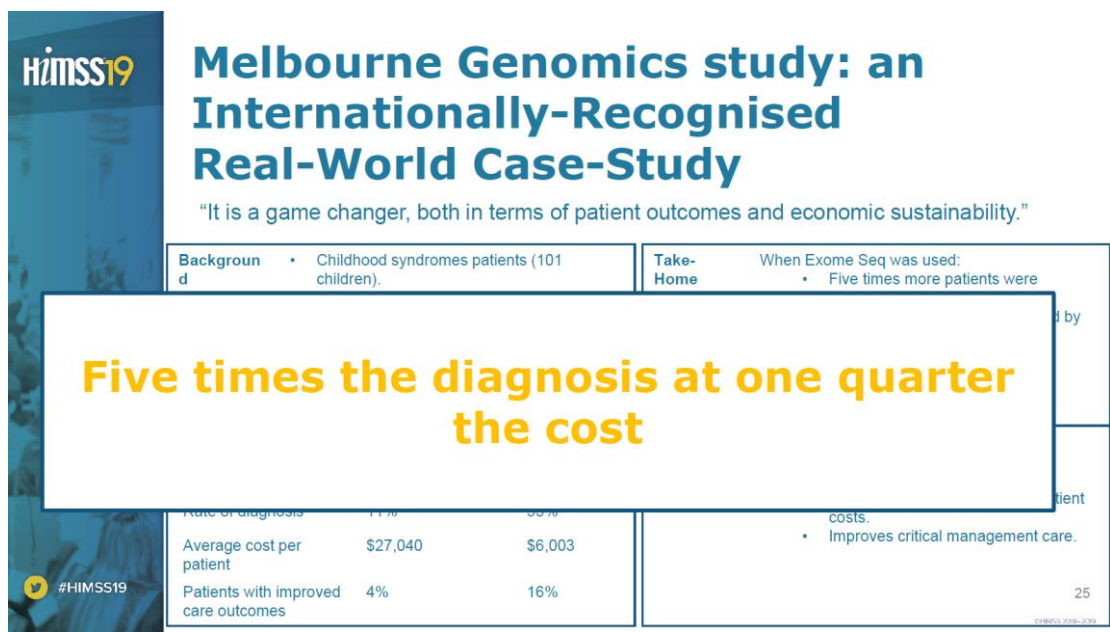
CMS のブースでは上記の施策が展示されていました。



CMS のブース

3.3 精密医療とゲノミクス

教育セッションのPrecision Medicine and Genomicsトピックは17セッションでそれほど数は多くはありませんでしたが、米国だけではなく、オーストラリアや韓国からの発表もありました。



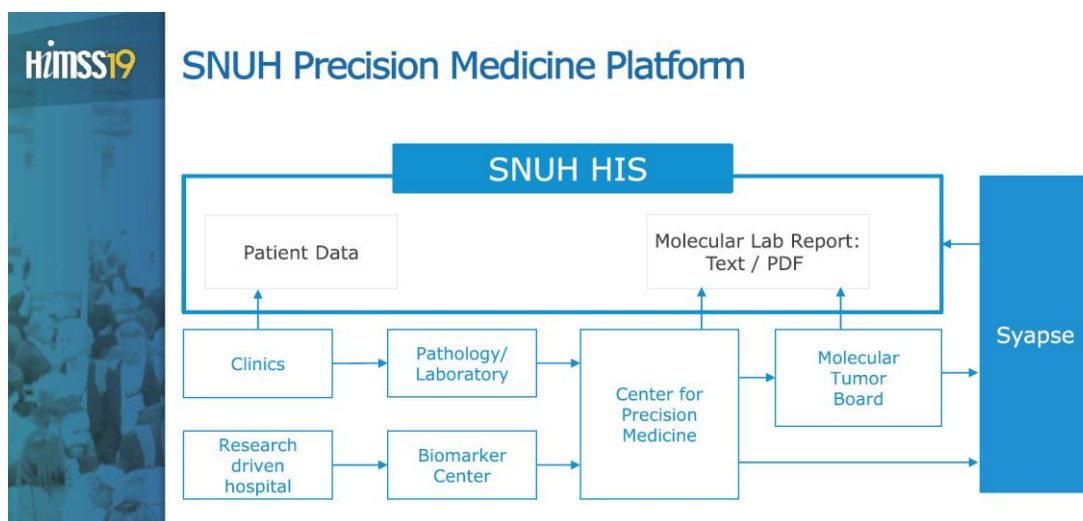
図表 3.3-1 メルボルン ゲノミクス調査

[出典] Session#100

"Technology to Enable the Clinical Genomics Revolution in Australia"

Kate Birch, Melbourne Genomics Health Alliance

メルボルンにおける調査では、ゲノム診断は患者アウトカムを向上させ、かつ経済的にも効果があることが示されたとのことで、診断は5倍精度が上がり、全体的なコストは4分の1になったとの結果を発表していました。上記スライドでは小児疾患の紹介をしています。



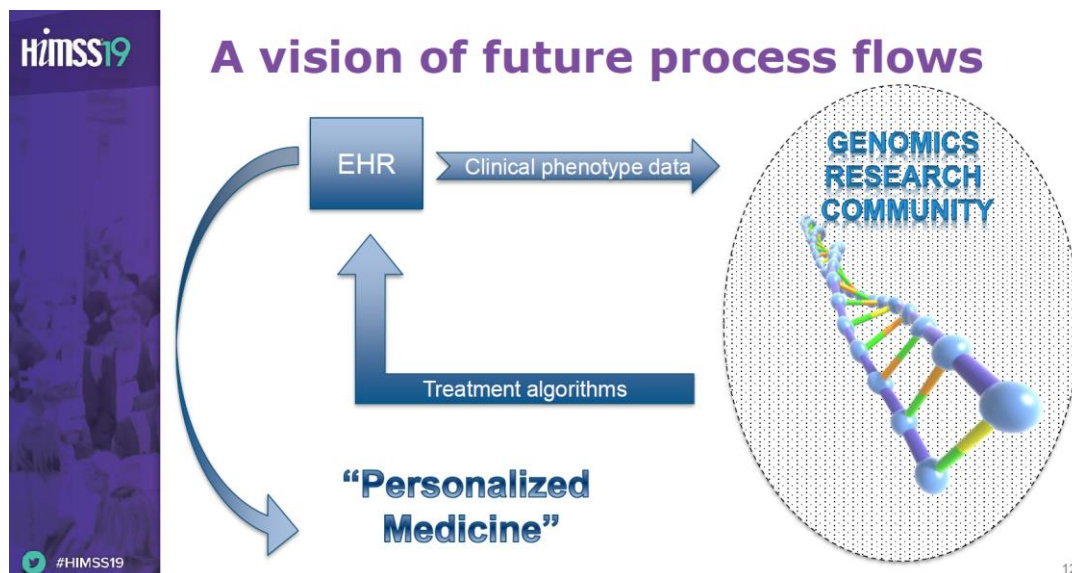
図表 3.3-2 SNUH 精密医療プラットフォーム

[出典] Session#117

“Future of Precision Medicine Platform in South Korea”

Kyung Hwan Kim, and Youngil Koh, Seoul National University Hospital

ソウル国立大学病院（SNUH）の発表は、病院情報システムとCDW(クリニカルデータウェアハウス)の構築と自施設内ラボでのNGS（次世代シーケンシング）により、精密医療のためのプラットフォームを確立しているとの報告でした。



図表 3.3-3 将来プロセスフローのビジョン

[出典] Session#134

“Implementing Genomics in EHRs: Present and Future”

Ian Green, SNOMED International

SNOMED internationalからは、ゲノミクスのTerminologyはゲノム研究の世界で通用し、EHRつまり臨床Terminologyとのインターオペラビリティが欠如していることが課題になっていることが説明されました。それを解決することによって上記の個別化医療実現のプロセスの実現が可能になります。そのために、ゲノムコミュニティのみならずヘルスケアコミュニティ全体を通じた標準化団体間の共同作業が必要です。GA4GH(Global Alliance for Genomics and Health)、HL7、SNOMEDがこの分野で協力しています。Ga4GHでは、Clinical & Phenotypic Data CaptureやGenomics Knowledge Standardsの作業部会が活動しています。HL7 Clinical Genomics (CG)では臨床や個人ゲノムデータや家族歴の翻訳情報の交換に関する標準を開発しています。SNOMEDはGenomics and Precision Medicine Clinical Reference Group(CRG)を作り、SNOMED CTとゲノムterminologyのリンクを作成する等のプロジェクトを行っています。



図表 3.3-4 Session#IL22 “What’s Next for Healthcare IT”, John Halamka, Beth Israel Deaconess Medical Center の様子

Dr. Halamka の上記セッションは展示会場の Innovation Live Pavilion のブースで行われました。精密医療は単にゲノミクスのことではなく、また健康の社会的決定要因以上のものです。精密医療は、適切なプロバイダーから適切なタイミングで適切な状態において適切なケアを行うことです。診断と治療には大きな違いがあり、患者属性、遺伝要素、その他のバイオマーカー、地域、気候などに大きく左右されます。精密医療が広く普及するためには、構造化されガバナンスが取られており、かつ可視化されたデータが重要となるでしょう、と語っていました。

3.4 Blockchain

Blockchain のブームは継続中です。米政府のバックアップもあり、社会実装も進んでいます。現実と妄想とのギャップを指摘する演題もありました。2/11 の Blockchain Symposium と 2/13 の Blockchain Forum のセッションを中心に報告します。

Blockchain がヘルスケア医療分野で得意とするところ

ユースケースごとの提供価値について下記のように説明されていました。

Delivering Healthcare Value with Blockchain Blockchainが提供する医療価値				
Use Case ユースケース	Reduce Cost コスト削減	Improve Patient Outcome 患者転帰（アウトカム）の改善	Engage Patients, Enhance Experience 患者関与、経験を深める	Enhance Healthcare Professional Experience 医療専門家の経験を深める
Provider Directory プロバイダディレクトリ	✓			
Drug Supply Chain 医薬品サプライチェーン	✓		✓	✓
Medical device Track and Trace 医療機器の追跡と追跡	✓	✓	✓	✓
Health Information Exchange 医療・健康情報交換	✓	✓	✓	
Provider Credentialing プロバイダ資格証明	✓	✓		
Anti-Fraud 不正防止	✓		✓	✓

図表 3.4-1 Blockchain が提供する医療価値

[出典] Session#BC1 Moving Toward Conscious Competence: Onboarding for Blockchain in Healthcare

David Houlding, Principal Healthcare Lead, Microsoft を翻訳

現実と誇大宣伝とのギャップ

また、Blockchain には過度な期待がかけられているとして、現実とのギャップが説明されていました。

Blockchain Reality vs Hype Blockchainの現実と誇大宣伝

		誇大宣伝	現実
1	セキュリティ	Blockchainはセキュリティ問題を解決する。	Blockchainにはセキュリティ上の長所と制限がある。効果的なセキュリティのためには制限を補う必要がある。
2	エンタープライズシステムの代替	Blockchainはエンタープライズシステムにとって代わるものである。	共存することにビジネス上価値がある場合はエンタープライズシステムと共存する。
3	パブリックvsプライベート	パブリックBlockchainだけが本当のBlockchainだ	ヘルスケアの価値に焦点を当てると、ユースケースの大多数はプライベート/コンソーシアムのBlockchainを使用している。

図表 3.4-2 Blockchain の実現と誇大広告

[出典]Session#BC1 Moving Toward Conscious Competence: Onboarding for Blockchain in Healthcare

David Houlding, Principal Healthcare Lead, Microsoft を翻訳

Blockchain のセキュリティについて

C.I.A を含めたセキュリティやプライバシーについてのセッションがありました。

(1) Blockchain の機密性 (Confidentiality) について

リスク評価が重要であり、ポイントは下記のとおりです。

- タイプ、チェーン、プロトコルについてテストと検証を行うこと
- Blockchain の「事実」の把握が必要

例：分権化について：本当に分権化されているのか？運用上の速度は十分か？

- プライベートシステム：予め招待者された参加のみなのか？システムで許可する形式なのか？
- 個人所有ソフトの持ち込み利用 (BYOS) に対する準備が必要。

(2) Blockchain の完全性 (Integrity) について

Blockchain は理論的に変更ができないため、耐タンパー性を有しています。(※)

具体的には下記特徴を備えています。

- 各ブロックに固有のハッシュという指紋をつけている。
- ノードが共有履歴について合意するプロトコルを採用している。

- 監査の証拠などによりコンプライアンス対応が可能
- セキュリティとアクティビティの情報源として監視、ログ記録、警告がある

※耐タンパー性とは、コンピュータシステムの内部構造の解析のしにくさ、見破られにくさのこと。

(3) Blockchain の可用性（Availability）について

インフラが重要であり、ポイントは下記のとおりです。

- タイプの選択を行う（パブリックは不適、プライベートか許可型か）
- チェーンを選ぶ（Ethereum、Hyperledger）
- データベースアーキテクチャについてはいくつかの決定すべき事項がある。
- 合意プロトコルの選択。
- ハッシュには多くの計算時間と時間がかかる
- ユースケースに適したタイプ、チェーン、プロトコルを選択する
- プロトコルは機能目的をサポートする必要がある
- 複数のチェーンなのか？ 異なるプロトコルなのか？
- 許可された Blockchain では、より速いトランザクションが必要になる可能性がある。
- 暗号通貨モデルは、大規模での利用や許可された Blockchain ではおそらく持続不可能。

(4) セキュリティの十分性について

以下の考慮が必要です。

- 侵害やその他のセキュリティ問題は、Blockchain を妨げたり遅らせたりする可能性がある。
- ビジネス仲間の間でのセキュリティリスクはよく知られている。
- Blockchain では、コンソーシアム全体で同様のリスクがある。
- 推奨アプローチは以下のとおり
 1. 予防的リスク評価
 2. 弱いリンクを識別し必要に応じた修正を行う
 3. セキュリティとリスク軽減の十分性を確保する
 4. 信頼を築き、成功への道を開く

(5) コンプライアンスについて

以下の考慮が必要です。

- Blockchain 上のデータ種の確認。
 - PII Personally Identifiable Information 個人を特定できる情報があるか否か
 - PHI Personally Health Information 個人の医療・健康情報があるか否か
- Blockchain ノードの場所
- どこから始めて、どのように成長していくか。

- Blockchain イニシアチブ組成の早い段階からコンプライアンスチームを巻き込んでおくこと。

(6) データの主権 (Data Sovereignty) について

以下の考慮が必要です。

- Blockchain に追加されたデータはノード間を経由して、共有台帳に繰り返しコピーされる。
- Blockchain ノードは複数の規制や複数の管轄区域のデータ保護法にまたがる可能性がある。
- Blockchain にどのような種類のデータを保存しているか？
- Blockchain ノードはどこにあるか？
- Blockchain はどのように成長するのか？データ型は？そして地理的には？

(7) 忘れられる権利 (Right to be Forgotten)

以下の考慮が必要です。

- データ保護法の中には、個人に忘れられる権利を強制するものもある。
- データの主権 (Data Sovereignty) は不変。
- 安全な大規模システムでは、可能な限り PII / PHI をブロックチェーンから外すのが望ましい。
- データ保護法への準拠を有効にする。

[出典]Session#109 Blockchain Privacy, Security, Compliance and Regulation

David Houlding CISSP CIPP Principal Healthcare Lead, Microsoft

Mitch Parker CISSP Executive Director, Information Security and Compliance, Indiana University Health

Dan Bowden VP and CISO Sentara Healthcare

ヘルスケアエコシステム (コンソーシアムの設立)

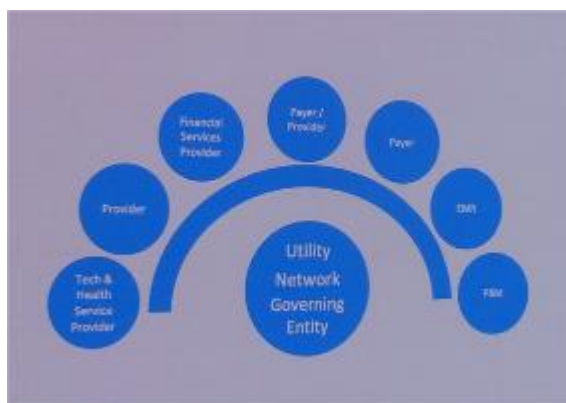
Blockchain でエコシステムを構築するために、そのエコシステムを構成する企業・団体間の連携が必要ですが、コンソーシアム設立においては相互の「信頼関係構築が難しい」という発表がありました。

[出典]Session#BC1 Moving Toward Conscious Competence: Onboarding for Blockchain in Healthcare

p14 Building the Consortium, Buy-in, Trust

David Houlding, Principal Healthcare Lead, Microsoft

IBM は、2019 年 1 月に設立した医療サービス、保険会社、ドラッグストア、金融機関、IT ベンダによるコンソーシアムの紹介をしていました。



Aetna CVS : ドラッグストア 消費者向け健康保険商品とサービス提供

Anthem : 健康保険会社 医療サービス提供

Health Care Service Corporation : 健康保険会社 医療サービス提供

PNC : 金融機関 金融サービス提供

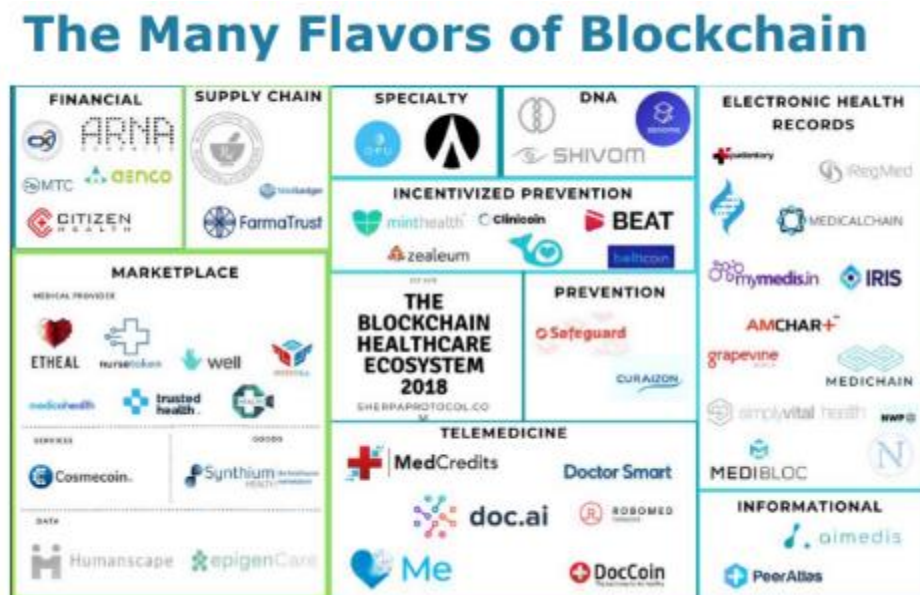
IBM : IT ベンダ 技術基盤サービスを提供

図表 3.4-3 IBM 紹介のコンソーシアム編成

[出典] IBM booth 12-Feb-2019

Building a blockchain based ecosystem for the healthcare industry

「ブロックチェーンの色々な味」と題してヘルスケアに関連するエコシステムの多様性を示したセッションもありました。



図表 3.4-4 Blockchain の色々な味

[出典] Session #92 The Evolution and Ramifications of Blockchain: What is the impact on Interoperability? Unlocking Healthcare Data p24 The Many Flavors of Blockchain

Chrissa McFarlane, Founder and CEO of Patientory, Inc.

Jim Tate, President & Founder EMR Advocate, Inc.

Wayne Singer, Vice President Darena Solutions

相互運用性

相互運用性がヘルスケア領域の Blockchain 成功の鍵とする演題がいくつかありました。

[出典] Session#BC1 Moving Toward Conscious Competence: Onboarding for Blockchain in Healthcare

p19 Integration, Interoperability

David Houlding, Principal Healthcare Lead, Microsoft

[出典] Session#BC3 A Top Down look at Blockchain - the Federal Perspective

p5 ONC -- A Focus on 21st Century Cures

Steve Posnack, Executive Director, Office of Technology, ONC

但し、相互運用性と言っても何を指すのかがバラバラなことが多く、OSI の全階層について話が混在している。きちんと整理するべきだ。という指摘もありました。セマンテック、オントロジーの標準化は IEEE で進めているとのこと。

〔出典〕 Session #BC2

I Understand Blockchain, What Else Do I Need to Know?

Brian Behlendorf Executive Director, Hyperledger

Heather Flannery Global Lead ,Consensys Health

Kevin Clauson, PharmD Associate Professor, Pharmacy Practice,Lipscomb University
College of Pharmacy

実装状況

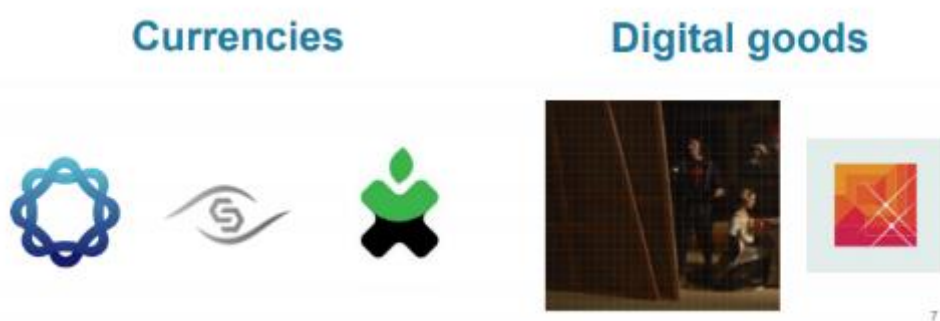
①Blockchain と Tokenとの組み合わせ

Blockchain と Token を組み合わせたサービスが登場しています

Token が持つことができる「通貨」と「デジタル商品」の性質をヘルスケアサービスに適用し、Blockchain 上で流通・売買することができる市場が商用展開されています。

What are tokens?

Tokens are digital assets created on top of a blockchain. These take **two primary forms**:

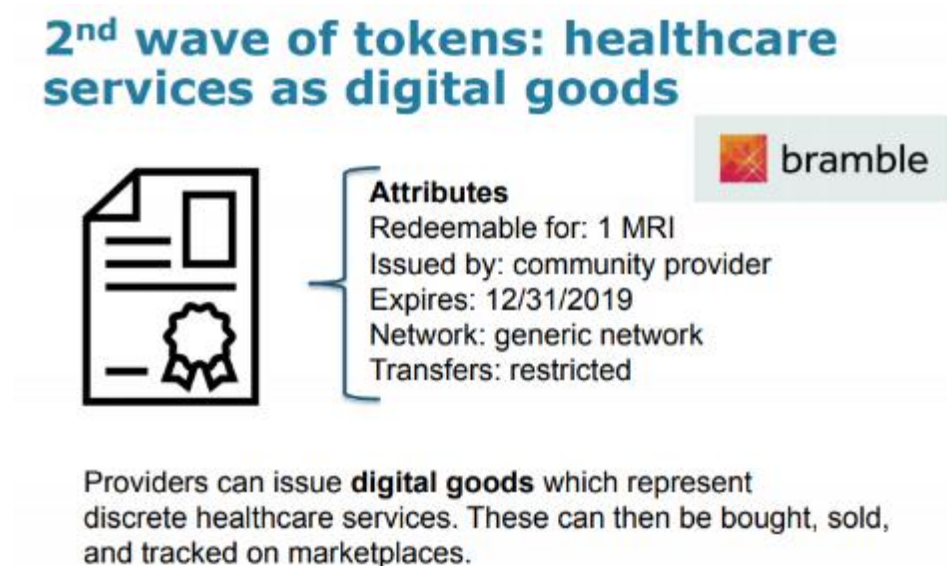


図表 3.4-4 Token とは

〔出典〕 Session # BC4 From Pilot to Process – Implementing Blockchain into the Episode and Economics of Care - Part 1、p7 What are tokens?

Robert Miller, CEO, Honeycomb Health

Bramble というヘルスケアサービス売買サービスの市場では、例えば MRI 検査サービスをデジタル商品として市場に発行することで、売買、トラッキングが可能となっています。



図表 3.4-5 Token のセカンドウェーブ

[出典] Session # BC4 From Pilot to Process – Implementing Blockchain into the Episode and Economics of Care - Part 1
p21 2nd wave of tokens: healthcare
Robert Miller, CEO, Honeycomb Health



図表 3.4-6 Bramble の Dashboard 画面

[出所]

<https://hashedhealth.com/blockchain-healthcare-solutions/bramble/bramble-dashboard/>

②医師の資格確認

医療機関が医師を採用する際、米国では州ごとに医師資格が異なっています。政府系の医療保険（メディケア、メディケイド）において、その医師がどのような資格を持っているのか？現在有効なのかなどを確認するのは、採用する医療機関の責務ですが、この手間が費用に大変なようです。また、医療費を支払う保険者は医療機関ごとの医師資格情報のデータ維持費に年間22億ドルも費やしているとのこと。

Challenges Facing Healthcare Credentialing

- Mandated, perpetual process confirming the clinical competency of healthcare professionals
- Must be performed by any organization delivering or paying for patient care
- Applies to virtually all 13.6 million care delivery personnel
- Physician / Hospital / Payer Use Case
 - 4 - 6+ month process
 - Costs \$300 - \$1,500+ / episode
 - **\$7,500 daily net revenue forfeitures***
 - 200MM+ annual artifact transactions
- Payers spending **\$2.2BN** annually to maintain provider data

* Source: Merritt Hawkins 2016 Inpatient/Outpatient Revenue Survey



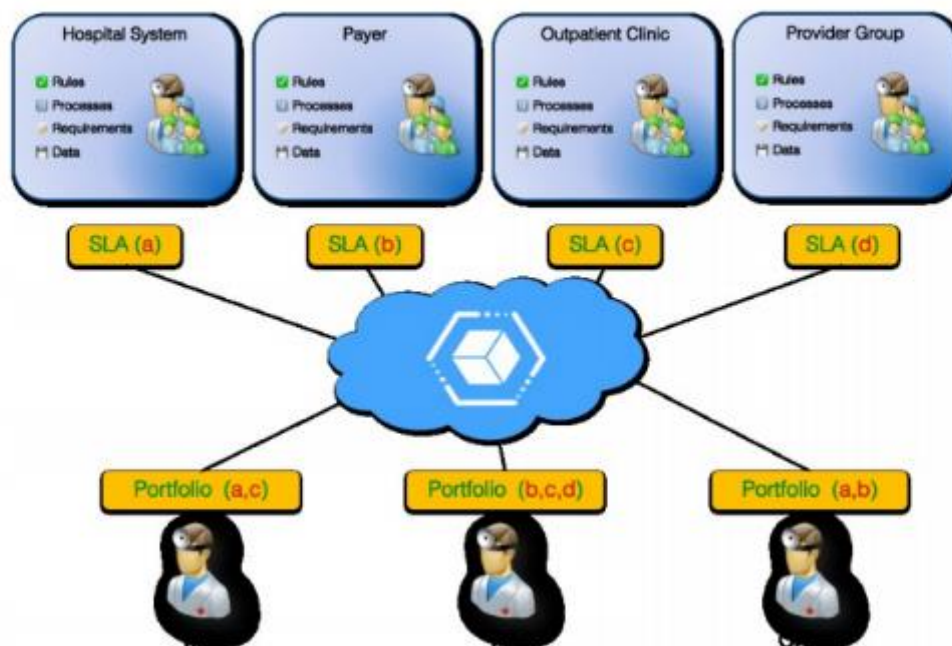
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図表 3.4-7 医師資格確認の課題

[出典] Session #280 Leveraging Blockchain to Transform Clinical Credentialing
Anthony D. Begando, CEO & Co-Founder Professional Credentials Exchange
p6 Challenges Facing Healthcare Credentialing

この手間暇・コスト問題を解決するために、散在している医師資格情報をステークホルダー間の blockchain で管理するサービスが紹介されていました。

Simplifying Complexity



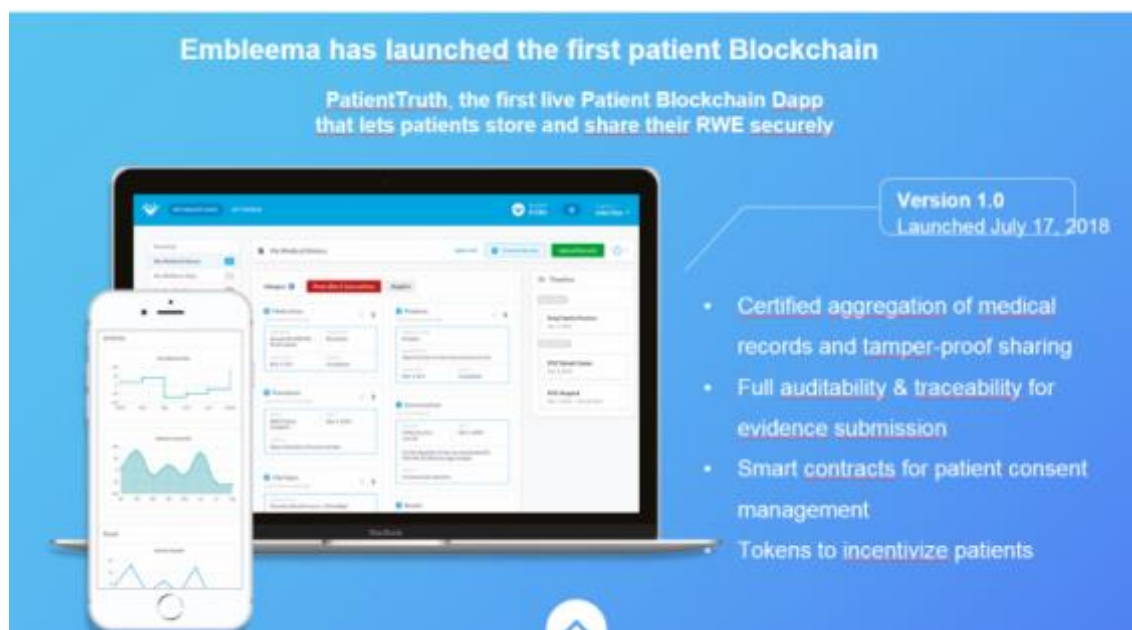
図表 3.4-8 複雑さを単純化する

[出典]Session #280 Leveraging Blockchain to Transform Clinical Credentialing
Anthony D. Begando, CEO & Co-Founder Professional Credentials Exchange
, p25 simplifying complexity

③ 治験データ実世界の証拠（Real World Evidence）の収集

治験患者のデータを収集・管理するサービスに Blockchain が使われています。Embleema 社の PatientTruth は、患者自身が蓄積し RWE を安全に共有できる患者向け blockchain アプリです。以下を特長としています。

- ・認定集約された医療記録をタンパープルーフで共有
- ・証拠提出のための完全な監査可能性とトレーサビリティ
- ・Smart contract で患者の同意管理
- ・トークンで患者にインセンティブを提供



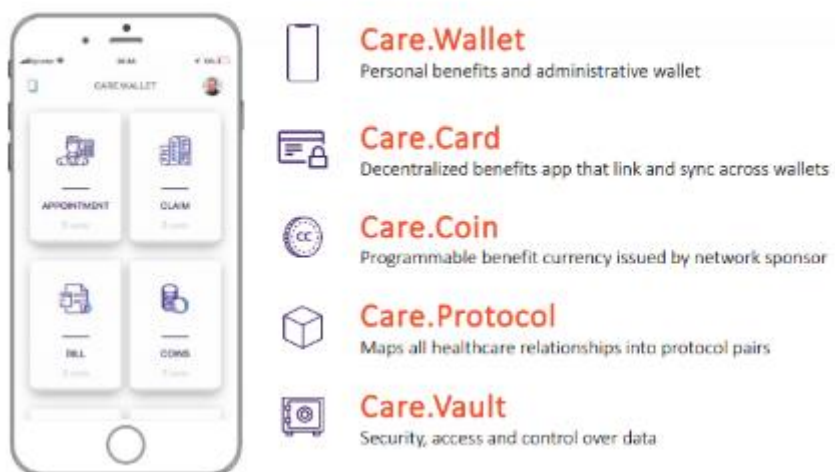
図表 3.4-9 PatientTruth の概要

[出典]Session #BC5 From Pilot to Process – Implementing Blockchain into the Episode and Economics of Care - Part 2, p18
Robert Chu, Founder, Embleema

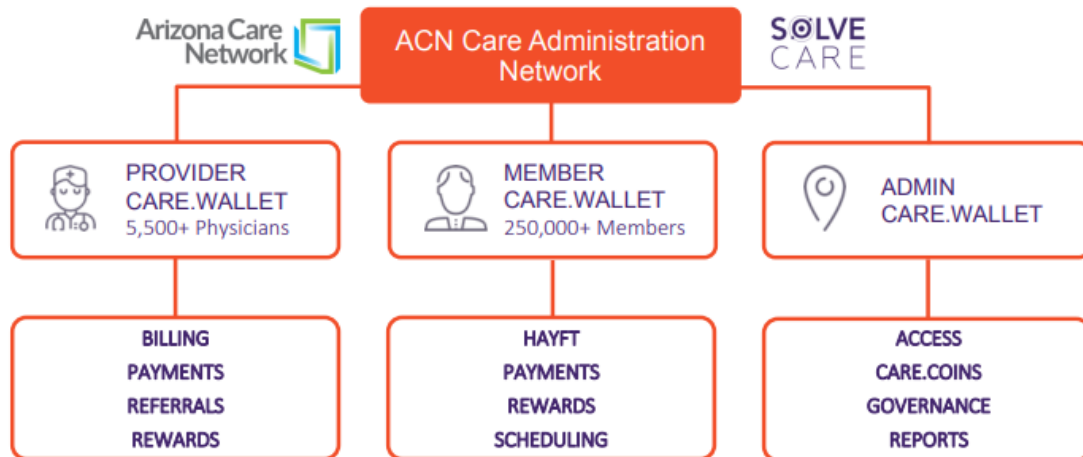
④Care.Wallet- personalized healthcare

Care Wallet は、医療費の支払、健康管理、処方管理ができるサービスです。5500 人以上の医療者と 25 万人以上の会員で使用されているとのこと。

Care.Wallet- personalized healthcare



Large scale deployment



図表 3.4-10 Care Wallet の概要

[出典]Session #BC5 From Pilot to Process – Implementing Blockchain into the Episode and Economics of Care - Part 2、p20,21

Pradeep Goel, Chief Executive Officer, Solve.Care Foundation

米政府のバックアップ

「患者に診療情報を返す」ことを米国政府が旗振りをしていることは前述の通りです。米国政府は、診療情報を流通させる仕組みとしての Blockchain の社会実装に多大な支援を行っています。

ONC(Office of the National Coordinator for Health;米国保健福祉省国家医療 IT 調整室)の Executive Director である Steve Posnack 氏は、Blockchain Symposium で ONC の取り組みを紹介していました。



図表 3.4-11 Steve Posnack 氏

[出典] Session # BC3

A Top Down look at Blockchain - the Federal Perspective Steve Posnack, Executive Director, Office of Technology, ONC

「ONC は 21st Century Cures Act(21 世紀の治療法)に従って、全国的な相互運用性を高め、臨床医の負担を軽減する活動に力を入れています。」として相互運用性向上とプロバイダーの負担軽減に取り組んでいることを説明しました。

相互運用性への取り組み

- 標準化されたアプリケーションプログラミングインターフェイス（API）のプロモーション
- 情報ブロックとの戦い
- 異種の医療健康情報ネットワークのデータ交換を加速
- 健康情報への患者アクセスを促進する
- 保健 IT 諮問委員会（HITAC）の管理

プロバイダーへの負担への取り組み

- 臨床医の管理上および報告上の負担を軽減する戦略を CMS と共同で策定

連邦政府はヘルスケア分野以外でも Blockchain に関して調査・検証を行っている状況を紹介しました。

- ・財務管理
- ・調達
- ・IT 資産とサプライチェーン管理
- ・各種のスマートコントラクト
- ・特許、商標、著作権、ロイヤルティ
- ・ビザ、パスポート、SSN、出生証明書などの政府発行の資格情報
- ・連邦要員労働力データ
- ・資金の適正配分

Blockchain の今後

ONC の Steve Posnack 氏は 2 年少しくらいで、Blockchain は下記のように利用されているだろうと述べていました。

- ・ID 管理（ID、認証、許可）、および信任状の確認
- ・アクセス制御と同意
- ・監査
- ・ワークフローの改善
 - IRB 治験の承認
 - 患者のデータ共有
 - 調剤や薬のモニタリングなどのサプライチェーン
 - モノのインターネットへの追跡とアクセス
 - 病院での滞在確認
 - メディケイドの資格確認
 - 請求プロセスと支払いの自動化
- ・Blockchain を外れた記録の場所特定と参照

また、Blockchain symposium の Closing Keynote では、Hashed Health 社の John Bass 氏と Endjinn 社の Russell Hanson が以下のような発言をしていました。

- ・3 年くらいの間に**データ市場**が形成されるだろう（Rusal）
- ・医療記録は**分散管理**されているだろう。**暗号とトークン**が活用された Blockchain で参加者に価値が与えられるものになっているだろう。（John）

3.5 Cybersecurity

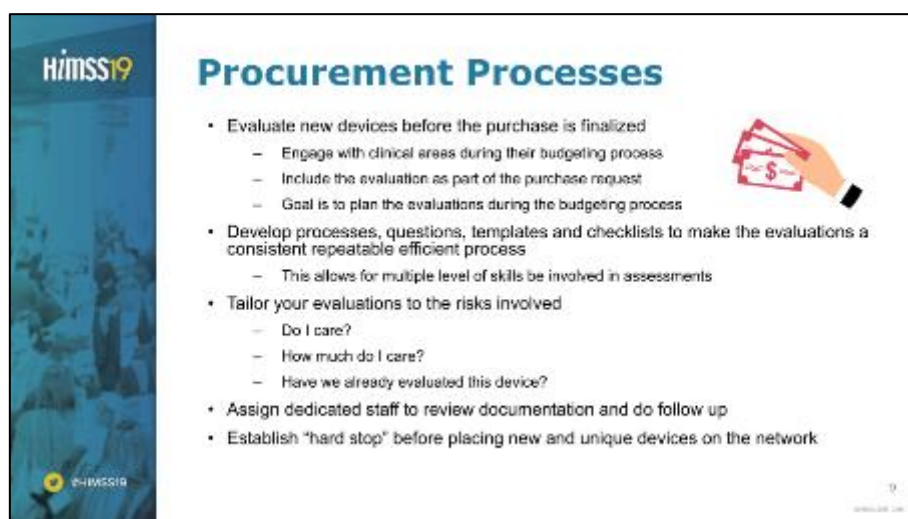
Cybersecurity Forum

今年の Cybersecurity Forum（医療機関の CISO (Chief Information Security Officer) などを対象とした一日有料セッション）は「リスクアセスメントの実施」にフォーカスした内容で、昨年の「サイバーセキュリティ体制の構築」から実行段階へ一歩進んだものになっていました。会場は 400 名近くの参加者で埋まっており、昨年同様、米国医療機関のサイバーセキュリティに対する意識の高さが伺えました。

Mayo Clinic は、「Harnessing Medical Device Risk」と題し、「医療機器の持つリスクをコントロールするためには、医療機器を購入する前の段階でリスクアセスメント（評価や試験）を実施すること、契約にはセキュリティが維持され続けるための条件を盛り込むことが必要である。」と述べ、セキュリティ確保のための調達プロセスを確立していなければならないと強調しました。

Yuma District Hospital は、過去に購入した古い医療機器、いわゆる Legacy について、「ベンダーによるテストやメンテナンスが行われないまま、医療機関は使い続けている。巨大なリスクである。」として、その危険性を示し、積極的にレガシーのリスクアセスメントに取り組むべきと述べました。

会場からは、「自分の施設では活動を進めるにはどうすればよいか？」といったリアルな質問が投げられ、活発な質疑応答が行われていました。大手医療機関のサイバーセキュリティ体制構築は着実に進む一方で、まったく進んでいない医療機関はまだ多く、米国全体で見るといまは二極化の状態にあるように見受けられました。



図表 3.5-1 Medical device procurement process

[出典] Session CYB3

“Harnessing Medical Device Risk”

Kevin McDonald, Director of Clinical Information Security, Mayo Clinic



図表 3.5-2 Legacy medical device

[出典] Session CYB2

“Don’t Let Your IT and OT Systems Become Antiques”

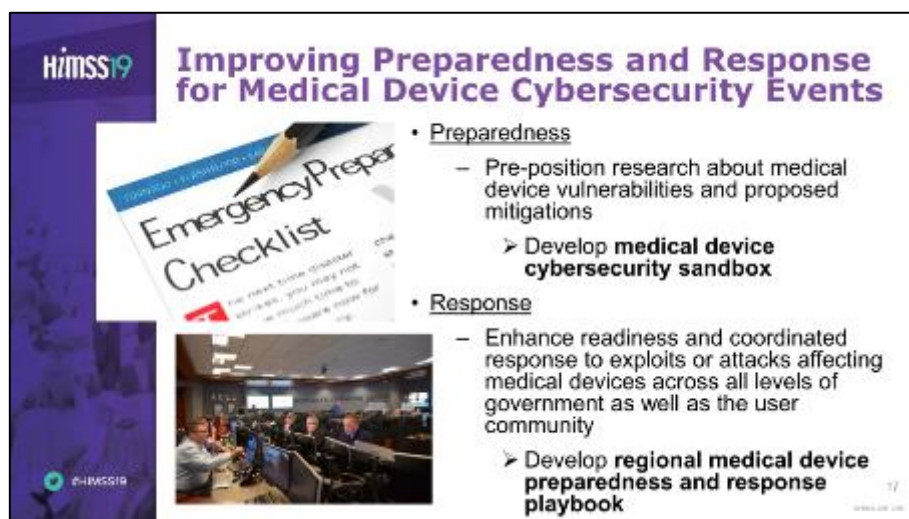
Jason Hawley, Director of Information Services & Security, Yuma District Hospital

規制当局／関連組織

FDA は、サイバーセキュリティインシデントをテーマとして講演を行いました。「Johnson & Johnson 社のインスリンポンプのように、協調的な脆弱性の公開は事態を早急に収束する。一方、St Jude/Abbott 社のペースメーカーと ICD のように、非協調的な脆弱性の公開は、リスク評価・低減策の遅延につながる」と具体的な社名を挙げ、脆弱性情報の公開に関して製造業者が積極的ではない現状を問題視しているという考えを示しました。また Medical Device Safety Action Plan (April 2018) に従い、Premarket Cybersecurity Draft Guidance の発行、実環境での機器に対する攻撃をシミュレート可能な Medical Device Cybersecurity Sandbox の開発着手、医療機関向けにサイバーセキュリティインシデントへの具体的な対策を説明した Medical Device Preparedness and response playbook の発行を行ったと発表しました。一昨年および昨年の発表と比べると、サイバーセキュリティへの対応を急激に加速させたという印象を受けました。

NIST（アメリカ国立標準技術研究所）は、現在米国内外でプライバシーに関する要求が多様化、複雑化しており、これに対応するためプライバシーに特化したフレームワークの開発を進めていると発表しました。

ECRI 研究所は、2019 年の医療技術ハザード Top10 の第 1 位は「Hackers Can Exploit Remote Access to Systems, Disrupting Healthcare Operations」とし、2018 年の第 1 位「Ransomware and Other Cybersecurity Threats to Healthcare Delivery Can Endanger Patients」に続き、2 年連続でサイバーセキュリティが医療安全における最重要課題であると発表しました。



図表 3.5-3 FDA Action for medical device cybersecurity

[出典] Session 257

“Medical Device Cybersecurity Incident Preparedness/Response”

Suzanne B. Schwartz, Food and Drug Administration (FDA)

AI

ヘルスケアへの AI や ML の活用をテーマとした発表が多くなされるなか、攻撃者もまた AI を活用するという HIMSS, Director of Privacy and Security を務める Kim 氏の発表が注目されていました。HIMSS による調査「2018 HIMSS Cybersecurity Survey」によると、この一年間で医療機関の 75% がセキュリティインシデントを経験し、その 3 割以上がフィッシングによるものであること。Kim 氏は、「昨今フィッシング、例えばターゲット固有の情報からターゲットを引き付けるようなメッセージを自動的に生成するために AI 技術が用いられている。」と、AI は脅威にもなり得ることを示すと同時に、フィッシング技術が進歩を続ける一方で、半数近くの医療機関がフィッシング対策に取り組んでいない現状に警鐘を鳴らしました。

Cybersecurity Command Center



図表 3.5-4 Cybersecurity Command Center Map

Cybersecurity Command Center は、大規模な専用会場を確保し、80 社による展示と 2 つの Theater での企業によるプレゼンテーション、また Educational Challenge と題して、8 社による参加型の教育セッションがおこなわれました。Command Center が展示会場の最も端にあることもあってか、3 日間を通して、Theater には人が集まっているものの、全体的に訪問者の数は昨年比べて少ないようでした。



Cybersecurity Command Center ブース



Theater での企業によるプレゼンテーション

3.6 Registry

昨年度も数例のセッションがあった Registry について、今年は臨床現場での活用に着目した発表が実施されていました。

Children's National Medical Center による Registry の実装

Children's National Medical Center では小児の喘息、心筋症、糖尿病、炎症性腸疾患、てんかん、鎌状赤血球症を対象に各々集積すべきデータ項目を策定し Population Health Registry として実装しており、これを構成するエントリーシステムとして、会計／支払、Cerner 社／eClinical Works／Greenway の EHR（電子カルテ）、予防接種 Registry、学校教育、Primary-source Verification（データ発生源監査）を連携させることで実現したそうです。各疾患の収集情報項目は以下の図表 3.6-1 の通りです。

Population Health Registries		
Asthma	Cardiomyopathy	Diabetes
<ul style="list-style-type: none"> Action Plan Complete Medication Management Lung Function Testing Asthma Control Test Influenza Vaccination Tobacco Screening & Cessation Tobacco Exposure Screening Outpatient Visit ED Visit Hospital Visit 	<ul style="list-style-type: none"> Echocardiogram Outpatient Vital Signs Outpatient EKG Routine Holter Monitor Routine Labs Blood Pressure Control Blood Pressure $\geq 130/90$ mm Hg Body Mass Index Outpatient Visit ED Visit Hospital Visit 	<ul style="list-style-type: none"> HbA1c Screening HbA1c $< 7.5\%$ HbA1c $< 9.0\%$ HbA1c $\geq 10.0\%$ Lipid Panel LDL < 100 mg/dL LDL ≥ 130 mg/dL Microalbumin Screening Thyroid Function Screening Celiac Screening Blood Pressure Measurement Blood Pressure $\geq 130/90$ mm Hg Body Mass Index Pneumonia Vaccination

Population Health Registries		
IBD	Epilepsy	Sickle Cell
<ul style="list-style-type: none"> Nutrition Assessment/Counseling Tuberculosis (TB) Testing Hepatitis B Vaccination Vaccella Vaccination Eye Exam Adolescent Depression Screening Blood Pressure Measurement Routine Labs Body Mass Index Routine Urinalysis 6 MP and Iron/Labs Methotrexate Labs Contraceptive Education Outpatient Visit High Risk Outpatient Visit Low Risk ED Visit Hospital Visit Bone Mineral Testing 	<ul style="list-style-type: none"> Brain MRI DMV Notification Dietary Prescription Electroencephalogram ED Visit Emergency Seizure Action Plan Felbamate Labs Hospital Visit Motor Vehicle Education Outpatient Visit Reproductive Education Routine Labs Surgical Referral 	<ul style="list-style-type: none"> Antibiotic Prophylaxis Blood Pressure $< 140/90$ mm Hg Chronic Transfusions - Labs Chronic Transf - Audiology Exam Chronic Transf - Fertilin Chronic Transf - Neuro Testing Chronic Transf - T2 Level Chronic Transf - Viral Testing Eye Exam Genetic Counseling: 12 Years Genetic Counseling: New Condition Hydroxyurea Treatment Hydroxyurea Treatment Education Meningococcal Vaccination Pain Assessment Pain Assessment Follow Up Pneumococcal Vaccination Proteinuria Screening RBC Phenotyping Spirometry Evaluation Stroke Prevention Well Visit

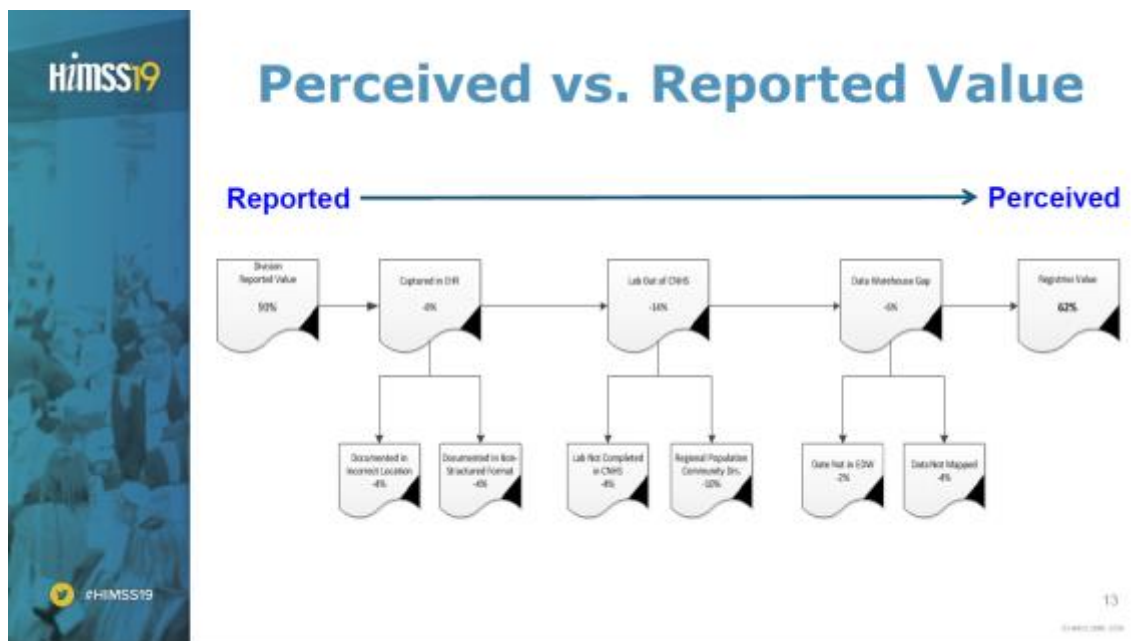
図表 3.6-1 各疾患の収集情報項目

[出典] Session 73

“Pediatric Population Outcomes Using Health Registries”

Brian Jacobs MD, VP, CMIO & CIO, Children's National Medical Center

情報の集積では、当然のこととして入力データの質を担保することが非常に重要かつチャレンジングであり、これに依存し情報入力～レジストリ登録のプロセスで、下図表 3.6-2 の通り価値が低減してしまうことが発表されていました。



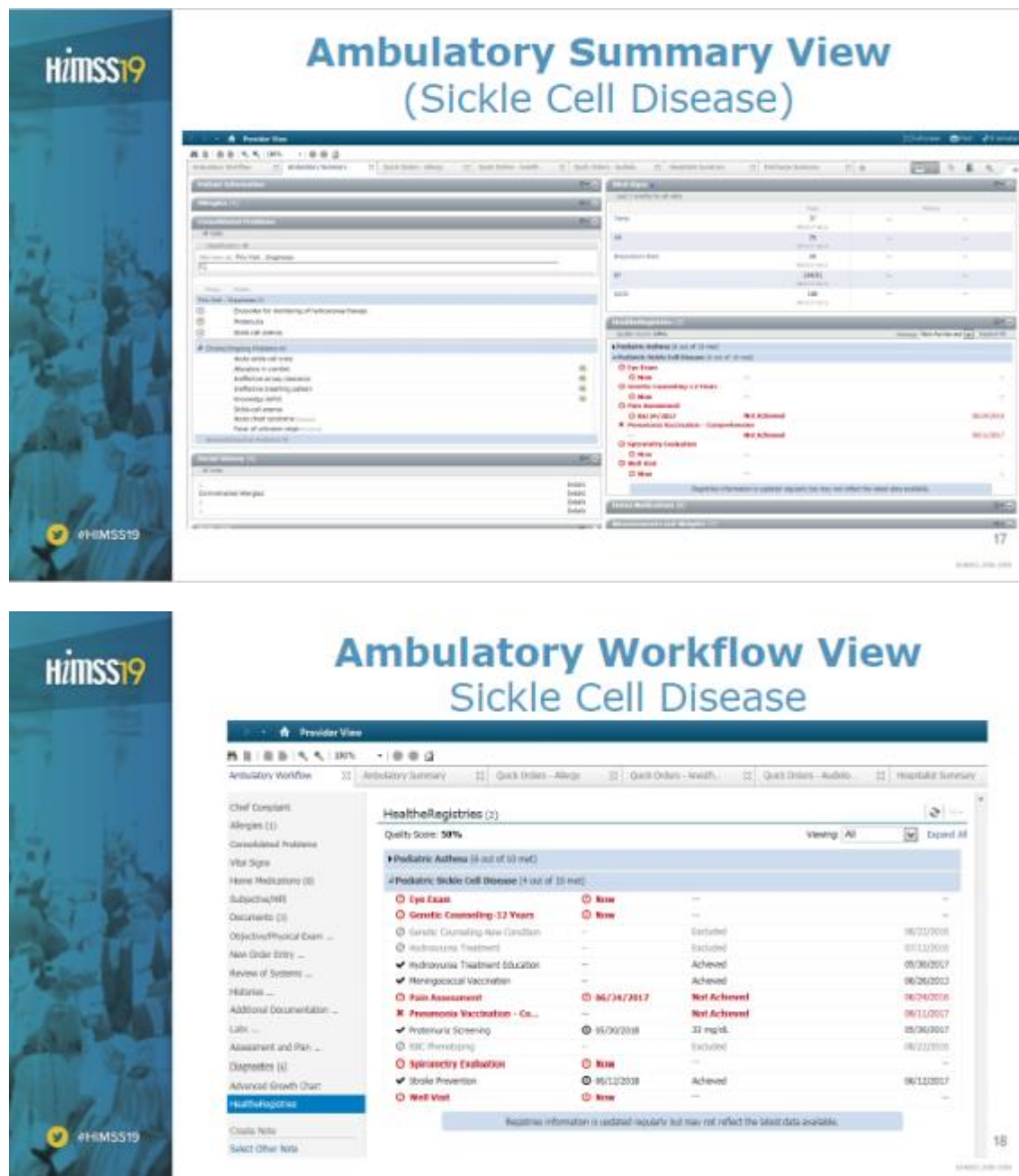
図表 3.6-2 入力～レジストリ登録の間で起こる情報価値の低減

[出典] Session 73

“Pediatric Population Outcomes Using Health Registries”

Brian Jacobs MD, VP, CMIO & CIO, Children’s National Medical Center

また、この下でレジストリとして情報を包括的に捉える機能と併せて臨床現場でのデータ活用が非常に重要であり、EHR 上で一体的に情報展開する実装例が発表されていました（下図表 3.6-3）。



図表 3.6-3 レジストリ情報の EHR 上での展開

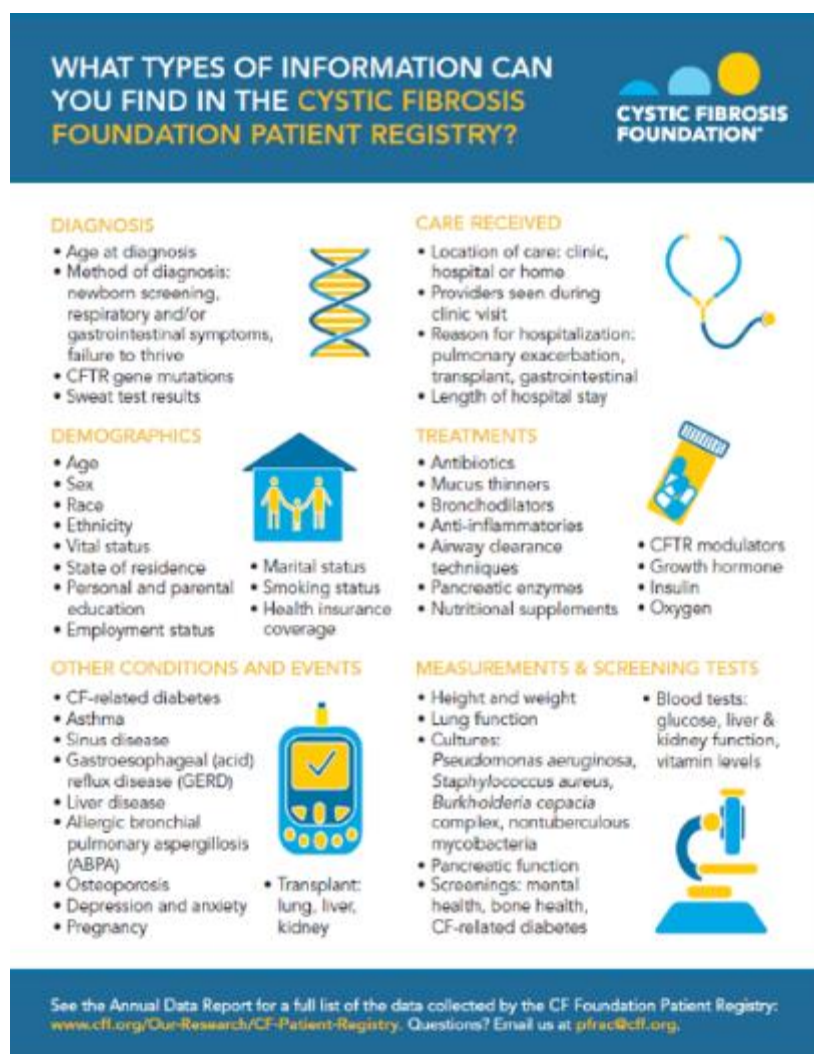
[出典] Session 73

“Pediatric Population Outcomes Using Health Registries”

Brian Jacobs MD, VP, CMIO & CIO, Children’s National Medical Center

Cystic Fibrosis Foundation によるレジストリ活用

白人に高い頻度で見られる遺伝性の難病である Cystic Fibrosis（嚢胞性線維症（CF 症））を対象とする財団、Cystic Fibrosis Foundation による患者情報の集積基盤は老舗のレジストリであり、1960 年代の紙の質問票に始まり、1994 年のフロッピーディスクメディアによる集積を契機に電子化が進み現在は Web ベースで運用されています。このレジストリでは下図表 3.6-4 の通り、患者基本情報や関連遺伝子情報、治療歴やバイタル/検査結果、合併症情報等の情報が集積されていることです。



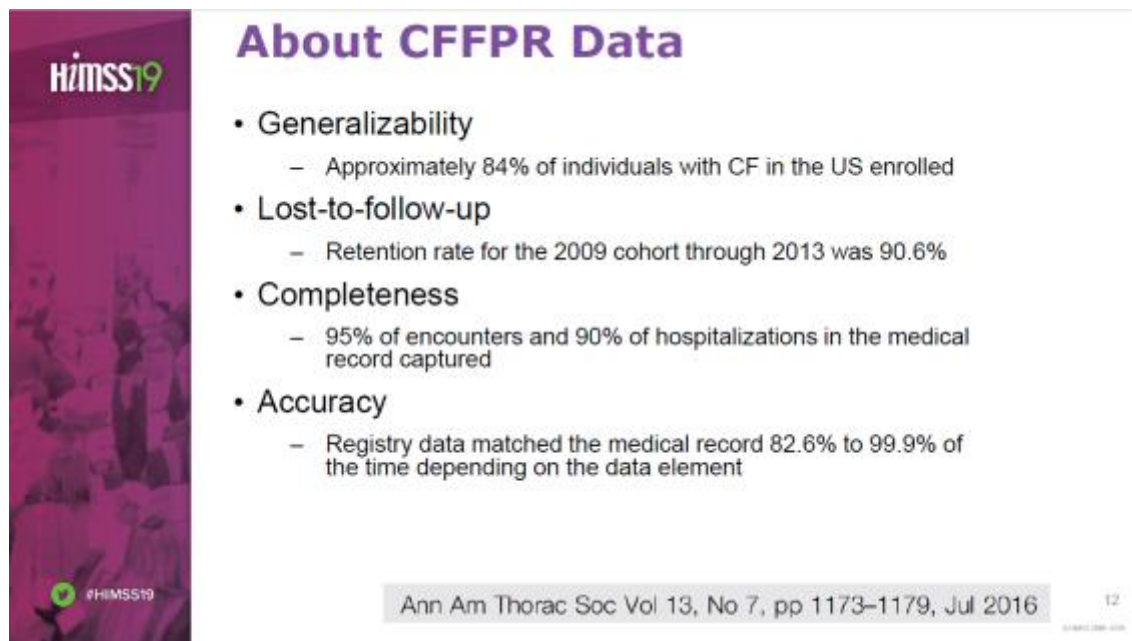
図表 3.6-4 CYSTIC FIBROSIS FOUNDATION PATIENT REGISTRY の集積情報

[出典] Session 119

“Integration of Registry Data into Clinical Care Process”

Alexander Elbert, Senior Director, Patient Registry / Shathiya Navaneeth, IT Project Manager, Cystic Fibrosis Foundation (CFF)

同時に、このレジストリでは下図表 3.6-6 の通り集積できている情報の充足性も非常に高いものとなっています。



図表 3.6-6 CYSTIC FIBROSIS FOUNDATION PATIENT REGISTRY のカバレッジ

[出典] Session 119

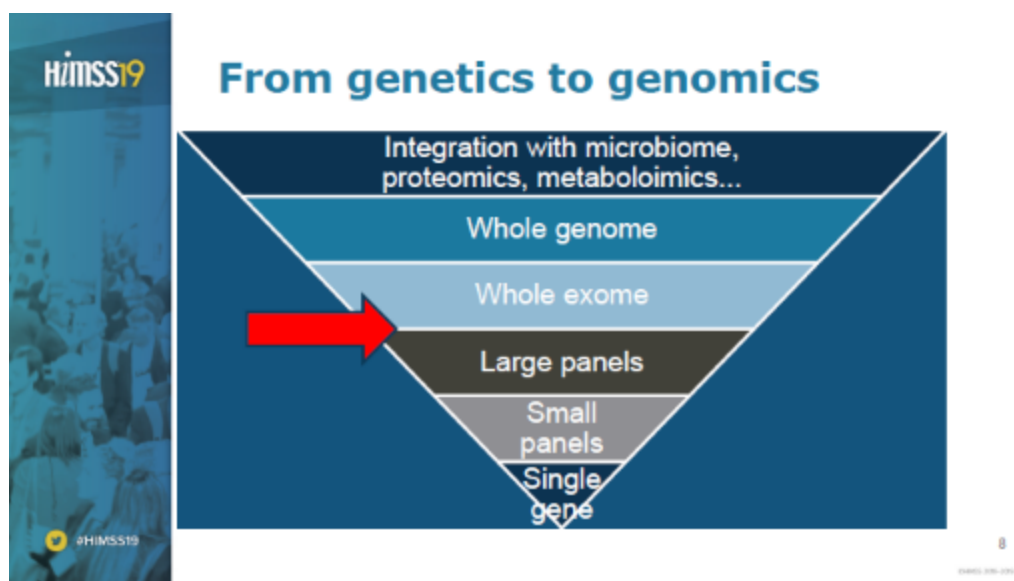
“Integration of Registry Data into Clinical Care Process”

Alexander Elbert, Senior Director, Patient Registry / Shathiya Navaneeth, IT Project Manager,
Cystic Fibrosis Foundation (CFF)

このデータは、疫学・統計の分野で活用するのみならず、情報の透明性を高める活動と相まって臨床研究や臨床の現場で使用するシステムとの連携を図っており、情報の有効な活用を実現しているとのことでした。

オーストラリア Melbourne Genomics Health Alliance による Genomics Registry 構築

clinical genomics を推進する上で whole exome/genome へと情報拡大を図る上で（図表 3.6-7）システム全体の改修が必要となった Melbourne Genomics Health Alliance では、研究ならびに臨床の相互的な側面でのゲノム情報の活用促進を重要テーマとして位置づけていたそうです。



図表 3.6-7 whole exome/genome への情報拡大

[出典] Session 100

“Technology to Enable the Clinical Genomics Revolution”

Kate Birch, Data & Technology Program Manager, Melbourne Genomics Health Alliance and CSIRO

このシステム全体の改修が必要となった背景には、オーストラリアの複雑で断片化されたヘルスケアシステムがあったとのことでした（図表 3.6-8）。



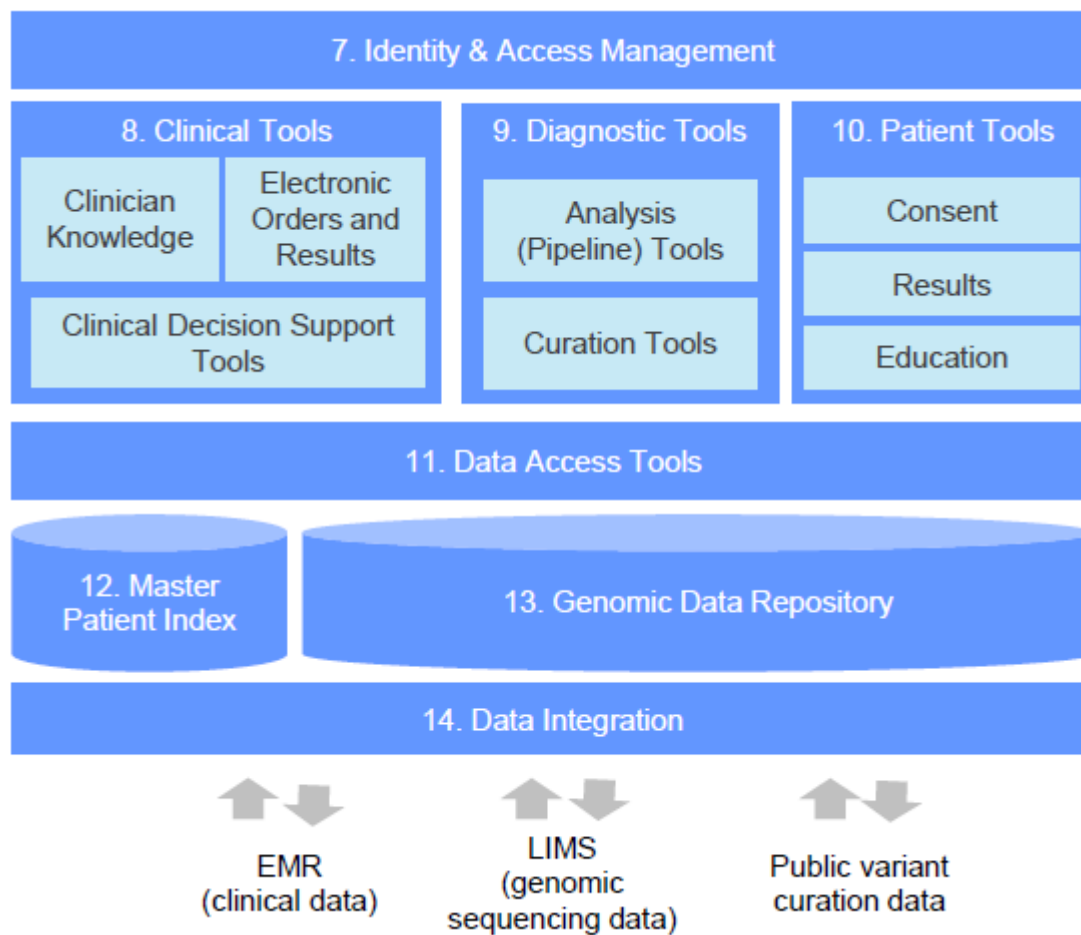
図表 3.6-8 オーストラリアのヘルスケアシステム

[出典] Session 100

“Technology to Enable the Clinical Genomics Revolution”

Kate Birch, Data & Technology Program Manager, Melbourne Genomics Health Alliance and CSIRO

こういった背景の中で、その導入効果が近年科学的に立証されてきているゲノム医療を展開すべく、これを支えるシステム再構築（図表 3.6-9）では、システムの利用者による要件のみならず、ゲノム関連技術の日進月歩の進展と変化、関連法規性の目まぐるしい変化の中で、従来型のウォーターフォールでは追従できず、図表 3.6-10 に掲載のアジャイル開発により推進したとの発表がありました（資料では Continual Improvement やプロトタイピングといったデザイン思考のカラーが強いですが、セッションでは“agile”と説明が実施されていました）。

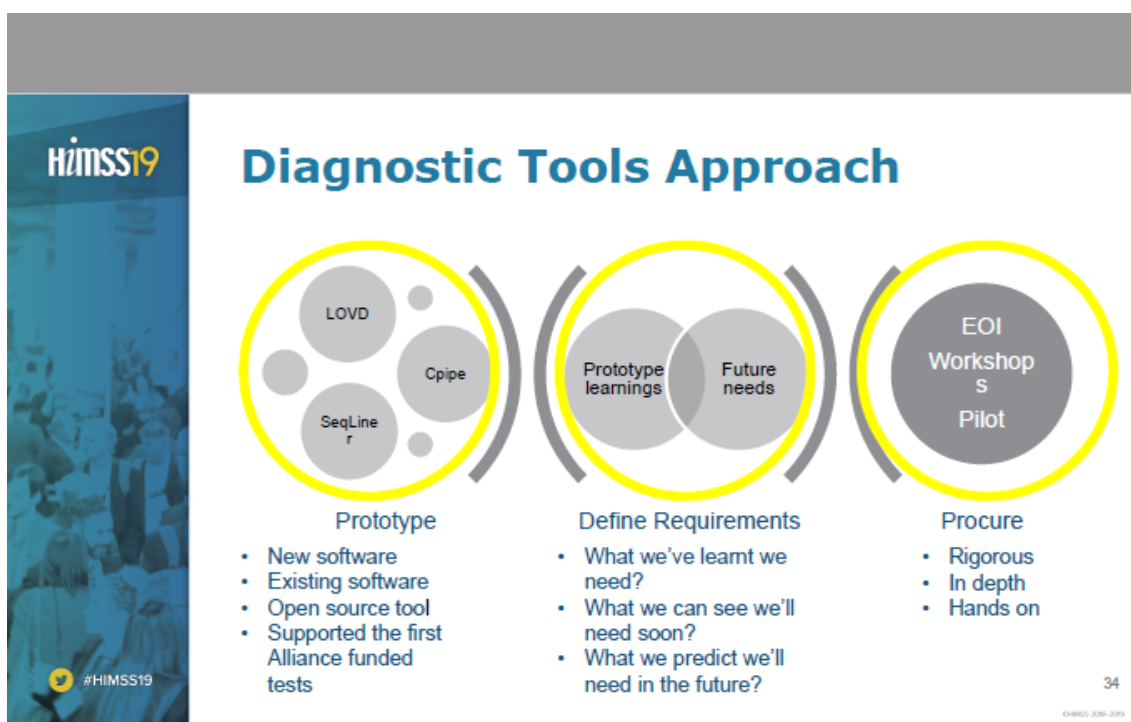
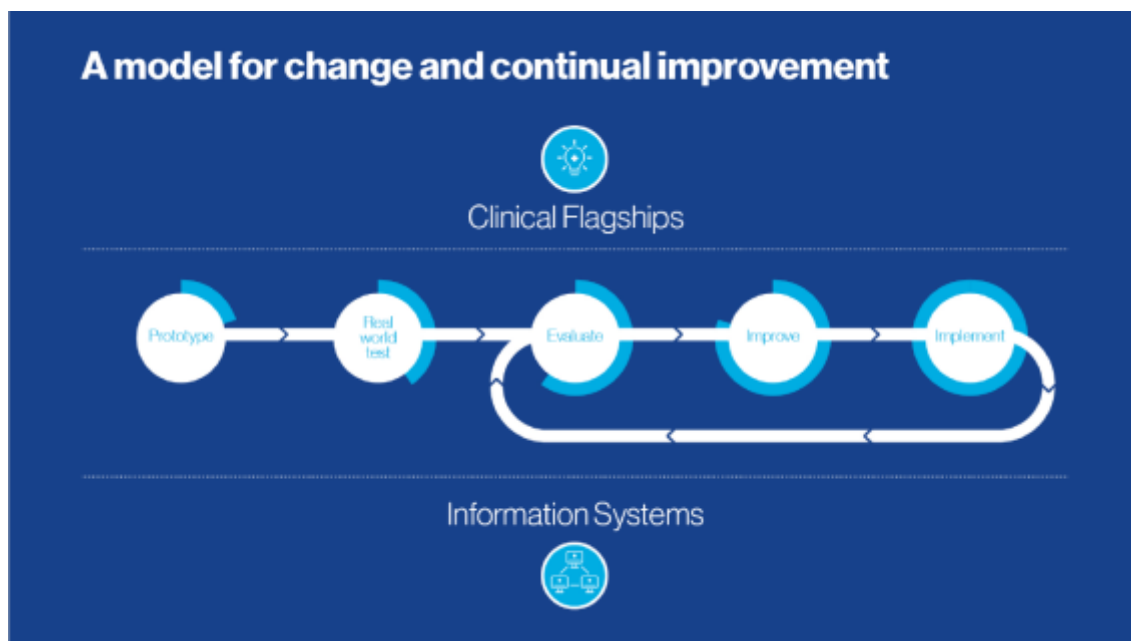


図表 3.6-9 システム概念図

[出典] Session 100

“Technology to Enable the Clinical Genomics Revolution”

Kate Birch, Data & Technology Program Manager, Melbourne Genomics Health Alliance and CSIRO



図表 3.6-10 アジャイルによる開発推進

[出典] Session 100

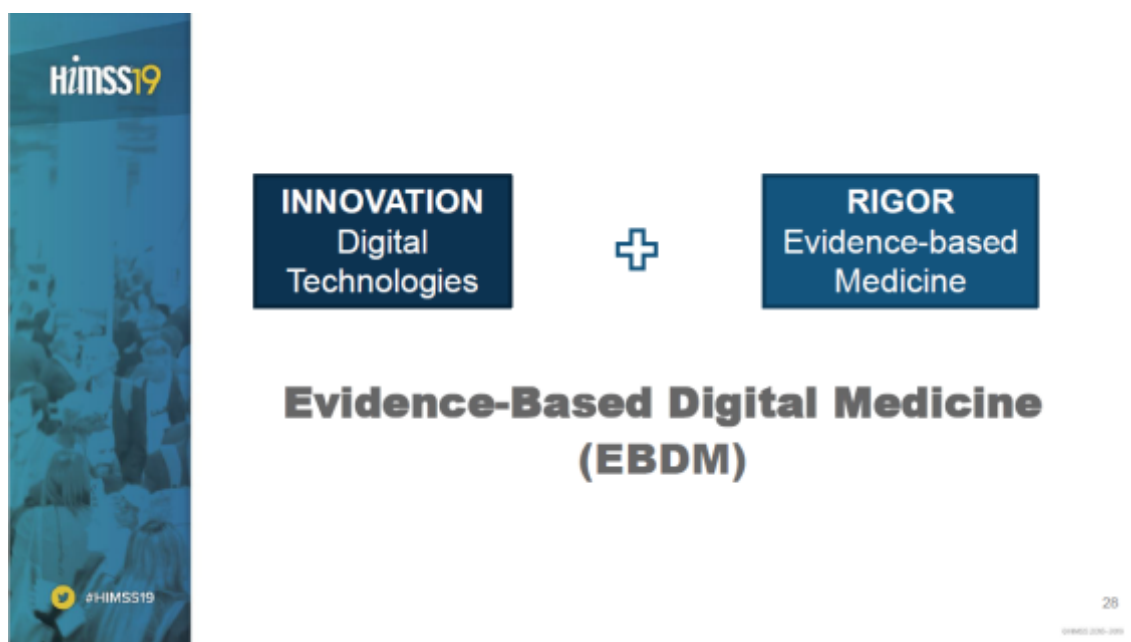
“Technology to Enable the Clinical Genomics Revolution”

Kate Birch, Data & Technology Program Manager, Melbourne Genomics Health Alliance and CSIRO

3.7 Evidence-based Digital Medicine

特に昨年来より関連するセッションや企業展示が増大傾向にある DX への対応については、今年の HIMSS でも様々なシーンで見受けることができました。

この対応の中で、多くの場合活用されるスマートデバイス向けの mHealth Apps は米国ではその数が 265,000 にも登るものの、その有効性の不十分さもあり、わずか 2% の患者しか使用していない実態が浮き彫りになってきているそうです。このため DX を促進していく上、アプリケーションの提供する効果効能についてきちんとエビデンスを積み上げていくことが重要視され始めており、従来よりある概念で厳密性のある Evidence-based Medicine を礎としつつ Digital Technology を組み合わせることでイノベーションを創出していくことが重要との発表がありました（図表 3.7-1）。



図表 3.7-1 Evidence-Based Digital Medicine

[出典] Session 145

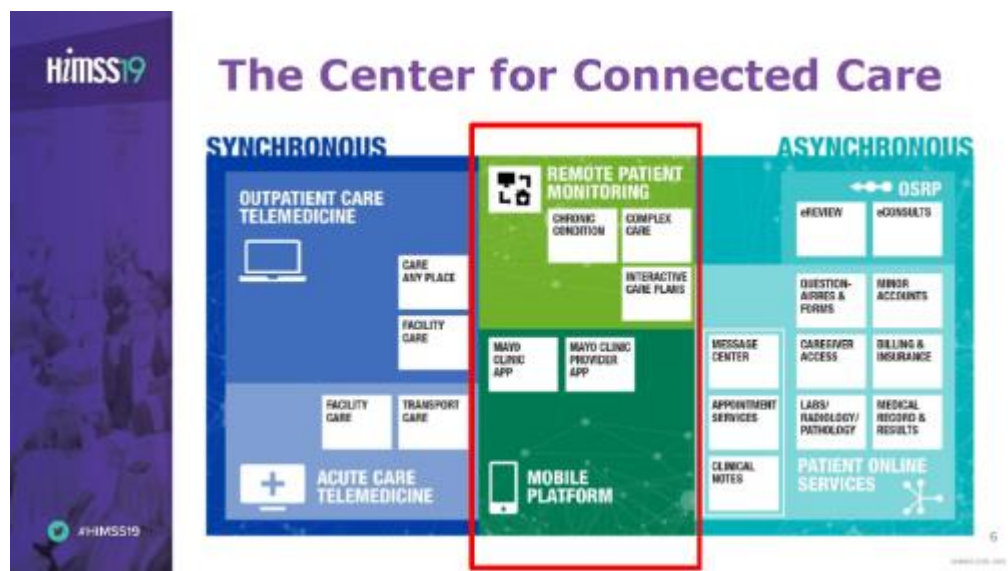
“Digital Medicine Transformation The New Skill for CIOs”

Ashish Atreja, Mount Sinai Health System and Shafiq Rab , Rush Health System

一方で Digital Prescription Platform を介して提供されるアプリケーションを使用している症例からは患者の快復において良い結果も得られ始めており、これを確かなものとしていく上で EHR と連携した mHealth Apps による Value based care および Patient Engagement の向上を推進していく必要があることはいままでもないとの発言もありました（同 Session145 より）。

この実践例として Mayo Clinic では Interactive Care Plan (ICP) を通じた Patient Journey をサポートする Mobile Application のデザイン指向による開発事例（図表 3.7-2）では、Leadership

Team、Clinical Subject Matter Experts、Core Project Team、Technology Partner、Patients/Caregivers の共創によりヒト・プロセス・テクノロジーの調和が取れたプロジェクト推進が発表されていました。



図表 3.7-2 Mayo Clinic の Connected Care Center

[出典] Session 63

“Design a Model for the Delivery of Digital Health Guidance”

Kaley Johnson, Principal Business Analyst, Mayo Clinic / Olivia Peavler, Health Systems Engineer, Mayo Clinic

この様な DX を推進するアプリケーション開発の手法に関する発表もいくつかありました。そのプロセスに関する分かり易い図を掲載します（図表 3.7-3）。



図表 3.7-3 アプリケーション開発プロセス

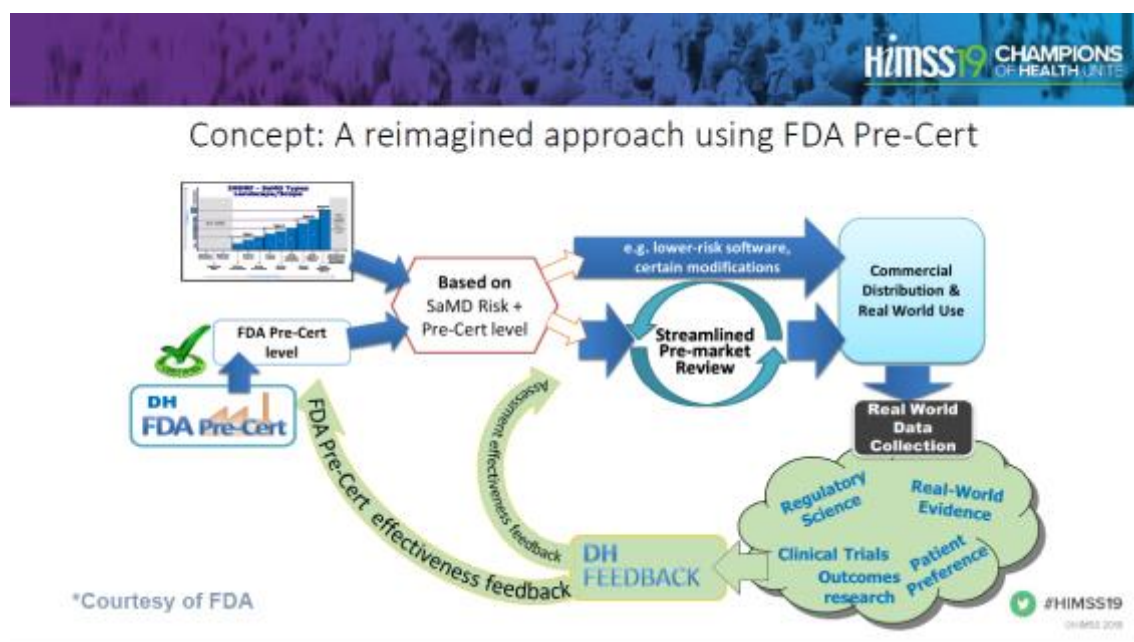
[出典] Session 29

“Elevating the Patient’s Digital Experience”

Aditya Bhasin, Chief of Web Systems; VP Software Design & Development, Stanford Health Care

上記のプロセスを Patient Centered であることを基本として推進することで、SoE（System of Engagement）の最大の目的とされる患者を始めとした関係者の関係性の再構築が進み、その先に新たな Insight を見出すことに繋がる（= Sol（System of Insight））との発表がありました。

本件と関連するレギュレーションとして、FDA Digital Health Software Pre-Certification Program に関するセッションがありましたが、米国では審査迅速化の側面が最も強いことからか聴講者も閑散としており、内容もリファレンスとしての審査対象案件はまだ走行しておらず、審査推進スキームに関し検討中である、というものでした。





図表 3.7-4 Pre-Certification Program 概観

[出典] Session 14

“FDA Digital Health Software Pre-Certification Program”

Dr. David Rhew, Chief Medical Officer, Samsung Electronics America

Nate Brown, FDA and Health Care Lawyer, Akin Gump LLP

Robert Jarrin, JD, Strategic Advisor, ResMed

Zach Rothstein, VP for Technology & Regulatory Affairs, Advanced Medical Technology Association

3.8 HIMSS Interoperability Showcase



図表3.8-1 HIMSS19 Interoperability Showcaseレイアウト図

(出典) <https://www.interoperabilityshowcase.org/orlando/2019>

HIMSS Interoperability Showcaseは、34,000平方フィート（約3,158平方メートル）の大規模な展示会場と、サテライトとしてPersonalized Health Experience会場の一部を確保し、昨年と同じ“Connections that Transform Health”のテーマの元に、上記のレイアウト図（図XX-1）にあるようにユースケースごとにブースを設けてデモンストレーションを実施し、Education Theaterではプレゼンテーションがおこなわれました。

ユースケースは下記の16ブースがあり、その中のPatient-centered Interoperabilityはサテライトに展示されました。その他にメイン会場では、VA（Veterans Affairs 退役軍人局）のSeamless Careを紹介する展示台がありました。

今回紹介されていたユースケースは下記の16つで、各ユースケースのブースでは下記に記載した4社から17社の企業や団体が参加して、実機とパネル等を使用したデモンストレーションがシナリオに沿って行わ

れ、各社のシステム間の情報連携が紹介されました。

1. Consumer Centered Care Planning 消費者中心のケア計画
参加企業：Allscripts, Elsevier, Infinit NA, PatientLink, Perspecta, VA
2. Clinical Exchange and Price Transparency 臨床情報交換と価格透明性
参加企業：Aprima, Cerner, eClinicalworks, Epic, Nextgen, Surescripts
3. Mother and Infant Mortality Prevention 母子死亡予防
参加企業：Allscripts, CDC, Cerner, Epic, GuardRFID, Motive Medical Intelligence, Obix, Philips, Smiths Medical, Utah DOH, Voalte
4. Opioid Crisis, the Person & the Population オピオイド危機、人、ポピュレーション
参加企業：AIMS, American Well, APHL, CareEvolution, CDC, Conduent, CSTE, Epic, FormFast, Michigan Department of Health and Human Services, Netsmart, National Consortium of Telehealth Resource Centers, NIC Inc., Tennessee Department of Health, Utah Department of Health, Washington State Department of Health
5. Safe Medication Practice 安全な薬物治療
参加企業：BD, Epic, Spok, STANLEY
6. School Telehealth & Social Determinants 学校遠隔医療と社会的決定要因
参加企業：Altarum, Arista, eClinicalWorks, Epic, National Consortium of Telehealth Resource Centers, ViTel Net
7. Treating Pediatric Cancer 小児がん治療
参加企業：California Cancer Registry, Cerner, Endosoft, Epic, Health Gorilla, ICU Medical, Mindray, Olympus
8. Unlocking Payer Data to Improve Care ケア改善のための保険者データのロック解除
参加企業：CMS, Da Vinci, HL7, RUSH
9. Bundled Payments & Chronic Pain Management 一括支払と慢性疼痛管理
参加企業：Allscripts, AHRQ, Cerner, Health Endeavors, Netsmart, NextGen, Orion Health, Virence Health
10. Cardiac Patient & Referral Management 心臓病患者と紹介管理
参加企業：Draeger, eClinicalworks, Epic, ICU Medical, Masimo, MedAllies, NetSmart, Qvera
11. Comprehensive Kidney Care 総合的な腎臓ケア
参加企業：Care Evolution, Dell Boomi, DevCool, Meehealth, NantHealth
12. Enabling Cancer Moonshot がん治療ムーンショット計画の実現

参加企業：Allscripts, B Braun, CDC (State Registry), Epic, Hyland, PRA Health Sciences, SPOK, STANLEY Healthcare

13. Immunization Integration & CDS 予防接種統合とCDS（臨床意思決定支援）

参加企業：Cerner, DSS, Epic, HLN, Hyland, STC, SureScripts

14. Nationwide Coordinated Care 全国的な協調ケア

参加企業：Brightree, Cerner, CommonWell Health Alliance, eClinicalWorks, ELLKAY, Greenway Health, MEDITECH, OneRecord

15. Telehealth Consult & Acute Care 遠隔医療相談と急性治療

参加企業：Baxter, Cerner, Draeger, Epic, Masimo, Philips, Rhapsody, Vidyo

16. Patient-centered Interoperability 患者中心の相互運用性

参加企業：AllianceChicago, Allscripts, CDC, PatientLink, Virence, Walgreens

（出典）<https://www.interoperabilityshowcase.org/orlando/2019/himss19-use-case-demosntrations>



Bundled Payments & Chronic Pain Management ブース



Nationwide Coordinated Care ブース



Opioid Crisis ブース



Mother & Infant Mortality Prevention ブース



Unlocking Payer Data to Improve Care
ブース



Patient-centered Interoperability
ブース（サテライト）

図表 3.8- 2 各ブースの様子

●Cardiac Patient & Referral Management ユースケースの紹介

デモされていた 16 ユースケースの中から Cardiac Patient & Referral Management（心臓病患者と紹介管理）のデモシナリオと、相互運用性に使われている規約等を紹介します。



Cardiac Patient & Referral Management

Cameron reports new-onset chest pain to his PCP and is urgently referred to cardiology. His physicians determine he needs non-emergent cardiac surgery, for which he is scheduled. When he is in the hospital for bypass surgery, his medical device data and alarms prevent decompensation. During post-op, he is discharged to home with PCP follow-up. His PCP determines that the patient requires a referral to behavioral health for depression and alcohol abuse.

図表 3.8-3 Cardiac Patient & Referral Management ブースの様子

シナリオ（和訳）：

「キャメロンは、新たに発症した胸痛について彼の PCP（かかりつけ医 Primary Care Physician)に報告したところ、緊急に心臓専門医に紹介されることになります。医師は緊急手術は必要ないと判断し、バイパス手術を計画することにしました。その後キャメロンがバイパス手術のために病院に入院した時、彼の状態をモニターをする医療機器データやアラームは心不全に陥ることを防ぎます。キャメロンは退院後は自

宅でかかりつけ医の術後フォローを受けます。かかりつけ医はキャメロンがうつ状態でアルコール依存のため、行動分析サービスへ紹介します。」

シナリオの最初のかかりつけ医から心臓病専門医への紹介の部分には、IHE 360x の Closed Loop Referrals が使われ、メッセージとしては Direct、HL7、C-CDA が用いられていました。デモでは、48 時間以内の受け入れを最初に紹介依頼した医師からは受け入れが断られ、次に紹介した医師からは受け入れられ、当日の受診予約がなされて患者は受診しました。入院して手術した際のモニタリングや麻酔データは IHE PCD を用いて、Epic の電子カルテと連携するデモを実施していました。また、術後のインフュージョンポンプのデータは IHE PCD を用いて電子カルテと連携しています。病院を退院後は C-CDA のサマリをかかりつけ医が確認します。術後フォローでかかりつけ医がキャメロンを診た際に、以前発症していたうつの再発とアルコール依存があったため、IHE 360x Closed Loop Referrals によって以前かかっていた精神科医に紹介します。その際患者がチェックした PHQ9 フォーム（Patient Health Questionnaire ところとからだの質問票）を添付します。その後精神科医からの C-CDA の中間レポートがかかりつけ医に送られますが、治療は継続しているため referral loop はクローズしません。

● Education Theater では下記の 20 セッションが開催されました。



図表 3.8-4 HIMSS19 Education Theater のセッション風景

2月12日

- ✓ Artificial Intelligence – A Solution for Interoperability?
- ✓ Unleashing Healthcare Data
- ✓ Enabling Price Transparency with Actionable Intelligence at the Point-of-Care
- ✓ Driving patient experience in the multi-cloud era
- ✓ Interoperability Moonshot: Project Gemini
- ✓ Sharing Clinical Knowledge as Interoperable SMART on FHIR Applications
- ✓ Interoperability Town Hall: Have we Kept the Patient Focus?

2月13日

- ✓ Making True Nationwide Interoperability A Reality
- ✓ Calling all Innovators – Optimize Integration

- ✓ Improving Medication Practice and Patient Safety Through Artificial Intelligence
- ✓ Current VA/VHIE approach to health record exchange integration and availability
- ✓ Sheridan Memorial & Parkview Health - Infusion Pump Interoperability
- ✓ Reducing Burden for Providers and Payers
- ✓ Interoperability Public Policy Roundtable
- ✓ Interoperability Town Hall: Are We Making Progress?

2月14日

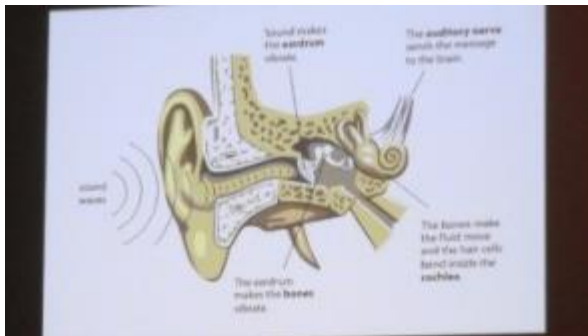
- ✓ The Latest in VA Connected Care
- ✓ Maximizing EHRs for Public Health Reporting and Bidirectional eReferrals
- ✓ Interoperability in Europe: From Shared Vision to Common Action
- ✓ Women in Interoperability
- ✓ Required Infrastructure for the Research Moonshot

3.9 Closing Keynote

最終日の Closing Keynote は Not Impossible Lab.の Mick Ebeling 氏。
「この会場のマイク、プロジェクター、ビデオなど、今は普通に思えることだって、昔は「そんなことできるわけがない」と言われていたことばかりだ。だとすると、今「できない」と言われていることだって「できないことはない」んじゃないか？」

テロで両腕を失った少年「ダニエル」。生きていても家族の役に立てない、苦勞をかけることしかできない。死んだほうがましだ。と絶望のダニエル。

彼のために人口の腕を開発。ダニエルは、ものをつかんで投げることができるまでになった。似たような境遇の多くの人たちを救っている。一式たった 100 ドルで。
(規制当局の FDA とは闘いの日々ようです。)



聴覚障害者への音楽。音は耳で聞くものではなく、脳で聞くものと理解し、聴覚障害の人たちのために体への「振動」で音楽を提供するプロジェクトを実現。彼らに音楽という世界を提供している。

パーキンソン病で手足が震え、ピアノが弾けなくなってしまったジャズピアニスト「ジョー」。「振動」の応用で、の手と足に振動を与えることで昔のようにピアノが弾けるようになった。「自分の人生を取り戻すことができた。」とジョー。





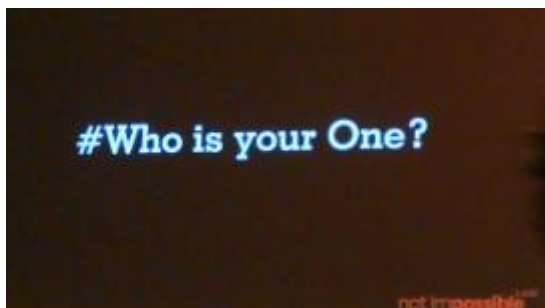
自分にとって大事なひとりを見つけよう。
そしてその人が困っていることを解決してあげよう。



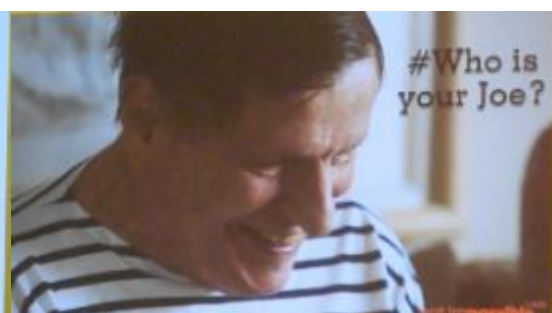
まず一人を助けよう。そうすればたくさんの人を助けられる。



コミットしてから考えるんだ。



あなたの大切な一人は誰ですか？



あなたにとっての「ダニエル」や「ジョー」は誰ですか？

スタンディングオベーションで終了。

意志を持って世界を変えていく人たち、彼らを生み出す米国のパワーを実感しました。

4. 教育セッション一覧

HIMSS19 の公式サイトから取得したスケジュールデータを元に作成した教育セッション一覧を掲載します。Event type が“Education”のセッションは 571 件であり、トピック分類付きのセッションは 499 件で、HIMSS18 と比較すると全体のセッション件数は増加しています。

表 1 に HIMSS19 と HIMSS18 のトピック分類とセッション件数を示します。トピック分類名は HIMSS18 から変更されているもの、EHRs のように分類自体がなくなっているもの、新たに増えているトピックスが複数あり再編されています。“Data Science/Analytics/Clinical & Business Intelligence”および“Improving Quality Outcomes Through Health Information and Technology” のトピックスのセッション件数が増加しています。

表 2 にセッション ID 順、表 3 にトピック分類別の教育セッションのタイトル一覧を掲載します。

4.1 表 1 トピック分類とセッション件数

HIMSS19			HIMSS18	
番号	トピック分類名	件数	トピック分類名	件数
1	Clinical Informatics & Clinician Engagement	30	Clinical Informatics & Clinician Engagement	26
2	Clinically Integrated Supply Chain	9	-	-
3	Consumer, Patient Engagement & Digital/Connected Health	39	Connected Health & Telehealth Consumer & Patient Engagement	38
4	Telehealth	13		26
5	Consumerization of Health	17		
6	Culture of Care & Care Coordination	8	Culture of Care & Care Coordination	21
7	Cybersecurity, Privacy, and Security	39	Privacy, Security & Cybersecurity	38
8	Population Health Management and Public Health	26	Population Health	22
9	Data Science/Analytics/Clinical & Business Intelligence	58	Data Analytics/Clinical & Business Intelligence	26
10	Disruptive Care Model	3	-	-
11	Grand Societal Challenges	3	-	-
12	Health Informatics Education, Career/Workforce Development and	18	Health Informatics Education, Career Development & Diversity	13

	<i>Academia</i>			
13	Health Information Exchange, Interoperability & Data Integration and Standards	36	Health Information Exchange, Interoperability & Data Integration	25
			HIT Infrastructure & Standards	8
14	Healthcare Applications and Technologies Enabling Care Delivery	18	-	-
15	Healthy Aging and Technology	7	-	-
16	User Experience, <i>Usability</i> , & <i>User-Centered Design</i>	6	Human Factors, User Experience & Design	9
17	Improving Quality Outcomes Through <i>Health Information and Technology</i>	42	Improving Quality Outcomes Through Health IT	30
18	<i>Safe Information and Technology Practices for Patient Care</i>	4	Patient Safety & Health IT	3
19	Innovation, Entrepreneurship & Venture Investment	47	Innovation, Entrepreneurship & Venture Investment	51
20	Leadership, Governance, Strategic Planning	28	Leadership, Governance, Strategic Planning	29
21	Precision Medicine and Genomics	17	Precision Medicine/Genomics	12
22	Process Improvement, Workflow, Change Management	23	Process Improvement, Workflow, Change Management	25
23	Public Policy, Reporting, and Risk Management	4	Public Policy	14
			Compliance, Risk Management & Program Integrity	14
24	Social, Psychosocial & Behavioral Determinants of Health	4	Social, Psychosocial & Behavioral Determinants of Health	4
	-	-	EHRs	11
	-	-	Emerging Payment Models for Value-Based Care	13
	-	-	Pharmacy Standards & Technology	7
25	その他（トピックス分類なし）	72	その他（分類なし, Women in Health IT）	31
	トピック分類別件数合計	571	トピック分類別件数合計	496

4.2 表2 セッション ID 順教育セッション一覧

ID	タイトル	トピック分類
1	Opening Keynote: Will Consumer-Directed Exchange Disrupt the Healthcare Marketplace?	(none)
2	Population Health As Ecosystem Engineering	Population Health Management and Public Health
3	How Embedding Care Standards into the EHR Empowers Clinical Variation Reduction	Improving Quality Outcomes Through Health Information and Technology
4	Leveraging Electronic Health Records to Discover Effective Care Coordination Practice Patterns	Culture of Care & Care Coordination
5	Leveraging EHR Data to Improve OR Operations - A University Hospital Case Study	Process Improvement, Workflow, Change Management
6	PULSE: A Health IT Disaster Response Platform	Health Information Exchange, Interoperability & Data Integration and Standards
7	Congressional Forum	(none)
8	How Consumer Technology is Revolutionizing Our Daily Lives	Consumerization of Health
9	MHS CIO – Standardizing, Modernizing, Securing Health IT	Health Information Exchange, Interoperability & Data Integration and Standards
10	The Real Challenges of Telehealth Adoption	Telehealth
11	Identifying Risky Drug-Seeking Behavior at the Point of Care	Data Science/Analytics/Clinical & Business Intelligence
12	Leveraging Business Acumen to Help Clinicians Get IT!	Leadership, Governance, Strategic Planning
13	Enhancing Care with Artificial Intelligence-Driven Interactive Multimedia Reports	Clinical Informatics & Clinician Engagement

ID	タイトル	トピック分類
14	FDA Digital Health Software Pre-Certification Program	(none)
15	Five Best Practices for Improving Transitions in Care with HIE	Health Information Exchange, Interoperability & Data Integration and Standards
16	Remote Monitoring Shows Significant Pop Health Benefits	Consumer, Patient Engagement & Digital/Connected Health
17	First Timers Conference Orientation	(none)
18	Advancing Patient Matching to Promote Interoperability	Health Information Exchange, Interoperability & Data Integration and Standards
19	NI Fellowship: Developing Future Nurse Informaticists	Health Informatics Education, Career/Workforce Development and Academia
20	Patient-Centric Health Information Exchange	Health Information Exchange, Interoperability & Data Integration and Standards
21	Enabling Digital Health Innovation: A Real-World NHS Journey	Innovation, Entrepreneurship and Venture Investment
22	Ethics of AI in Healthcare: Developing the Right Framework for Innovative Clinical Delivery	Leadership, Governance, Strategic Planning
23	\$8.6M in CapEx Savings: A Case Study on Sharing Medical Equipment	Clinically Integrated Supply Chain
24	About HIMSS: An Orientation to Our Organization	(none)
25	Reactions from the Field: Cybersecurity	Cybersecurity, Privacy and Security
26	Colorado's Health IT Success: What's Our Secret Sauce?	Leadership, Governance, Strategic Planning
27	Policy Update from the Office of the National	Health Information

ID	タイトル	トピック分類
	Coordinator for Health IT (ONC)	Exchange, Interoperability & Data Integration and Standards
28	Bring Digital to Life	User Experience, Usability, & User-Centered Design
29	Elevating the Patient's Digital Experience	Consumer, Patient Engagement & Digital/Connected Health
30	Clinical Impact and Value of Workstation Single Sign-On	Clinical Informatics & Clinician Engagement
31	An Update on HIPAA Compliance and Enforcement from the HHS Office for Civil Rights	Cybersecurity, Privacy and Security
32	Providing Payer Insights to Clinicians at the Point of Care	Improving Quality Outcomes Through Health Information and Technology
33	Empowerment, Activation and Engagement for Digital Health	Consumer, Patient Engagement & Digital/Connected Health
34	Forging a Stronger Approach for the Cybersecurity Challenge	Cybersecurity, Privacy and Security
35	Powering Research and Analytics with a Data Lake and Hadoop	Data Science/Analytics/Clinical & Business Intelligence
36	Metric Driven Strategy for EHR Continuous Improvement	Process Improvement, Workflow, Change Management
37	Cracking the Code to Better Quality and Financial Outcomes	Improving Quality Outcomes Through Health Information and Technology
38	Augment Healthcare Decisions with Pharmacogenomics	Precision Medicine and Genomics
39	The Use of VR for Enhanced Patient Engagement	Healthcare Applications and

ID	タイトル	トピック分類
		Technologies Enabling Care Delivery
40	Improving Care Coordination with Nationwide Data Exchange	Health Information Exchange, Interoperability & Data Integration and Standards
41	For Students Only: An Orientation	(none)
42	Smart Nation, Smart Health: Building a Future-Ready and Sustainable Healthcare System	Innovation, Entrepreneurship and Venture Investment
43	MHS GENESIS: Transforming the Delivery of Healthcare	Improving Quality Outcomes Through Health Information and Technology
44	Quality Payment Program Year 3	Clinical Informatics & Clinician Engagement
45	Reinventing Organizations through Profound Digital Transformation: Lessons Learned from Across Europe	Leadership, Governance, Strategic Planning
46	Enhancing Patient Care with Physician-Driven Documentation	Improving Quality Outcomes Through Health Information and Technology
47	Public Health Extension of the Primary Care EHR	Clinical Informatics & Clinician Engagement
48	Federal-State Response to the Opioid Crisis	(none)
49	Empowering Consumers with Data to Improve Chronic Disease Conditions	Consumer, Patient Engagement & Digital/Connected Health
50	Clozapine Medication Stewardship	Healthcare Applications and Technologies Enabling Care Delivery
51	"Don't Be Phooled!": What You Need to Know About Phishing	Cybersecurity, Privacy and Security
52	Evolution of the Healthcare Consumer Contact Center	Consumer, Patient

ID	タイトル	トピック分類
		Engagement & Digital/Connected Health
53	Using RTLS Data to Increase Ambulatory Care Capacity	Process Improvement, Workflow, Change Management
54	Artificial Intelligence vs COPD: The Fight for Patient Health	Improving Quality Outcomes Through Health Information and Technology
55	Telehealth 301: Beyond the Basics	Telehealth
56	Pediatric Robotics: A Journey from the Lab to a Child's Home	Healthcare Applications and Technologies Enabling Care Delivery
57	Aligning Digital and Provider Enterprise Strategies: One Organization's Experience	Leadership, Governance, Strategic Planning
58	Humanity and Technology in Medicine: Antithetic or Symbiotic?	Grand Societal Challenges
59	From Real-World Data to Digital Twins: Paving the Way for Personalized Healthcare	Precision Medicine and Genomics
60	Reserved for Department of Veterans Affairs Session	(none)
61	Connected Care Delivery Across the World: A HIMSS Multi-National Session	(none)
62	Real-Time Machine Learning Pipeline: A Clinical Early Warning Score (EWS) Use-Case	Data Science/Analytics/Clinical & Business Intelligence
63	Design a Model for the Delivery of Digital Health Guidance	Consumer, Patient Engagement & Digital/Connected Health
64	Clinician Satisfaction: Digitalizing ID Clinical Guidelines	Clinical Informatics & Clinician Engagement
65	Managing 600+ EHR Instances in One of the World's Most Diverse Cities	Culture of Care & Care Coordination
66	Digital Fluency Within Healthcare: The "New Normal"	Healthcare Applications and Technologies Enabling Care

ID	タイトル	トピック分類
		Delivery
67	Patient Portals: Critical for Consumer-Driven Care	Consumer, Patient Engagement & Digital/Connected Health
68	Securing a Picture Archiving and Communication System (PACS)	Cybersecurity, Privacy and Security
69	The Human Side of Informatics: Promoting Wellness	User Experience, Usability, & User-Centered Design
71	Regional Health-Data Sharing Extends to Food and Nutrition	Improving Quality Outcomes Through Health Information and Technology
72	Mitigating the Next Generation of Risk: Connected Devices	Cybersecurity, Privacy and Security
73	Pediatric Population Outcomes Using Health Registries	Population Health Management and Public Health
74	Enabling Path of Digital Pathology to Personalized Medicine	Healthcare Applications and Technologies Enabling Care Delivery
75	Bending the Cost Curve with Whole-Person Care	Social, Psychosocial & Behavioral Determinants of Health
76	Defeat Nation State Actors Stalking the Healthcare Sector	Cybersecurity, Privacy and Security
77	Communicate Value and Build Support for Enterprise Analytics	Leadership, Governance, Strategic Planning
78	Achieving EMRAM Stage 6: A Collaboration with the Turkey Ministry of Health	Population Health Management and Public Health
79	How Web Bots Freed \$2 Million from a Billing Bottleneck	Data Science/Analytics/Clinical & Business Intelligence
80	Call Center Turned Strategic Patient Engagement	Consumer, Patient

ID	タイトル	トピック分類
	Engine	Engagement & Digital/Connected Health
81	Smartphones Are Driving Clinical Transformation	Clinical Informatics & Clinician Engagement
82	Overview of 405d Cybersecurity Guidance Document	Cybersecurity, Privacy and Security
83	Bidirectional eReferrals Between Health Systems and YMCAs	Population Health Management and Public Health
84	Exploring Critical Success Factors for Telehealth Implementation	Telehealth
85	Assessing When a Vendor's Security Incident Is a Breach	Cybersecurity, Privacy and Security
86	Mergers and Acquisitions: CIO Change Management Strategies	Process Improvement, Workflow, Change Management
87	Interoperability and Patient Engagement	Public Policy, Reporting, and Risk Management
88	HIE Emergency Preparedness and Response: RSVPs from Florence and Michael	Health Information Exchange, Interoperability & Data Integration and Standards
89	Team-Based Decision Support in Diabetes: Outcomes and Costs	Improving Quality Outcomes Through Health Information and Technology
90	Taking a Patient-Centered Approach to Clinical Communication	Healthcare Applications and Technologies Enabling Care Delivery
91	Embracing Risk: One CIN's Progressive Value-Based Care Success	Disruptive Care Models
92	Unlocking Healthcare Data: The Evolution and Ramifications of Blockchain	Health Information Exchange, Interoperability & Data Integration and

ID	タイトル	トピック分類
		Standards
93	Value-Based Care: Defining Value - Including the Patient Perspective	(none)
94	Transparency in Prescription Drug Costs to Help Patients Save Money	Consumerization of Health
95	SMART on FHIR Integration to Improve Medication Adherence	Consumer, Patient Engagement & Digital/Connected Health
96	Smart States and the Push towards Health IT Modernization	Population Health Management and Public Health
97	Leveraging Data Analytics to Complement Value-Based Approach	Data Science/Analytics/Clinical & Business Intelligence
98	How to Streamline Cross-Continuum Data for Greater Usability	Health Information Exchange, Interoperability & Data Integration and Standards
99	Novel EHR Tools to Assist with Organ Procurement Workflows	Clinical Informatics & Clinician Engagement
100	Technology to Enable the Clinical Genomics Revolution in Australia	Precision Medicine and Genomics
101	Enabling Data Interoperability Across the Continuum of Care	Health Information Exchange, Interoperability & Data Integration and Standards
102	Managing Population Health: A Supply and Demand Challenge	Clinically Integrated Supply Chain
103	Let's Get Real: Targeting Legal Risk and Threat Intelligence	Cybersecurity, Privacy and Security
104	A Quality and Analytics-Based Approach to the Opioid Epidemic	Grand Societal Challenges
105	Using Technology to Align Treatment with End-of-Life Goals	Culture of Care & Care Coordination

ID	タイトル	トピック分類
106	Lessons from Israel: Finding Cancers with AI and EHR Data	Population Health Management and Public Health
107	Modifying the Mobile Application Rating Scale (MARS) to Evaluate Specific Health Applications	Healthcare Applications and Technologies Enabling Care Delivery
108	Unlocking the Value of Clinical Data	Improving Quality Outcomes Through Health Information and Technology
109	Blockchain Privacy, Security, Compliance and Regulation	Cybersecurity, Privacy and Security
110	Structuring Data for Value-Based Care	(none)
111	Reactions from the Field: Innovation	Innovation, Entrepreneurship and Venture Investment
112	Reserved for Department of Veterans Affairs Session	(none)
113	Meaningful Measures Initiative	Clinical Informatics & Clinician Engagement
114	Overcoming Challenges in Creating Self-Service Analytics	Data Science/Analytics/Clinical & Business Intelligence
115	Accelerating Transformation Through Policy and Technology	Health Information Exchange, Interoperability & Data Integration and Standards
116	The What and Where of HL7 FHIR 2019	Health Information Exchange, Interoperability & Data Integration and Standards
117	Future of Precision Medicine Platform in South Korea	Precision Medicine and Genomics
118	Digital Transformation: Uniting the Full Continuum of Care	Process Improvement, Workflow, Change Management

ID	タイトル	トピック分類
119	Integration of Registry Data into Clinical Care Process	Clinical Informatics & Clinician Engagement
120	Building Business Narratives to Sell Security to the Board	Cybersecurity, Privacy and Security
121	Creating a Digital Patient Experience Strategy from Scratch	Consumer, Patient Engagement & Digital/Connected Health
122	Restore Human Connections with Collaboration and Technology	Process Improvement, Workflow, Change Management
123	Leveraging Local Data for Public Health with "SMART Scatter"	Population Health Management and Public Health
124	Teaming up for Change: Virtual Care Lessons	Healthcare Applications and Technologies Enabling Care Delivery
125	Personalize Patient Relationships and Connect Care Journeys	Consumer, Patient Engagement & Digital/Connected Health
126	Improving Provider Data Accuracy with Blockchain	Health Information Exchange, Interoperability & Data Integration and Standards
127	Integrated Meets Value-Based Care: Aligning Stakeholders' Incentives	(none)
128	Using Machine Learning to Drive Innovation-Driven Healthcare	Data Science/Analytics/Clinical & Business Intelligence
129	A Validated Strategy to Reduce Error in Electronic Orders	Improving Quality Outcomes Through Health Information and Technology
130	The Policy Aspects of International Data Protection Laws: A HIMSS Multi-National Session	(none)
131	Using the Past to Predict the Future with Machine	Data

ID	タイトル	トピック分類
	Learning	Science/Analytics/Clinical & Business Intelligence
132	Management of Semantics in Structured Laboratory Report	Health Information Exchange, Interoperability & Data Integration and Standards
133	Optimizing Health Information Technology to Promote Opioid Stewardship	Culture of Care & Care Coordination
134	Implementing Genomics in EHRs: Present and Future	Precision Medicine and Genomics
135	Case: Building a Quality-Driven Narrow SNF Network	Leadership, Governance, Strategic Planning
136	Three Secrets to Take Control of an Unruly Order Set Catalog	User Experience, Usability, & User-Centered Design
137	Turning Good Information Security Into Good HIPAA Compliance	Cybersecurity, Privacy and Security
138	Uniting and Standardizing Healthcare Provision Across Dubai	Process Improvement, Workflow, Change Management
139	Move from Traditional Change Management to Agile Methodology	Process Improvement, Workflow, Change Management
140	Data-Driven Clinical Transformation in an Unhealthy Region	Population Health Management and Public Health
141	Adapting an Information Technology Infrastructure Library (ITIL) for Effective Telehealth Service Management	Telehealth
142	Redesigning Clinical Care with Analytics	Data Science/Analytics/Clinical & Business Intelligence
143	Enhanced Public Health Reporting Using an HIE Network	Health Information Exchange, Interoperability & Data Integration and

ID	タイトル	トピック分類
		Standards
144	Identifying Homelessness Through Data	Population Health Management and Public Health
145	Digital Medicine Transformation: The New Skill for CIOs	Innovation, Entrepreneurship and Venture Investment
146	Integrating Acute and Post-Acute Care to Improve Outcomes	Improving Quality Outcomes Through Health Information and Technology
147	Approaching Persistent Problems in Health IT Through Science	Data Science/Analytics/Clinical & Business Intelligence
148	Quality Data Automation: A Journey with Business Intelligence	Data Science/Analytics/Clinical & Business Intelligence
149	Presenting the Case for Cybersecurity Education of Clinicians	Cybersecurity, Privacy and Security
150	Capacity Planning for Inpatient Units	Leadership, Governance, Strategic Planning
151	Real-Time Patient Safety Monitoring in Clinical Trials	Safe Information and Technology Practices for Patient Care
152	Patient Engagement As a Key to Bundled Payment Model Success	Consumer, Patient Engagement & Digital/Connected Health
153	Managing Physician Burnout: Using the EHR as a Clinical Extender	Clinical Informatics & Clinician Engagement
154	Building a Cybersecurity Strategy in a Hospital	Cybersecurity, Privacy and Security
155	Unlocking EHRs: How APIs Usher in a New Data Exchange Era	Health Information Exchange, Interoperability & Data Integration and

ID	タイトル	トピック分類
		Standards
156	Leveraging Technology to Improve Prior Authorization	Process Improvement, Workflow, Change Management
157	Building Continuity of Care for Chatham County Jail Inmates	Improving Quality Outcomes Through Health Information and Technology
158	Augmented Reality in Global Healthcare Delivery and Training	Healthcare Applications and Technologies Enabling Care Delivery
159	Predictive Analytics for Data-Driven Care Management	Population Health Management and Public Health
160	Embracing the IoT: Ideas Are Easy, Execution Is Hard	Health Information Exchange, Interoperability & Data Integration and Standards
161	Going Deep into Our Communities with Advanced Data Platform	Social, Psychosocial & Behavioral Determinants of Health
162	Innovation at HHS	Leadership, Governance, Strategic Planning
163	Clinical Quality and Patient Safety Considerations	Improving Quality Outcomes Through Health Information and Technology
164	Transforming EHR Interactions Using Voice Assistants	User Experience, Usability, & User-Centered Design
165	Machine Learning Over Our Growing Electronic Health Records	Data Science/Analytics/Clinical & Business Intelligence
166	Reporting and Learning from Health IT-Related Events Toward Safer Healthcare	Safe Information and Technology Practices for Patient Care

ID	タイトル	トピック分類
167	Can Information and Technology, Nursing and Informatics Shape Operations? A Case Study	Leadership, Governance, Strategic Planning
168	Counterfeit Pharmaceuticals Supply Chain	Clinically Integrated Supply Chain
169	Medicare Reimbursement and Connected Health: Where Are We?	Consumer, Patient Engagement & Digital/Connected Health
170	Hiring and Retaining the Right Healthcare Technology Staff	Health Informatics Education, Career/Workforce Development and Academia
171	Healthcare Information and Technology in the Age of GDPR	Cybersecurity, Privacy and Security
172	Virtual Acute Care: Pediatric Physiotherapy with Telehealth	Telehealth
173	Improving Corridor Compliance Through Inventory Analytics	Process Improvement, Workflow, Change Management
174	Using Real-Time Analytics to Improve Patient Clinical Outcomes	Improving Quality Outcomes Through Health Information and Technology
175	Feasibility Study of HIT-Enabled Patient-Reported Outcomes Measures (PROMs) in Home Health	Healthcare Applications and Technologies Enabling Care Delivery
176	Adapting Guidelines for Emergencies in the Digital Age	Population Health Management and Public Health
177	You've Experienced A Data Breach—Now What? A Crisis Simulation Exercise	Public Policy, Reporting, and Risk Management
178	Improving the Flow of Immunization Information: IIS-EHR Interoperability	Population Health Management and Public Health
179	Global Health Informatics Competencies:	Health Informatics

ID	タイトル	トピック分類
	Recommendations for Interprofessional Care Delivery	Education, Career/Workforce Development and Academia
180	New Horizons in Patient-Directed Exchange	Consumer, Patient Engagement & Digital/Connected Health
181	If You Build It, Build It Well: User-Centered Design and Agile Development Provides User-Delight	User Experience, Usability, & User-Centered Design
182	Demystifying TEFCA: Ins and Outs of the Exchange Framework	Health Information Exchange, Interoperability & Data Integration and Standards
183	Using AI and NLP to Uncover Population Social Determinants of Health Factors	Social, Psychosocial & Behavioral Determinants of Health
184	Achieving Legacy System Retirement and Data Consolidation	Leadership, Governance, Strategic Planning
185	Real-Time Adverse Event Predictive Model Reduces Readmissions	Improving Quality Outcomes Through Health Information and Technology
186	Telehealth Urgent Care for Off-Shore Oil and Gas Platforms	Telehealth
187	Competency-Based Education: Solving Today's Health Information and Technology Needs	Health Informatics Education, Career/Workforce Development and Academia
188	Proactive and Preventative Vendor Security Management	Cybersecurity, Privacy and Security
189	Telehealth Reimbursement: The Times They Are a Changin'!	Telehealth
190	The Intersection Between Interoperability and Value-Based Care Delivery	Leadership, Governance, Strategic Planning

ID	タイトル	トピック分類
191	Managing Multi-Site Workflow in the Era of Consolidation	Process Improvement, Workflow, Change Management
192	Clinical Optimization: One Approach to Integration	Improving Quality Outcomes Through Health Information and Technology
193	Implementing a Statewide School-Based Telehealth Program	Telehealth
194	Unifying Provider and Payer Data to Propel Value-Based Care	Healthcare Applications and Technologies Enabling Care Delivery
195	Style Standards to Improve Data Quality and Interoperability	Health Information Exchange, Interoperability & Data Integration and Standards
196	Effective Education Utilizing Multiple Modes of Technology	Clinical Informatics & Clinician Engagement
197	Wearable Device Data: Signal or Noise?	Disruptive Care Models
198	Creating the Next Generation of Digital Engagement	Consumer, Patient Engagement & Digital/Connected Health
199	Balancing Value & Burden: CMS Electronic Quality Reporting	Improving Quality Outcomes Through Health Information and Technology
200	Deriving Value from Patient Flow Analytics	Data Science/Analytics/Clinical & Business Intelligence
201	From Print to Interoperability: Cancer Staging in the EHR	Health Information Exchange, Interoperability & Data Integration and Standards
202	Consumer Innovations in Less Than 90 Days	Innovation, Entrepreneurship and

ID	タイトル	トピック分類
		Venture Investment
203	Maximizing Synergy Between Federal Health Information and Technology Programs	Leadership, Governance, Strategic Planning
204	To Buy or to Build: How to Get Your Project Off the Ground	Healthcare Applications and Technologies Enabling Care Delivery
205	Operational Readiness: Often Overlooked Key Success Factor	Process Improvement, Workflow, Change Management
206	ONC Town Hall	Health Information Exchange, Interoperability & Data Integration and Standards
207	Digitizing Mental Health Support Through Internet-Delivered Cognitive Behavioral Therapy (iCBT) Technology	Consumer, Patient Engagement & Digital/Connected Health
208	Best Practices for Optimizing Core EHR Systems	Consumer, Patient Engagement & Digital/Connected Health
209	A Business and Clinical Case for Continuous Surveillance	Improving Quality Outcomes Through Health Information and Technology
210	Driving Physician Engagement and Patient Outcomes with Artificial Intelligence	Healthcare Applications and Technologies Enabling Care Delivery
211	Retail Healthcare Care Delivery Evolution	Consumerization of Health
212	Streamline Payment Card Industry (PCI) Compliance in a Diverse Hospital Environment	Cybersecurity, Privacy and Security
213	Developing a Social Determinants of Health Data Model for PRAPARE	Social, Psychosocial & Behavioral Determinants of Health
214	Data Rich, Information Poor – Breaking Barriers and Driving Innovation	Health Information Exchange, Interoperability

ID	タイトル	トピック分類
		& Data Integration and Standards
215	Cyber Fluency: Si Vis, Pacem Para Bellum	Cybersecurity, Privacy and Security
216	Health Information and Technology in Primary Care: Learnings from CPC+	Improving Quality Outcomes Through Health Information and Technology
217	Identification of Rare Events in Narrative EHR Data	Data Science/Analytics/Clinical & Business Intelligence
218	Using Decision Support to Promote Value-Based Prescribing	Healthcare Applications and Technologies Enabling Care Delivery
219	State of the Healthcare API Economy	Innovation, Entrepreneurship and Venture Investment
220	Novel Genomic De-Identification Method to Enable Research	Precision Medicine and Genomics
221	Telehealth and Rising Demand for Behavioral Healthcare	Telehealth
222	Clinical Supply Chain Integration in a Data-Driven Healthcare Environment	Innovation, Entrepreneurship and Venture Investment
223	Secure Medical Device Procurement	Cybersecurity, Privacy and Security
224	Advanced Analytics in Clinical Operations: Framework and ROI	Data Science/Analytics/Clinical & Business Intelligence
225	Change Management Playbook: Leading Change in Healthcare	Leadership, Governance, Strategic Planning
226	Amplifying Primary Prevention with Artificial Intelligence	Improving Quality Outcomes Through Health Information and

ID	タイトル	トピック分類
		Technology
227	How to Improve Patient Engagement with Transportation	Healthcare Applications and Technologies Enabling Care Delivery
228	Steps to a Full-Lifecycle Drug Diversion Monitoring Program	Cybersecurity, Privacy and Security
229	Artificial Intelligence Helps Put Privacy on Autopilot	Cybersecurity, Privacy and Security
230	Analysis of Centura Health's Population Management Initiatives	Culture of Care & Care Coordination
231	Overhauling Information and Technology Service Delivery: A Success Story	Process Improvement, Workflow, Change Management
232	Telemedicine Fraud and Abuse Under the Microscope	Telehealth
233	Initiative to Advance Interoperability	Clinical Informatics & Clinician Engagement
234	Analytics-Based EHRs Implementation: Improved Outcomes	Data Science/Analytics/Clinical & Business Intelligence
235	Electronic Long-Term Services and Supports (eLTSS) Standards	Health Information Exchange, Interoperability & Data Integration and Standards
236	Innovative Startup Partnerships: Tapping Into Creativity and Experience of Entrepreneurs	Innovation, Entrepreneurship and Venture Investment
237	Utilizing Predictive Analytics to Increase the Value of Care	Population Health Management and Public Health
238	A Practical Approach to Medical Technology Capital Planning	Leadership, Governance, Strategic Planning
239	Promoting End-of-Life Advanced Care Planning Using Health IT	Healthy Aging and Technology
240	Blockchain: Beyond the Hype - What Is Really	Cybersecurity, Privacy and

ID	タイトル	トピック分類
	Motivating It?	Security
241	Moral Distress with Burden of Documentation: Call to Action	Process Improvement, Workflow, Change Management
242	Missouri Model for Optimizing Data for Population Health Management	Improving Quality Outcomes Through Health Information and Technology
243	Improving Sepsis Care with Data Analytics	Improving Quality Outcomes Through Health Information and Technology
244	Data Analytics As a Population Health Compass	Population Health Management and Public Health
245	Patient Engagement is Changing: Trends and Health System Successes	Consumer, Patient Engagement & Digital/Connected Health
246	Remote Access Security: An Ethical Hack Demo	Cybersecurity, Privacy and Security
247	Software Development for an Exceptional Clinician Experience	User Experience, Usability, & User-Centered Design
248	Cloud Providers: Addressing the Barriers to Interoperability in Healthcare	Health Information Exchange, Interoperability & Data Integration and Standards
249	Reserved for Department of Veterans Affairs Session	(none)
250	Applying the Fraud and Abuse Laws in Digital Health	Public Policy, Reporting, and Risk Management
251	Navigating Our Way to a Digital Experience	Innovation, Entrepreneurship and Venture Investment
252	Engage Consumers and Build Loyalty with Data-Driven Marketing	Consumer, Patient Engagement &

ID	タイトル	トピック分類
		Digital/Connected Health
254	Tele-ICU: The Strategy That Delivers	Telehealth
255	The Power of One: A Transformation Journey	Process Improvement, Workflow, Change Management
256	Adopting Innovation in the OR: Leading and Managing Change	Data Science/Analytics/Clinical & Business Intelligence
257	Medical Device Cybersecurity Incident Preparedness/Response	Cybersecurity, Privacy and Security
258	Facilitating Improved End-of-Life Care	Clinical Informatics & Clinician Engagement
259	How to Close Biomedical HIPAA Compliance and Security Gaps	Cybersecurity, Privacy and Security
260	Patient-Centered Referral Workflow Automation	Culture of Care & Care Coordination
262	Finding the Right Solutions: A Healthcare Organization Meets Federal and State EPCS requirements	Healthcare Applications and Technologies Enabling Care Delivery
264	Artificial Intelligence for Organ Transplantation	Improving Quality Outcomes Through Health Information and Technology
265	Reactions from the Field: AI	Data Science/Analytics/Clinical & Business Intelligence
266	Burnout: How EHR Usability Improves Efficiency and Satisfaction	Clinical Informatics & Clinician Engagement
267	Standards and Technology Update from ONC	Health Information Exchange, Interoperability & Data Integration and Standards
268	Developing a Large-Scale Tele-Dermatology Program	Telehealth
269	Said the HIE: "Reports of Our Death Are Greatly	Health Information

ID	タイトル	トピック分類
	Exaggerated"	Exchange, Interoperability & Data Integration and Standards
270	Data Science Reduces Anatomic Pathology Reporting Errors	Clinical Informatics & Clinician Engagement
271	Deploying a Disaster Response HIE Platform: PULSE California	Grand Societal Challenges
272	Surviving Sepsis: How Health IT Saves One Life Per Week	Improving Quality Outcomes Through Health Information and Technology
273	Integrating Financial Data for a Better Consumer Experience	Consumerization of Health
274	Cybersecurity in a Digital Transformation World	Cybersecurity, Privacy and Security
275	Reducing Burden Interfacing Public Health and Clinical Care	Improving Quality Outcomes Through Health Information and Technology
276	Hold Effective Meetings and Increase Employee Satisfaction	Process Improvement, Workflow, Change Management
277	New Mexico Reduces Avoidable ED Visits with Technology	Improving Quality Outcomes Through Health Information and Technology
278	How to Save Costs Beyond Targeting the Most Costly Patients	Population Health Management and Public Health
279	Telestroke Continuum of Care: EMS Through Discharge Clinic	Culture of Care & Care Coordination
280	Leveraging Blockchain to Transform Clinical Credentialing	Innovation, Entrepreneurship and Venture Investment

ID	タイトル	トピック分類
281	Postanalytic Risk Reduction in Pathology Results Reporting	Safe Information and Technology Practices for Patient Care
282	Developing an Internal Innovation Competency and Culture	Innovation, Entrepreneurship and Venture Investment
283	Patient Loyalty in Healthcare: An Innovative New Approach	Consumer, Patient Engagement & Digital/Connected Health
284	Navigating Multi-Hospital, Episode-Based Care Delivery	Disruptive Care Models
285	Data As an Asset: A Pragmatic Framework for Health Analytics	Data Science/Analytics/Clinical & Business Intelligence
286	Leveraging Network-Wide Opportunities to Manage Population	Health Information Exchange, Interoperability & Data Integration and Standards
287	Telehealth Training: Lessons and Future Directions	Health Informatics Education, Career/Workforce Development and Academia
288	Centralized Provider Data: Foundation for Digital Innovation	Consumerization of Health
289	Electronic Tracking of Endoscopes: Benefits and Best Practices	Clinical Informatics & Clinician Engagement
290	Predictive Public Health: Leveraging Technology and Behavioural Insights	Clinical Informatics & Clinician Engagement
291	Incoming! Medical Device Cybersecurity Alerts on the Rise	Cybersecurity, Privacy and Security
292	EU/US Collaborations to Ensure a Capable eHealth Workforce	Health Informatics Education, Career/Workforce Development and Academia

ID	タイトル	トピック分類
293	Healing from Within: Leading Change, Inspiring Action	(none)
294	Diabetic Retinopathy Screening in the Primary Care Setting	Improving Quality Outcomes Through Health Information and Technology
295	Improving Depression Screening In Primary Care With Health IT	Improving Quality Outcomes Through Health Information and Technology
296	Creating SNF Preferred Provider Networks to Drive Quality Outcomes	Improving Quality Outcomes Through Health Information and Technology
297	Empowering Providers with Data to Affect Behavior and Reduce Cost	Data Science/Analytics/Clinical & Business Intelligence
298	Improvement of Quality Scores	Improving Quality Outcomes Through Health Information and Technology
299	Reducing Catheter-Associated Urinary Tract Infection	Improving Quality Outcomes Through Health Information and Technology
300	Improving Pediatric Asthma Outcomes	Improving Quality Outcomes Through Health Information and Technology
301	Virtual Care and Clinical Decision Support Improves Sepsis Alert	Telehealth
302	Achieving the Triple Aim for Children with Medical Complexity	Improving Quality Outcomes Through Health Information and Technology
303	Decreasing CAUTI Through Resilience in Workflow and	Improving Quality

ID	タイトル	トピック分類
	IT Redesign	Outcomes Through Health Information and Technology
304	Managing Populations With An Automated Clinical Risk System	Population Health Management and Public Health
305	Census Reporting and Clinical Pathway Management to Optimize Patient Care	Process Improvement, Workflow, Change Management
306	FHIR Interoperability: Point-of-Care Healthcare Apps in the Real World	Health Information Exchange, Interoperability & Data Integration and Standards
307	Commitment to Results: The Essential Clinical Dataset	Process Improvement, Workflow, Change Management
308	Optimizing Care Transitions Across the Continuum	Culture of Care & Care Coordination
309	Digitally Transforming Patient and Caregiver Experiences	Consumer, Patient Engagement & Digital/Connected Health
310	Clinical Analytics Prediction Engine (CAPE)	Data Science/Analytics/Clinical & Business Intelligence
311	AMR Biosurveillance System in the Italian Region of Veneto	Population Health Management and Public Health
312	Decreasing Falls with the Automation of the Beers Criteria Medications	Safe Information and Technology Practices for Patient Care
313	OR Charge Capture Optimization	Process Improvement, Workflow, Change Management
314	Closing Keynote: Not Impossible: Pushing the Bar on Innovation	(none)

ID	タイトル	トピック分類
BC1	Moving Toward Conscious Competence: Onboarding for Blockchain in Healthcare	Innovation, Entrepreneurship and Venture Investment
BC2	I Understand Blockchain, What Else Do I Need to Know?	Innovation, Entrepreneurship and Venture Investment
BC3	A Top Down look at Blockchain - the Federal Perspective	Innovation, Entrepreneurship and Venture Investment
BC4	From Pilot to Process – Implementing Blockchain into the Episode of Care Part 1	Innovation, Entrepreneurship and Venture Investment
BC5	From Pilot to Process – Implementing Blockchain into the Episode of Care Part 2	Innovation, Entrepreneurship and Venture Investment
BC6	Closing Keynote: The Path Forward	Innovation, Entrepreneurship and Venture Investment
BG1	Big Data Drives Radical Change	Data Science/Analytics/Clinical & Business Intelligence
BG2	Getting Started: Modeling the Structure and Operations of Big Data	Data Science/Analytics/Clinical & Business Intelligence
BG3	Clinicians Views and Experiences with Big Data	Data Science/Analytics/Clinical & Business Intelligence
BG4	Big Data Healthcare: A Leader's Story	Data Science/Analytics/Clinical & Business Intelligence
BG5	How Practical Big Data Management can Drive Value in Healthcare	Data Science/Analytics/Clinical & Business Intelligence
BG6	The Business of Healthcare Data: The Value and Return on Investment in Big Data Analytics	Data Science/Analytics/Clinical &

ID	タイトル	トピック分類
		Business Intelligence
BP1	Opioid Stewardship Through Utilization of Opioid Risk Tools	Population Health Management and Public Health
BP2	Perioperative Care, Enhanced Recovery After Surgery and Reducing Opioid Dependency	Population Health Management and Public Health
BP3	Leveraging Analytics to Change Opioid Prescribing Behavior	Population Health Management and Public Health
BP4	Standardizing Opioid and Drug Abuse Referrals to Rehabilitation	Population Health Management and Public Health
BP5	Anticipating and Preventing Adverse Drug Events from Opioid-related Complications	Population Health Management and Public Health
BP6	Treating Emergency Room Opioid Withdrawal with Buprenorphine	Population Health Management and Public Health
BRS	Brazil Summit	(none)
CARC1	CAHIMS Review Course	Health Informatics Education, Career/Workforce Development and Academia
CD1	Career Advancement	Health Informatics Education, Career/Workforce Development and Academia
CD2	Professional Growth - The Ultimate Super Power!	Health Informatics Education, Career/Workforce Development and Academia

ID	タイトル	トピック分類
CD3	The Future of Work!	Health Informatics Education, Career/Workforce Development and Academia
CD4	The Rapidly Changing Environment	Health Informatics Education, Career/Workforce Development and Academia
CD5	Leveraging Continuing Education to Improve Employment Prospects and Professional Profiles	Health Informatics Education, Career/Workforce Development and Academia
CD6	Facilitated Small Group Discussions	Health Informatics Education, Career/Workforce Development and Academia
CHC01	Welcome Remarks	Consumer, Patient Engagement & Digital/Connected Health
CHC02	Keynote: Health @ Work	Consumerization of Health
CHC03	Health Behaviors in Context: Consumer, Patient or Employee?	Consumerization of Health
CHC04	Digital Traction in Consumerization of Healthcare	Consumerization of Health
CHC05	'Retailing' the Back End: Cost, Quality & Payment	Consumerization of Health
CHC06	Lunch	(none)
CHC07	Issue Focus: Health Data Monetization & The Data Economy	Consumerization of Health
CHC08	Data Set: Design's Bottom Line Impact	Consumerization of Health
CHC09	Going Retail	Consumerization of Health
CHC10	Fireside Chat: Putting Consumerization to Work in Diabetes	Consumerization of Health

ID	タイトル	トピック分類
CHC11	Networking Break	(none)
CHC12	Consumers & Aging: Why You Should Adjust Your Headspace	Consumerization of Health
CHC13	Can Prevention Be Trendy?	Consumerization of Health
CHC14	Immersive Technologies in Health	Consumerization of Health
CHC15	Closing Keynote: Calling All Robots	Consumerization of Health
CIO1	Opening Keynote	Leadership, Governance, Strategic Planning
CIO2	Mid-Morning Keynote	Leadership, Governance, Strategic Planning
CIO3	Mid-Afternoon Keynote	Leadership, Governance, Strategic Planning
CIO4	Closing Keynote	Leadership, Governance, Strategic Planning
CLO01	Networking Breakfast & Badge Pick-up	(none)
CLO02	Welcome Remarks	(none)
CLO03	Keynote: Innovation with a Cause: Better and Safer Care	Data Science/Analytics/Clinical & Business Intelligence
CLO04	Cloud Analytics: A Fast Lane to Enable Real-World Evidence	Data Science/Analytics/Clinical & Business Intelligence
CLO05	Networking Break	(none)
CLO06	Cloud Computing: Morning Wrap-up with Speakers	Data Science/Analytics/Clinical & Business Intelligence
CLO07	Human Health, Well-Being and Machine Learning	Data Science/Analytics/Clinical & Business Intelligence
CLO08	Data & Cloud Infrastructure: Building Blocks for Healthcare Transformation	Data Science/Analytics/Clinical & Business Intelligence
CLO09	Early Prediction of Sepsis: How to Tackle a Lethal Threat	Data Science/Analytics/Clinical &

ID	タイトル	トピック分類
		Business Intelligence
CLO10	Networking Lunch	(none)
CLO11	Goodbye Legacy Tech, Hello Cloud-Based EMPI for 15 Million Patients	Data Science/Analytics/Clinical & Business Intelligence
CLO12	A Framework for Innovation: Test, Scale, Fail Quickly	Data Science/Analytics/Clinical & Business Intelligence
CLO13	Data has the Power to Tackle Healthcare's Biggest Challenges-- A Case Study	Data Science/Analytics/Clinical & Business Intelligence
CLO14	How to Ensure Your Organization Moves Safely to the Cloud	Cybersecurity, Privacy and Security
CLO15	Industry Snapshot: Cloud Security in Healthcare	Data Science/Analytics/Clinical & Business Intelligence
CLO16	Sentara's Digital Vision for the Future: A DevSecOps Story	Data Science/Analytics/Clinical & Business Intelligence
CLO17	Closing Comments	(none)
CLO20	Networking Break	(none)
CPRC1	CPHIMS Review Course	Health Informatics Education, Career/Workforce Development and Academia
CYB1	Opening Keynote: Looking Towards the Future with Teachings from the Past	Cybersecurity, Privacy and Security
CYB2	Don't Let Your IT and OT Systems Become Antiques!	Cybersecurity, Privacy and Security
CYB3	Harnessing Medical Device Risk	Cybersecurity, Privacy and Security
CYB4	Healthcare Cybersecurity Check-Up: Achieving and Measuring Excellence	Cybersecurity, Privacy and Security

ID	タイトル	トピック分類
CYB5	The NIST Privacy Framework: What It Is And What It Means For You	Cybersecurity, Privacy and Security
CYB6	Closing Keynote: Full Speed Ahead: How to Thrive and Succeed!	Cybersecurity, Privacy and Security
CYBR	Closing Reception: Cybersecurity Forum	Cybersecurity, Privacy and Security
FT01	First Timers Conference Orientation	(none)
GC19W S- WKSP3	Scaling Your Startup: A Workshop for Entrepreneurs	Innovation, Entrepreneurship and Venture Investment
GCS	Greater China Summit	(none)
GVTP01	State Policy Learning Lab: Statewide Health IT Roadmaps: Realizing the Value of Advancing Health IT in your State:	Leadership, Governance, Strategic Planning
GVTP02	State Policy Learning Lab: Smart Cities & Smart Health Ecosystems: Exploring societal impact & making a difference in underserved communities	Population Health Management and Public Health
GVTP03	State Policy Learning Lab: Bridging the Gap: Health IT Policy Strategies to Connect the Spectrum of Care During Emergencies	Population Health Management and Public Health
HAT1	Opening Keynote: Personal Perspectives: Using Technology to Improve Quality of Life as We Age	Healthy Aging and Technology
HAT2	Aging and Technology: What the Data Tells Us	Healthy Aging and Technology
HAT3	Promoting Quality of Aging: Technological Innovations in Memory Care	Healthy Aging and Technology
HAT4	Promoting Quality of Aging: Care Coordination and Disease Management	Healthy Aging and Technology
HAT5	Promoting Quality of Aging: Addressing Social Isolation	Healthy Aging and Technology
HAT6	Closing Keynote: The Future of Technology in the Longevity Economy	Healthy Aging and Technology
INT1	Breaking Down the Silos: Connecting the Public Policy Dots	Health Information Exchange, Interoperability & Data Integration and

ID	タイトル	トピック分類
		Standards
INT2	Clinical Informatics In the Age of FHIR: How API-Based Technologies are Transforming Healthcare	Health Information Exchange, Interoperability & Data Integration and Standards
INT3	Analyze the Remaining Gaps as Data Exchange is Expanded to Broader Stakeholder Groups in Support of Innovation	Health Information Exchange, Interoperability & Data Integration and Standards
INT4	A Use Case RoadMap: Driving Policies & Standards	Health Information Exchange, Interoperability & Data Integration and Standards
INT5	Payers Role in Health Information Exchange	Health Information Exchange, Interoperability & Data Integration and Standards
INT6	Putting It All Together: Unlocking the Potential of Tomorrow	Health Information Exchange, Interoperability & Data Integration and Standards
INV1	Overcoming Overwhelming Disruption: What to Do NOW	Innovation, Entrepreneurship and Venture Investment
INV2	Aligning Innovation Strategy to Overall Strategy	Innovation, Entrepreneurship and Venture Investment
INV3	Building a Regional Innovation Program: Lessons from Across the Pond	Innovation, Entrepreneurship and Venture Investment
INV4	The Playbook for Building Win-Win Startup Partnerships	Innovation, Entrepreneurship and Venture Investment
INV5	The Blueprint for Putting Patients at the Center of APIs	Innovation, Entrepreneurship and

ID	タイトル	トピック分類
		Venture Investment
INV6	Frontline Perspectives on Consumer-Driven Technologies for Better Health Through Information and Technology	Innovation, Entrepreneurship and Venture Investment
LAS	Latin America Summit	(none)
LL01	HIMSS19 Learning Lounge	(none)
LL02	HIMSS19 Learning Lounge	(none)
LL03	HIMSS19 Learning Lounge	(none)
MES	Middle East Summit	(none)
MH1	Opening Keynote: The Scope, Challenges, and Complexity in Support of the Military Medical Care Mission	(none)
MH2	Data Flow Dynamics While Transitioning through Echelons of Care	(none)
MH3	Advancing Technology: The Impact on Military Medicine	(none)
MH4	Clinician Panel: What Matters on the Front Line, What Information is Necessary	(none)
MH6	Closing Keynote: What's Our Why?	(none)
MK20	NursePitch™ Roundtable	Innovation, Entrepreneurship and Venture Investment
MK21	NursePitch (Pre-Seed and Series A Pitch Competition) Presentations	Innovation, Entrepreneurship and Venture Investment
MLAI01	Networking Breakfast & Badge Pick-up	(none)
MLAI02	Welcome Remarks	(none)
MLAI03	Keynote: Synergies Between Man and Machine	Data Science/Analytics/Clinical & Business Intelligence
MLAI04	State of the Industry: Machine Learning and Artificial Intelligence in Healthcare	Data Science/Analytics/Clinical & Business Intelligence
MLAI05	Networking Break	(none)

ID	タイトル	トピック分類
MLAI06	AI and Imaging: Your Data as a Strategic Asset	(none)
MLAI07	Blockchain & AI: Stronger Together	Data Science/Analytics/Clinical & Business Intelligence
MLAI08	Machine Learning to Predict Risk and Enhance Efficiency	Data Science/Analytics/Clinical & Business Intelligence
MLAI09	Cognitive Computing and Real-World Data in a Breast Cancer Clinic	Data Science/Analytics/Clinical & Business Intelligence
MLAI10	Networking Lunch	(none)
MLAI11	How AI Enabled a Community Hospital to Tackle Clinical Variation and Reduce Length-of-Stay	Data Science/Analytics/Clinical & Business Intelligence
MLAI12	Panel Discussion: Healthcare's Innovation Challenge	Data Science/Analytics/Clinical & Business Intelligence
MLAI13	Building a Real-time Community Insights Engine for a Healthcare System: Challenges and Opportunities	Data Science/Analytics/Clinical & Business Intelligence
MLAI14	Networking Break	(none)
MLAI15	Using AI and NLP to Alleviate Physician Burnout	Data Science/Analytics/Clinical & Business Intelligence
MLAI16	Underserved Populations: Addressing Health Challenges in Rural and Native American Communities	Data Science/Analytics/Clinical & Business Intelligence
MLAI17	AI Optimism and the Race for Talent	Data Science/Analytics/Clinical & Business Intelligence
MLAI18	Designing a Successful Citizen Data Science Strategy for Healthcare	Data Science/Analytics/Clinical & Business Intelligence
MLAI19	Integrating an end-to-end AI Solution into Clinical Workflow	Data Science/Analytics/Clinical &

ID	タイトル	トピック分類
		Business Intelligence
MLAI20	Final Thoughts and Takeaways	(none)
MSE01	Welcome and Overview of Microsoft in Health	(none)
MSE02	One Microsoft Intelligent Health Keynote	Consumer, Patient Engagement & Digital/Connected Health
MSE03	What This Means to Our Customers	Consumer, Patient Engagement & Digital/Connected Health
MSE04	Partnering for Rare Disease Patients: How Takeda, Microsoft, and global patient advocacy groups are working together to shorten time to diagnosis	Consumer, Patient Engagement & Digital/Connected Health
MSE05	Optimizing Hospital Operations with Predictive Analytics	Consumer, Patient Engagement & Digital/Connected Health
MSE06	Tele-medicine on Air Force One: Beyond video to a data-driven, evidence-based, virtual care delivery experience	Consumer, Patient Engagement & Digital/Connected Health
MSE07	Innovation Awards & Closing Remarks	Consumer, Patient Engagement & Digital/Connected Health
NI1	Nursing's Unique Role in Care Coordination	Clinical Informatics & Clinician Engagement
NI2	Incorporating Social and Behavioral Determinants of Health in Patient Care	Clinical Informatics & Clinician Engagement
NI3	Innovative Utilization Management: Addressing the ED Frequent Flyer Challenge	Clinical Informatics & Clinician Engagement
NI4	Using Health IT Beyond the EHR to Support Changing Care Models	Clinical Informatics & Clinician Engagement
NI5	Data Across the Continuum of Care	Clinical Informatics & Clinician Engagement
NI6	Technology and the Human Connection: A Personal Perspective	Clinical Informatics & Clinician Engagement
PE1	Opening Keynote: Putting IT in Perspective: A Journey	Improving Quality

ID	タイトル	トピック分類
	through Health IT	Outcomes Through Health Information and Technology
PE2	Reengineering Healthcare Delivery through Innovation	Clinical Informatics & Clinician Engagement
PE3	The Green Button Project: Deploying an Informatics Consult Service at an Academic Medical Center	Improving Quality Outcomes Through Health Information and Technology
PE4	What is Holding You Back From an EHR Revolution?	Clinical Informatics & Clinician Engagement
PE5	Transitioning from Unintelligible to Intelligent Documentation	Clinical Informatics & Clinician Engagement
PE6	Closing Keynote: Being a Physician Leader in a Challenging Environment	Clinical Informatics & Clinician Engagement
PHF01	Lunch	(none)
PHF02	Keynote: The Journey to a More Patient-Focused Sustainable Health System	Innovation, Entrepreneurship and Venture Investment
PHF03	The Evolving Healthcare Ecosystem: What Do Providers Want From Pharma?	Improving Quality Outcomes Through Health Information and Technology
PHF04	Emerging Trends: Life Sciences, Payers and Value-Based Care	Innovation, Entrepreneurship and Venture Investment
PHF05	Networking Break	(none)
PHF06	More and Better Data: Partnering to Improve Clinical Outcomes	Healthcare Applications and Technologies Enabling Care Delivery
PHF07	Pfizer Spotlight: How Digital Technology is Changing Pharma	Improving Quality Outcomes Through Health Information and Technology

ID	タイトル	トピック分類
PHF07A	Technology to Drive Patient Engagement in a Digital World	Improving Quality Outcomes Through Health Information and Technology
PHF08	Radical Collaboration breaks down Silos, Drives Innovation	Consumer, Patient Engagement & Digital/Connected Health
PHF09	Networking Reception	(none)
PHF11	Opening Remarks	(none)
PHF12	HIMSS President & CEO Remarks	(none)
PMED01	Networking Breakfast & Badge Pick-up	(none)
PMED02	Welcome Remarks	(none)
PMED03	Overcoming Obstacles, Seizing Opportunities, and Curing Cancer	Precision Medicine and Genomics
PMED04	State of the Industry: Bench to the Bedside	Precision Medicine and Genomics
PMED05	Networking Break	(none)
PMED06	Chronic Care Management: Bridging the Gap Between Daily-Living and Clinical Settings	Precision Medicine and Genomics
PMED08	Synchronizing Precision Medicine Operations Across Two National Community Health Systems	Precision Medicine and Genomics
PMED09	Four Legal Issues for Providers of Precision Medicine	Precision Medicine and Genomics
PMED10	Networking Lunch	(none)
PMED11	Moving Genomics to General Practice	Precision Medicine and Genomics
PMED12	Determining Value of a Precision Medicine Program	Precision Medicine and Genomics
PMED13	Precision Medicine's "Last Mile" Problem	Leadership, Governance, Strategic Planning
PMED14	Networking Break	(none)
PMED15	Ensuring Access to Personalized Medicine: Coverage, Reimbursement and Clinical Implementation	Precision Medicine and Genomics
PMED16	Closing Keynote: A Doctor-Patient's Holistic Perspective	Precision Medicine and

ID	タイトル	トピック分類
		Genomics
PMED18	The mCODE Project: Improving Cancer Care Through Better Interoperability	Precision Medicine and Genomics
PMED21	Final Thoughts and Closing Comments	Precision Medicine and Genomics
PS1	Accelerating Medical Imaging Artificial Intelligence Development Through Natural Language Processing	Data Science/Analytics/Clinical & Business Intelligence
PS10	Patient Attitudes About Point-of-Care Photography	Consumer, Patient Engagement & Digital/Connected Health
PS2	Approaches to Evaluating Quality of Clinical Documentation: A Comparative Analysis	Clinical Informatics & Clinician Engagement
PS3	Attack Modeling and Mitigation Strategies for Networked Medical Devices	Public Policy, Reporting, and Risk Management
PS4	Generalizability Study of Deep learning based Heart Failure Predictive Model	Data Science/Analytics/Clinical & Business Intelligence
PS5	A Framework for Risk-Based Assessment of Computerized Medical Devices	Cybersecurity, Privacy and Security
PS6	Implementation of EHR Systems for Medicinal Cannabis	Healthcare Applications and Technologies Enabling Care Delivery
PS7	Infographics: Maximize Engagement and Critical Thinking	Cybersecurity, Privacy and Security
PS8	Interprofessional Education, a Critical Skill for Health IT Professionals	Health Informatics Education, Career/Workforce Development and Academia
PS9	Optimization-based Models for Assessing Risk of Heart Disease in Diabetic Patients	Health Informatics Education, Career/Workforce Development and

ID	タイトル	トピック分類
		Academia
PSEC1	Development and Application of an Overall Health Metric	Population Health Management and Public Health
PSEC10	Utilizing virtual care for South Carolina patients during Hurricane Florence	Consumer, Patient Engagement & Digital/Connected Health
PSEC2	Development of a Trust Framework for a State Health Information Exchange	Health Information Exchange, Interoperability & Data Integration and Standards
PSEC3	Driving Successful Clinician Engagement in a Large Technology Implementation	Clinical Informatics & Clinician Engagement
PSEC4	Enhancing Pharmacist Intervention by Implementing CDS for Pregnant Patients	Improving Quality Outcomes Through Health Information and Technology
PSEC5	Health Data Breaches: Examining Trends	Cybersecurity, Privacy and Security
PSEC6	A Holistic Approach to Telehealth Training as Part of Service Development	Process Improvement, Workflow, Change Management
PSEC7	The Impact of Prescription Drug Monitoring Programs on Patient Outcomes	Improving Quality Outcomes Through Health Information and Technology
PSEC9	Startup Intake: How iHub/Healthcare Transformation Lab Collaborates with Startups	Innovation, Entrepreneurship and Venture Investment
PTS01	Networking Breakfast & Badge Pick-up	(none)
PTS02	Welcome Remarks	(none)
PTS03	Empathy by Design	Leadership, Governance, Strategic Planning
PTS04	State of the Industry: Hardwiring Patient Engagement	Data

ID	タイトル	トピック分類
	& Experience	Science/Analytics/Clinical & Business Intelligence
PTS05	Networking Break	(none)
PTS06	Improve Quality of Life with Patient Reported Outcomes	Consumer, Patient Engagement & Digital/Connected Health
PTS07	Smarter Care: The AI Driven Patient Experience	Consumer, Patient Engagement & Digital/Connected Health
PTS08	Meaningful Engagement through Behavior Change Design	Clinical Informatics & Clinician Engagement
PTS09	Patient Experience Genius Bar	Consumer, Patient Engagement & Digital/Connected Health
PTS10	Networking Lunch	(none)
PTS11	Modernizing Healthcare in Today's Consumer-Based Economy	Consumer, Patient Engagement & Digital/Connected Health
PTS12	Is This for You or Me? Best Practices for Co-Designed Patient Information	Consumer, Patient Engagement & Digital/Connected Health
PTS13	Dignity Health Boosts Medication Adherence with SMART on FHIR	Data Science/Analytics/Clinical & Business Intelligence
PTS14	Networking Break	(none)
PTS15	Final Thoughts and Takeaways	(none)
PTS16	Virtual Reality Delivers 360-Degrees of Patient Satisfaction	Data Science/Analytics/Clinical & Business Intelligence
PTS17	Connecting People, Systems, and Settings to Drive Action and Engagement	(none)
PTS18	Keynote: The Road to Healthcare's True North	Consumer, Patient Engagement & Digital/Connected Health

ID	タイトル	トピック分類
PTS19	Patient & Provider Expectations: Elevating the Human Experience	Consumer, Patient Engagement & Digital/Connected Health
PTS20	Removing Transportation Barriers to Care	Consumer, Patient Engagement & Digital/Connected Health
RCSS01	Networking Breakfast & Badge Pick-up	(none)
RCSS02	Welcome Remarks	(none)
RCSS03	Keynote: Securing the Consumer-Driven Revenue Cycle	Leadership, Governance, Strategic Planning
RCSS04	Transparency and other Hallmarks of the Patient-Centered Revenue Cycle	(none)
RCSS05	Networking Break	(none)
RCSS06	Closing Comments	Process Improvement, Workflow, Change Management
RCSS07	Meet the Patient As Payer	Leadership, Governance, Strategic Planning
RCSS08	The Patient Behind the Bill: Creating a More Satisfying Financial Journey	Leadership, Governance, Strategic Planning
RCSS09	Re-engineering Check-in to Improve the Patient Experience	Leadership, Governance, Strategic Planning
RCSS10	Networking Lunch	(none)
RCSS11	Machine Learning and Other Technology Redefining the Revenue Cycle	Leadership, Governance, Strategic Planning
RCSS12	Get Utilization Review Right With Physician Advisors: Here's How	(none)
RCSS13	Break Down Silos to Improve the Patient Financial Experience	Leadership, Governance, Strategic Planning
RCSS14	Networking Break	(none)
RCSS15	Boost Staff Productivity with Gamification, Small Data & Advanced Analytics	Improving Quality Outcomes Through Health Information and Technology

ID	タイトル	トピック分類
RCSS16	AI, Workforce Development, and Other Key Takeaways	(none)
RCSS17	Navigating Patient-Centric Financing Options	Data Science/Analytics/Clinical & Business Intelligence
RCSS18	Owning the Patient Financial Experience: A Catholic Health Initiatives Case Study	Data Science/Analytics/Clinical & Business Intelligence
SC1	Opening Keynote: Uncovering Strategic Assets for Achieving Health System Performance	Clinically Integrated Supply Chain
SC2	Achieving the Triple Aim: Building a Sound Supply Chain Infrastructure	Clinically Integrated Supply Chain
SC3	Using Data to Generate Evidence Which Drives Value	Clinically Integrated Supply Chain
SC4	Securing the Clinically-Integrated Supply Chain	Clinically Integrated Supply Chain
SC5	Scaling the Supply Chain: Perspectives from Academic Medical Centers	Clinically Integrated Supply Chain
SC6	Closing Keynote: Supply Chain 3.0: A Glimpse into the Future	Clinically Integrated Supply Chain
SI1	Guide to Health IT Career Success	Health Informatics Education, Career/Workforce Development and Academia
SI2	I am Graduating...what's next?	Health Informatics Education, Career/Workforce Development and Academia
V10	Real Life Lessons Learned: Late Stage Strategies	Innovation, Entrepreneurship and Venture Investment
V16	ThirdEye Sponsor Announcement	Innovation, Entrepreneurship and Venture Investment

ID	タイトル	トピック分類
V8	Strategic Investing Pt. 2: Payers	Innovation, Entrepreneurship and Venture Investment
VC0	Breakfast & Registration	Innovation, Entrepreneurship and Venture Investment
VC1	Welcome and Introduction	Innovation, Entrepreneurship and Venture Investment
VC11	Real Life Lessons Learned: Early Stage Stories	Innovation, Entrepreneurship and Venture Investment
VC12	Announcement of Series A Pitch Winners & Closing Remarks	Innovation, Entrepreneurship and Venture Investment
VC13	Health 2.0 VentureConnect Reception	Innovation, Entrepreneurship and Venture Investment
VC14	Unique Exposures Facing Digital Health Companies	Innovation, Entrepreneurship and Venture Investment
VC2	Health Tech Investment and Market Trends	Innovation, Entrepreneurship and Venture Investment
VC3	Traditional VCs and Their Position on Digital Health in 2019	Innovation, Entrepreneurship and Venture Investment
VC4	Coffee Break and Networking	Innovation, Entrepreneurship and Venture Investment
VC5	Series A Pitch Competition Presentations	Innovation, Entrepreneurship and Venture Investment
VC6	Networking Luncheon	Innovation, Entrepreneurship and

ID	タイトル	トピック分類
		Venture Investment
VC7	Strategic Investing Pt. 1: Healthcare Organizations	Innovation, Entrepreneurship and Venture Investment
VC9	Coffee Break and Networking	Innovation, Entrepreneurship and Venture Investment
WHITM M01	Women in Health IT Mentor Meetup	(none)
WS1	Creating and Sustaining Process Improvement: Applying Lean & Six-Sigma Tools and Change Management to Achieve Organizational Success	Process Improvement, Workflow, Change Management
WS2	Project Management: Prioritizing, Managing and Controlling your Project and Application Portfolios	Process Improvement, Workflow, Change Management
WS3	Developing an Effective Sales Strategy	Innovation, Entrepreneurship and Venture Investment
WS4	Marketing for Healthcare Startups	Innovation, Entrepreneurship and Venture Investment

4.3 表3 トピック分類別教育セッション一覧

ID	タイトル	トピック分類
NI1	Nursing's Unique Role in Care Coordination	Clinical Informatics & Clinician Engagement
NI2	Incorporating Social and Behavioral Determinants of Health in Patient Care	Clinical Informatics & Clinician Engagement
PE2	Reengineering Healthcare Delivery through Innovation	Clinical Informatics & Clinician Engagement
NI3	Innovative Utilization Management: Addressing the ED Frequent Flyer Challenge	Clinical Informatics & Clinician Engagement
PTS08	Meaningful Engagement through Behavior Change Design	Clinical Informatics & Clinician Engagement
NI4	Using Health IT Beyond the EHR to Support Changing Care Models	Clinical Informatics & Clinician Engagement
PE4	What is Holding You Back From an EHR Revolution?	Clinical Informatics & Clinician Engagement
NI5	Data Across the Continuum of Care	Clinical Informatics & Clinician Engagement
PE5	Transitioning from Unintelligible to Intelligent Documentation	Clinical Informatics & Clinician Engagement
NI6	Technology and the Human Connection: A Personal Perspective	Clinical Informatics & Clinician Engagement
PE6	Closing Keynote: Being a Physician Leader in a Challenging Environment	Clinical Informatics & Clinician Engagement
13	Enhancing Care with Artificial Intelligence-Driven Interactive Multimedia Reports	Clinical Informatics & Clinician Engagement
30	Clinical Impact and Value of Workstation Single Sign-On	Clinical Informatics & Clinician Engagement
44	Quality Payment Program Year 3	Clinical Informatics & Clinician Engagement
47	Public Health Extension of the Primary Care EHR	Clinical Informatics & Clinician Engagement
64	Clinician Satisfaction: Digitalizing ID Clinical Guidelines	Clinical Informatics & Clinician Engagement

ID	タイトル	トピック分類
81	Smartphones Are Driving Clinical Transformation	Clinical Informatics & Clinician Engagement
99	Novel EHR Tools to Assist with Organ Procurement Workflows	Clinical Informatics & Clinician Engagement
PS2	Approaches to Evaluating Quality of Clinical Documentation: A Comparative Analysis	Clinical Informatics & Clinician Engagement
PSEC3	Driving Successful Clinician Engagement in a Large Technology Implementation	Clinical Informatics & Clinician Engagement
113	Meaningful Measures Initiative	Clinical Informatics & Clinician Engagement
119	Integration of Registry Data into Clinical Care Process	Clinical Informatics & Clinician Engagement
153	Managing Physician Burnout: Using the EHR as a Clinical Extender	Clinical Informatics & Clinician Engagement
196	Effective Education Utilizing Multiple Modes of Technology	Clinical Informatics & Clinician Engagement
233	Initiative to Advance Interoperability	Clinical Informatics & Clinician Engagement
258	Facilitating Improved End-of-Life Care	Clinical Informatics & Clinician Engagement
266	Burnout: How EHR Usability Improves Efficiency and Satisfaction	Clinical Informatics & Clinician Engagement
270	Data Science Reduces Anatomic Pathology Reporting Errors	Clinical Informatics & Clinician Engagement
289	Electronic Tracking of Endoscopes: Benefits and Best Practices	Clinical Informatics & Clinician Engagement
290	Predictive Public Health: Leveraging Technology and Behavioural Insights	Clinical Informatics & Clinician Engagement
SC1	Opening Keynote: Uncovering Strategic Assets for Achieving Health System Performance	Clinically Integrated Supply Chain
SC2	Achieving the Triple Aim: Building a Sound Supply Chain Infrastructure	Clinically Integrated Supply Chain
SC3	Using Data to Generate Evidence Which Drives Value	Clinically Integrated Supply Chain

ID	タイトル	トピック分類
SC4	Securing the Clinically-Integrated Supply Chain	Clinically Integrated Supply Chain
SC5	Scaling the Supply Chain: Perspectives from Academic Medical Centers	Clinically Integrated Supply Chain
SC6	Closing Keynote: Supply Chain 3.0: A Glimpse into the Future	Clinically Integrated Supply Chain
23	\$8.6M in CapEx Savings: A Case Study on Sharing Medical Equipment	Clinically Integrated Supply Chain
102	Managing Population Health: A Supply and Demand Challenge	Clinically Integrated Supply Chain
168	Counterfeit Pharmaceuticals Supply Chain	Clinically Integrated Supply Chain
PTS18	Keynote: The Road to Healthcare's True North	Consumer, Patient Engagement & Digital/Connected Health
PTS07	Smarter Care: The AI Driven Patient Experience	Consumer, Patient Engagement & Digital/Connected Health
PTS06	Improve Quality of Life with Patient Reported Outcomes	Consumer, Patient Engagement & Digital/Connected Health
PTS09	Patient Experience Genius Bar	Consumer, Patient Engagement & Digital/Connected Health
PTS11	Modernizing Healthcare in Today's Consumer-Based Economy	Consumer, Patient Engagement & Digital/Connected Health
PTS20	Removing Transportation Barriers to Care	Consumer, Patient Engagement & Digital/Connected Health
PTS12	Is This for You or Me? Best Practices for Co-Designed Patient Information	Consumer, Patient Engagement & Digital/Connected Health
PTS19	Patient & Provider Expectations: Elevating the Human Experience	Consumer, Patient Engagement &

ID	タイトル	トピック分類
		Digital/Connected Health
16	Remote Monitoring Shows Significant Pop Health Benefits	Consumer, Patient Engagement & Digital/Connected Health
29	Elevating the Patient's Digital Experience	Consumer, Patient Engagement & Digital/Connected Health
33	Empowerment, Activation and Engagement for Digital Health	Consumer, Patient Engagement & Digital/Connected Health
49	Empowering Consumers with Data to Improve Chronic Disease Conditions	Consumer, Patient Engagement & Digital/Connected Health
52	Evolution of the Healthcare Consumer Contact Center	Consumer, Patient Engagement & Digital/Connected Health
PHF08	Radical Collaboration breaks down Silos, Drives Innovation	Consumer, Patient Engagement & Digital/Connected Health
63	Design a Model for the Delivery of Digital Health Guidance	Consumer, Patient Engagement & Digital/Connected Health
67	Patient Portals: Critical for Consumer-Driven Care	Consumer, Patient Engagement & Digital/Connected Health
80	Call Center Turned Strategic Patient Engagement Engine	Consumer, Patient Engagement & Digital/Connected Health
95	SMART on FHIR Integration to Improve Medication Adherence	Consumer, Patient Engagement & Digital/Connected Health
PS10	Patient Attitudes About Point-of-Care Photography	Consumer, Patient Engagement & Digital/Connected Health

ID	タイトル	トピック分類
PSEC 10	Utilizing virtual care for South Carolina patients during Hurricane Florence	Consumer, Patient Engagement & Digital/Connected Health
MSE02	One Microsoft Intelligent Health Keynote	Consumer, Patient Engagement & Digital/Connected Health
121	Creating a Digital Patient Experience Strategy from Scratch	Consumer, Patient Engagement & Digital/Connected Health
MSE03	What This Means to Our Customers	Consumer, Patient Engagement & Digital/Connected Health
MSE04	Partnering for Rare Disease Patients: How Takeda, Microsoft, and global patient advocacy groups are working together to shorten time to diagnosis	Consumer, Patient Engagement & Digital/Connected Health
MSE05	Optimizing Hospital Operations with Predictive Analytics	Consumer, Patient Engagement & Digital/Connected Health
MSE06	Tele-medicine on Air Force One: Beyond video to a data-driven, evidence-based, virtual care delivery experience	Consumer, Patient Engagement & Digital/Connected Health
MSE07	Innovation Awards & Closing Remarks	Consumer, Patient Engagement & Digital/Connected Health
125	Personalize Patient Relationships and Connect Care Journeys	Consumer, Patient Engagement & Digital/Connected Health
152	Patient Engagement As a Key to Bundled Payment Model Success	Consumer, Patient Engagement & Digital/Connected Health
169	Medicare Reimbursement and Connected Health: Where Are We?	Consumer, Patient Engagement & Digital/Connected Health
180	New Horizons in Patient-Directed Exchange	Consumer, Patient Engagement &

ID	タイトル	トピック分類
		Digital/Connected Health
198	Creating the Next Generation of Digital Engagement	Consumer, Patient Engagement & Digital/Connected Health
207	Digitizing Mental Health Support Through Internet-Delivered Cognitive Behavioral Therapy (iCBT) Technology	Consumer, Patient Engagement & Digital/Connected Health
CHC01	Welcome Remarks	Consumer, Patient Engagement & Digital/Connected Health
208	Best Practices for Optimizing Core EHR Systems	Consumer, Patient Engagement & Digital/Connected Health
245	Patient Engagement is Changing: Trends and Health System Successes	Consumer, Patient Engagement & Digital/Connected Health
252	Engage Consumers and Build Loyalty with Data-Driven Marketing	Consumer, Patient Engagement & Digital/Connected Health
283	Patient Loyalty in Healthcare: An Innovative New Approach	Consumer, Patient Engagement & Digital/Connected Health
309	Digitally Transforming Patient and Caregiver Experiences	Consumer, Patient Engagement & Digital/Connected Health
8	How Consumer Technology is Revolutionizing Our Daily Lives	Consumerization of Health
94	Transparency in Prescription Drug Costs to Help Patients Save Money	Consumerization of Health
CHC02	Keynote: Health @ Work	Consumerization of Health
CHC03	Health Behaviors in Context: Consumer, Patient or Employee?	Consumerization of Health
211	Retail Healthcare Care Delivery Evolution	Consumerization of Health
CHC04	Digital Traction in Consumerization of Healthcare	Consumerization of Health

ID	タイトル	トピック分類
CHC05	'Retailing' the Back End: Cost, Quality & Payment	Consumerization of Health
CHC07	Issue Focus: Health Data Monetization & The Data Economy	Consumerization of Health
CHC08	Data Set: Design's Bottom Line Impact	Consumerization of Health
CHC09	Going Retail	Consumerization of Health
CHC10	Fireside Chat: Putting Consumerization to Work in Diabetes	Consumerization of Health
273	Integrating Financial Data for a Better Consumer Experience	Consumerization of Health
CHC12	Consumers & Aging: Why You Should Adjust Your Headspace	Consumerization of Health
288	Centralized Provider Data: Foundation for Digital Innovation	Consumerization of Health
CHC13	Can Prevention Be Trendy?	Consumerization of Health
CHC14	Immersive Technologies in Health	Consumerization of Health
CHC15	Closing Keynote: Calling All Robots	Consumerization of Health
4	Leveraging Electronic Health Records to Discover Effective Care Coordination Practice Patterns	Culture of Care & Care Coordination
65	Managing 600+ EHR Instances in One of the World's Most Diverse Cities	Culture of Care & Care Coordination
105	Using Technology to Align Treatment with End-of-Life Goals	Culture of Care & Care Coordination
133	Optimizing Health Information Technology to Promote Opioid Stewardship	Culture of Care & Care Coordination
230	Analysis of Centura Health's Population Management Initiatives	Culture of Care & Care Coordination
260	Patient-Centered Referral Workflow Automation	Culture of Care & Care Coordination
279	Telestroke Continuum of Care: EMS Through Discharge Clinic	Culture of Care & Care Coordination
308	Optimizing Care Transitions Across the Continuum	Culture of Care & Care Coordination
CYB1	Opening Keynote: Looking Towards the Future with Teachings from the Past	Cybersecurity, Privacy and Security

ID	タイトル	トピック分類
CYB2	Don't Let Your IT and OT Systems Become Antiques!	Cybersecurity, Privacy and Security
CYB3	Harnessing Medical Device Risk	Cybersecurity, Privacy and Security
CYB4	Healthcare Cybersecurity Check-Up: Achieving and Measuring Excellence	Cybersecurity, Privacy and Security
CYB5	The NIST Privacy Framework: What It Is And What It Means For You	Cybersecurity, Privacy and Security
CLO14	How to Ensure Your Organization Moves Safely to the Cloud	Cybersecurity, Privacy and Security
CYB6	Closing Keynote: Full Speed Ahead: How to Thrive and Succeed!	Cybersecurity, Privacy and Security
CYBR	Closing Reception: Cybersecurity Forum	Cybersecurity, Privacy and Security
25	Reactions from the Field: Cybersecurity	Cybersecurity, Privacy and Security
31	An Update on HIPAA Compliance and Enforcement from the HHS Office for Civil Rights	Cybersecurity, Privacy and Security
34	Forging a Stronger Approach for the Cybersecurity Challenge	Cybersecurity, Privacy and Security
51	"Don't Be Phooled!": What You Need to Know About Phishing	Cybersecurity, Privacy and Security
68	Securing a Picture Archiving and Communication System (PACS)	Cybersecurity, Privacy and Security
72	Mitigating the Next Generation of Risk: Connected Devices	Cybersecurity, Privacy and Security
76	Defeat Nation State Actors Stalking the Healthcare Sector	Cybersecurity, Privacy and Security
82	Overview of 405d Cybersecurity Guidance Document	Cybersecurity, Privacy and Security
85	Assessing When a Vendor's Security Incident Is a Breach	Cybersecurity, Privacy and Security
103	Let's Get Real: Targeting Legal Risk and Threat Intelligence	Cybersecurity, Privacy and Security

ID	タイトル	トピック分類
PS5	A Framework for Risk-Based Assessment of Computerized Medical Devices	Cybersecurity, Privacy and Security
PS7	Infographics: Maximize Engagement and Critical Thinking	Cybersecurity, Privacy and Security
PSEC5	Health Data Breaches: Examining Trends	Cybersecurity, Privacy and Security
109	Blockchain Privacy, Security, Compliance and Regulation	Cybersecurity, Privacy and Security
120	Building Business Narratives to Sell Security to the Board	Cybersecurity, Privacy and Security
137	Turning Good Information Security Into Good HIPAA Compliance	Cybersecurity, Privacy and Security
149	Presenting the Case for Cybersecurity Education of Clinicians	Cybersecurity, Privacy and Security
154	Building a Cybersecurity Strategy in a Hospital	Cybersecurity, Privacy and Security
171	Healthcare Information and Technology in the Age of GDPR	Cybersecurity, Privacy and Security
188	Proactive and Preventative Vendor Security Management	Cybersecurity, Privacy and Security
212	Streamline Payment Card Industry (PCI) Compliance in a Diverse Hospital Environment	Cybersecurity, Privacy and Security
215	Cyber Fluency: Si Vis, Pacem Para Bellum	Cybersecurity, Privacy and Security
223	Secure Medical Device Procurement	Cybersecurity, Privacy and Security
228	Steps to a Full-Lifecycle Drug Diversion Monitoring Program	Cybersecurity, Privacy and Security
229	Artificial Intelligence Helps Put Privacy on Autopilot	Cybersecurity, Privacy and Security
240	Blockchain: Beyond the Hype - What Is Really Motivating It?	Cybersecurity, Privacy and Security
246	Remote Access Security: An Ethical Hack Demo	Cybersecurity, Privacy and Security

ID	タイトル	トピック分類
257	Medical Device Cybersecurity Incident Preparedness/Response	Cybersecurity, Privacy and Security
259	How to Close Biomedical HIPAA Compliance and Security Gaps	Cybersecurity, Privacy and Security
274	Cybersecurity in a Digital Transformation World	Cybersecurity, Privacy and Security
291	Incoming! Medical Device Cybersecurity Alerts on the Rise	Cybersecurity, Privacy and Security
CLO03	Keynote: Innovation with a Cause: Better and Safer Care	Data Science/Analytics/Clinical & Business Intelligence
MLAI03	Keynote: Synergies Between Man and Machine	Data Science/Analytics/Clinical & Business Intelligence
BG1	Big Data Drives Radical Change	Data Science/Analytics/Clinical & Business Intelligence
MLAI17	AI Optimism and the Race for Talent	Data Science/Analytics/Clinical & Business Intelligence
CLO07	Human Health, Well-Being and Machine Learning	Data Science/Analytics/Clinical & Business Intelligence
PTS04	State of the Industry: Hardwiring Patient Engagement & Experience	Data Science/Analytics/Clinical & Business Intelligence
MLAI04	State of the Industry: Machine Learning and Artificial Intelligence in Healthcare	Data Science/Analytics/Clinical & Business Intelligence
CLO04	Cloud Analytics: A Fast Lane to Enable Real-World Evidence	Data Science/Analytics/Clinical & Business Intelligence
BG2	Getting Started: Modeling the Structure and Operations of Big Data	Data Science/Analytics/Clinical & Business Intelligence

ID	タイトル	トピック分類
CLO08	Data & Cloud Infrastructure: Building Blocks for Healthcare Transformation	Data Science/Analytics/Clinical & Business Intelligence
MLAI08	Machine Learning to Predict Risk and Enhance Efficiency	Data Science/Analytics/Clinical & Business Intelligence
BG3	Clinicians Views and Experiences with Big Data	Data Science/Analytics/Clinical & Business Intelligence
CLO09	Early Prediction of Sepsis: How to Tackle a Lethal Threat	Data Science/Analytics/Clinical & Business Intelligence
MLAI09	Cognitive Computing and Real-World Data in a Breast Cancer Clinic	Data Science/Analytics/Clinical & Business Intelligence
RCSS17	Navigating Patient-Centric Financing Options	Data Science/Analytics/Clinical & Business Intelligence
MLAI11	How AI Enabled a Community Hospital to Tackle Clinical Variation and Reduce Length-of-Stay	Data Science/Analytics/Clinical & Business Intelligence
CLO11	Goodbye Legacy Tech, Hello Cloud-Based EMPI for 15 Million Patients	Data Science/Analytics/Clinical & Business Intelligence
MLAI12	Panel Discussion: Healthcare's Innovation Challenge	Data Science/Analytics/Clinical & Business Intelligence
CLO06	Cloud Computing: Morning Wrap-up with Speakers	Data Science/Analytics/Clinical & Business Intelligence
BG4	Big Data Healthcare: A Leader's Story	Data Science/Analytics/Clinical & Business Intelligence
CLO12	A Framework for Innovation: Test, Scale, Fail Quickly	Data Science/Analytics/Clinical &

ID	タイトル	トピック分類
		Business Intelligence
MLAI07	Blockchain & AI: Stronger Together	Data Science/Analytics/Clinical & Business Intelligence
MLAI18	Designing a Successful Citizen Data Science Strategy for Healthcare	Data Science/Analytics/Clinical & Business Intelligence
CLO13	Data has the Power to Tackle Healthcare's Biggest Challenges-- A Case Study	Data Science/Analytics/Clinical & Business Intelligence
RCSS18	Owning the Patient Financial Experience: A Catholic Health Initiatives Case Study	Data Science/Analytics/Clinical & Business Intelligence
MLAI13	Building a Real-time Community Insights Engine for a Healthcare System: Challenges and Opportunities	Data Science/Analytics/Clinical & Business Intelligence
BG5	How Practical Big Data Management can Drive Value in Healthcare	Data Science/Analytics/Clinical & Business Intelligence
CLO15	Industry Snapshot: Cloud Security in Healthcare	Data Science/Analytics/Clinical & Business Intelligence
PTS13	Dignity Health Boosts Medication Adherence with SMART on FHIR	Data Science/Analytics/Clinical & Business Intelligence
MLAI16	Underserved Populations: Addressing Health Challenges in Rural and Native American Communities	Data Science/Analytics/Clinical & Business Intelligence
PTS16	Virtual Reality Delivers 360-Degrees of Patient Satisfaction	Data Science/Analytics/Clinical & Business Intelligence
MLAI19	Integrating an end-to-end AI Solution into Clinical Workflow	Data Science/Analytics/Clinical & Business Intelligence

ID	タイトル	トピック分類
BG6	The Business of Healthcare Data: The Value and Return on Investment in Big Data Analytics	Data Science/Analytics/Clinical & Business Intelligence
CLO16	Sentara's Digital Vision for the Future: A DevSecOps Story	Data Science/Analytics/Clinical & Business Intelligence
MLAI1 5	Using AI and NLP to Alleviate Physician Burnout	Data Science/Analytics/Clinical & Business Intelligence
11	Identifying Risky Drug-Seeking Behavior at the Point of Care	Data Science/Analytics/Clinical & Business Intelligence
35	Powering Research and Analytics with a Data Lake and Hadoop	Data Science/Analytics/Clinical & Business Intelligence
62	Real-Time Machine Learning Pipeline: A Clinical Early Warning Score (EWS) Use-Case	Data Science/Analytics/Clinical & Business Intelligence
79	How Web Bots Freed \$2 Million from a Billing Bottleneck	Data Science/Analytics/Clinical & Business Intelligence
97	Leveraging Data Analytics to Complement Value-Based Approach	Data Science/Analytics/Clinical & Business Intelligence
PS1	Accelerating Medical Imaging Artificial Intelligence Development Through Natural Language Processing	Data Science/Analytics/Clinical & Business Intelligence
PS4	Generalizability Study of Deep learning based Heart Failure Predictive Model	Data Science/Analytics/Clinical & Business Intelligence
114	Overcoming Challenges in Creating Self-Service Analytics	Data Science/Analytics/Clinical & Business Intelligence
128	Using Machine Learning to Drive Innovation-Driven Healthcare	Data Science/Analytics/Clinical &

ID	タイトル	トピック分類
		Business Intelligence
131	Using the Past to Predict the Future with Machine Learning	Data Science/Analytics/Clinical & Business Intelligence
142	Redesigning Clinical Care with Analytics	Data Science/Analytics/Clinical & Business Intelligence
147	Approaching Persistent Problems in Health IT Through Science	Data Science/Analytics/Clinical & Business Intelligence
148	Quality Data Automation: A Journey with Business Intelligence	Data Science/Analytics/Clinical & Business Intelligence
165	Machine Learning Over Our Growing Electronic Health Records	Data Science/Analytics/Clinical & Business Intelligence
200	Deriving Value from Patient Flow Analytics	Data Science/Analytics/Clinical & Business Intelligence
217	Identification of Rare Events in Narrative EHR Data	Data Science/Analytics/Clinical & Business Intelligence
224	Advanced Analytics in Clinical Operations: Framework and ROI	Data Science/Analytics/Clinical & Business Intelligence
234	Analytics-Based EHRs Implementation: Improved Outcomes	Data Science/Analytics/Clinical & Business Intelligence
256	Adopting Innovation in the OR: Leading and Managing Change	Data Science/Analytics/Clinical & Business Intelligence
265	Reactions from the Field: AI	Data Science/Analytics/Clinical & Business Intelligence

ID	タイトル	トピック分類
285	Data As an Asset: A Pragmatic Framework for Health Analytics	Data Science/Analytics/Clinical & Business Intelligence
297	Empowering Providers with Data to Affect Behavior and Reduce Cost	Data Science/Analytics/Clinical & Business Intelligence
310	Clinical Analytics Prediction Engine (CAPE)	Data Science/Analytics/Clinical & Business Intelligence
91	Embracing Risk: One CIN's Progressive Value-Based Care Success	Disruptive Care Models
197	Wearable Device Data: Signal or Noise?	Disruptive Care Models
284	Navigating Multi-Hospital, Episode-Based Care Delivery	Disruptive Care Models
58	Humanity and Technology in Medicine: Antithetic or Symbiotic?	Grand Societal Challenges
104	A Quality and Analytics-Based Approach to the Opioid Epidemic	Grand Societal Challenges
271	Deploying a Disaster Response HIE Platform: PULSE California	Grand Societal Challenges
CARC1	CAHIMS Review Course	Health Informatics Education, Career/Workforce Development and Academia
CPRC1	CPHIMS Review Course	Health Informatics Education, Career/Workforce Development and Academia
CD1	Career Advancement	Health Informatics Education, Career/Workforce Development and Academia
CD2	Professional Growth - The Ultimate Super Power!	Health Informatics

ID	タイトル	トピック分類
		Education, Career/Workforce Development and Academia
CD3	The Future of Work!	Health Informatics Education, Career/Workforce Development and Academia
CD4	The Rapidly Changing Environment	Health Informatics Education, Career/Workforce Development and Academia
CD5	Leveraging Continuing Education to Improve Employment Prospects and Professional Profiles	Health Informatics Education, Career/Workforce Development and Academia
CD6	Facilitated Small Group Discussions	Health Informatics Education, Career/Workforce Development and Academia
19	NI Fellowship: Developing Future Nurse Informaticists	Health Informatics Education, Career/Workforce Development and Academia
PS8	Interprofessional Education, a Critical Skill for Health IT Professionals	Health Informatics Education, Career/Workforce Development and Academia
PS9	Optimization-based Models for Assessing Risk of Heart	Health Informatics

ID	タイトル	トピック分類
	Disease in Diabetic Patients	Education, Career/Workforce Development and Academia
170	Hiring and Retaining the Right Healthcare Technology Staff	Health Informatics Education, Career/Workforce Development and Academia
179	Global Health Informatics Competencies: Recommendations for Interprofessional Care Delivery	Health Informatics Education, Career/Workforce Development and Academia
187	Competency-Based Education: Solving Today's Health Information and Technology Needs	Health Informatics Education, Career/Workforce Development and Academia
287	Telehealth Training: Lessons and Future Directions	Health Informatics Education, Career/Workforce Development and Academia
292	EU/US Collaborations to Ensure a Capable eHealth Workforce	Health Informatics Education, Career/Workforce Development and Academia
SI1	Guide to Health IT Career Success	Health Informatics Education, Career/Workforce Development and Academia
SI2	I am Graduating...what's next?	Health Informatics

ID	タイトル	トピック分類
		Education, Career/Workforce Development and Academia
INT1	Breaking Down the Silos: Connecting the Public Policy Dots	Health Information Exchange, Interoperability & Data Integration and Standards
INT2	Clinical Informatics In the Age of FHIR: How API-Based Technologies are Transforming Healthcare	Health Information Exchange, Interoperability & Data Integration and Standards
INT3	Analyze the Remaining Gaps as Data Exchange is Expanded to Broader Stakeholder Groups in Support of Innovation	Health Information Exchange, Interoperability & Data Integration and Standards
INT4	A Use Case RoadMap: Driving Policies & Standards	Health Information Exchange, Interoperability & Data Integration and Standards
INT5	Payers Role in Health Information Exchange	Health Information Exchange, Interoperability & Data Integration and Standards
INT6	Putting It All Together: Unlocking the Potential of Tomorrow	Health Information Exchange, Interoperability & Data Integration and Standards
6	PULSE: A Health IT Disaster Response Platform	Health Information Exchange, Interoperability & Data Integration and Standards
9	MHS CIO – Standardizing, Modernizing, Securing Health IT	Health Information Exchange, Interoperability & Data Integration and

ID	タイトル	トピック分類
		Standards
15	Five Best Practices for Improving Transitions in Care with HIE	Health Information Exchange, Interoperability & Data Integration and Standards
18	Advancing Patient Matching to Promote Interoperability	Health Information Exchange, Interoperability & Data Integration and Standards
20	Patient-Centric Health Information Exchange	Health Information Exchange, Interoperability & Data Integration and Standards
27	Policy Update from the Office of the National Coordinator for Health IT (ONC)	Health Information Exchange, Interoperability & Data Integration and Standards
40	Improving Care Coordination with Nationwide Data Exchange	Health Information Exchange, Interoperability & Data Integration and Standards
88	HIE Emergency Preparedness and Response: RSVPs from Florence and Michael	Health Information Exchange, Interoperability & Data Integration and Standards
92	Unlocking Healthcare Data: The Evolution and Ramifications of Blockchain	Health Information Exchange, Interoperability & Data Integration and Standards
98	How to Streamline Cross-Continuum Data for Greater Usability	Health Information Exchange, Interoperability & Data Integration and Standards
101	Enabling Data Interoperability Across the Continuum of Care	Health Information Exchange, Interoperability

ID	タイトル	トピック分類
		& Data Integration and Standards
PSEC2	Development of a Trust Framework for a State Health Information Exchange	Health Information Exchange, Interoperability & Data Integration and Standards
115	Accelerating Transformation Through Policy and Technology	Health Information Exchange, Interoperability & Data Integration and Standards
116	The What and Where of HL7 FHIR 2019	Health Information Exchange, Interoperability & Data Integration and Standards
126	Improving Provider Data Accuracy with Blockchain	Health Information Exchange, Interoperability & Data Integration and Standards
132	Management of Semantics in Structured Laboratory Report	Health Information Exchange, Interoperability & Data Integration and Standards
143	Enhanced Public Health Reporting Using an HIE Network	Health Information Exchange, Interoperability & Data Integration and Standards
155	Unlocking EHRs: How APIs Usher in a New Data Exchange Era	Health Information Exchange, Interoperability & Data Integration and Standards
160	Embracing the IoT: Ideas Are Easy, Execution Is Hard	Health Information Exchange, Interoperability & Data Integration and Standards
182	Demystifying TEFCA: Ins and Outs of the Exchange	Health Information

ID	タイトル	トピック分類
	Framework	Exchange, Interoperability & Data Integration and Standards
195	Style Standards to Improve Data Quality and Interoperability	Health Information Exchange, Interoperability & Data Integration and Standards
201	From Print to Interoperability: Cancer Staging in the EHR	Health Information Exchange, Interoperability & Data Integration and Standards
206	ONC Town Hall	Health Information Exchange, Interoperability & Data Integration and Standards
214	Data Rich, Information Poor – Breaking Barriers and Driving Innovation	Health Information Exchange, Interoperability & Data Integration and Standards
235	Electronic Long-Term Services and Supports (eLTSS) Standards	Health Information Exchange, Interoperability & Data Integration and Standards
248	Cloud Providers: Addressing the Barriers to Interoperability in Healthcare	Health Information Exchange, Interoperability & Data Integration and Standards
267	Standards and Technology Update from ONC	Health Information Exchange, Interoperability & Data Integration and Standards
269	Said the HIE: "Reports of Our Death Are Greatly Exaggerated"	Health Information Exchange, Interoperability & Data Integration and Standards

ID	タイトル	トピック分類
286	Leveraging Network-Wide Opportunities to Manage Population	Health Information Exchange, Interoperability & Data Integration and Standards
306	FHIR Interoperability: Point-of-Care Healthcare Apps in the Real World	Health Information Exchange, Interoperability & Data Integration and Standards
39	The Use of VR for Enhanced Patient Engagement	Healthcare Applications and Technologies Enabling Care Delivery
50	Clozapine Medication Stewardship	Healthcare Applications and Technologies Enabling Care Delivery
56	Pediatric Robotics: A Journey from the Lab to a Child's Home	Healthcare Applications and Technologies Enabling Care Delivery
66	Digital Fluency Within Healthcare: The "New Normal"	Healthcare Applications and Technologies Enabling Care Delivery
PHF06	More and Better Data: Partnering to Improve Clinical Outcomes	Healthcare Applications and Technologies Enabling Care Delivery
74	Enabling Path of Digital Pathology to Personalized Medicine	Healthcare Applications and Technologies Enabling Care Delivery
90	Taking a Patient-Centered Approach to Clinical Communication	Healthcare Applications and Technologies Enabling Care Delivery
PS6	Implementation of EHR Systems for Medicinal Cannabis	Healthcare Applications and Technologies Enabling Care Delivery
107	Modifying the Mobile Application Rating Scale (MARS) to Evaluate Specific Health Applications	Healthcare Applications and Technologies Enabling Care Delivery

ID	タイトル	トピック分類
124	Teaming up for Change: Virtual Care Lessons	Healthcare Applications and Technologies Enabling Care Delivery
158	Augmented Reality in Global Healthcare Delivery and Training	Healthcare Applications and Technologies Enabling Care Delivery
175	Feasibility Study of HIT-Enabled Patient-Reported Outcomes Measures (PROMs) in Home Health	Healthcare Applications and Technologies Enabling Care Delivery
194	Unifying Provider and Payer Data to Propel Value-Based Care	Healthcare Applications and Technologies Enabling Care Delivery
204	To Buy or to Build: How to Get Your Project Off the Ground	Healthcare Applications and Technologies Enabling Care Delivery
210	Driving Physician Engagement and Patient Outcomes with Artificial Intelligence	Healthcare Applications and Technologies Enabling Care Delivery
218	Using Decision Support to Promote Value-Based Prescribing	Healthcare Applications and Technologies Enabling Care Delivery
227	How to Improve Patient Engagement with Transportation	Healthcare Applications and Technologies Enabling Care Delivery
262	Finding the Right Solutions: A Healthcare Organization Meets Federal and State EPCS requirements	Healthcare Applications and Technologies Enabling Care Delivery
HAT1	Opening Keynote: Personal Perspectives: Using Technology to Improve Quality of Life as We Age	Healthy Aging and Technology
HAT2	Aging and Technology: What the Data Tells Us	Healthy Aging and Technology
HAT3	Promoting Quality of Aging: Technological Innovations in Memory Care	Healthy Aging and Technology
HAT4	Promoting Quality of Aging: Care Coordination and Disease Management	Healthy Aging and Technology

ID	タイトル	トピック分類
HAT5	Promoting Quality of Aging: Addressing Social Isolation	Healthy Aging and Technology
HAT6	Closing Keynote: The Future of Technology in the Longevity Economy	Healthy Aging and Technology
239	Promoting End-of-Life Advanced Care Planning Using Health IT	Healthy Aging and Technology
PE1	Opening Keynote: Putting IT in Perspective: A Journey through Health IT	Improving Quality Outcomes Through Health Information and Technology
PE3	The Green Button Project: Deploying an Informatics Consult Service at an Academic Medical Center	Improving Quality Outcomes Through Health Information and Technology
RCSS15	Boost Staff Productivity with Gamification, Small Data & Advanced Analytics	Improving Quality Outcomes Through Health Information and Technology
3	How Embedding Care Standards into the EHR Empowers Clinical Variation Reduction	Improving Quality Outcomes Through Health Information and Technology
32	Providing Payer Insights to Clinicians at the Point of Care	Improving Quality Outcomes Through Health Information and Technology
PHF03	The Evolving Healthcare Ecosystem: What Do Providers Want From Pharma?	Improving Quality Outcomes Through Health Information and Technology
37	Cracking the Code to Better Quality and Financial Outcomes	Improving Quality Outcomes Through Health Information and Technology
43	MHS GENESIS: Transforming the Delivery of Healthcare	Improving Quality

ID	タイトル	トピック分類
		Outcomes Through Health Information and Technology
46	Enhancing Patient Care with Physician-Driven Documentation	Improving Quality Outcomes Through Health Information and Technology
54	Artificial Intelligence vs COPD: The Fight for Patient Health	Improving Quality Outcomes Through Health Information and Technology
PHF07 A	Technology to Drive Patient Engagement in a Digital World	Improving Quality Outcomes Through Health Information and Technology
71	Regional Health-Data Sharing Extends to Food and Nutrition	Improving Quality Outcomes Through Health Information and Technology
PHF07	Pfizer Spotlight: How Digital Technology is Changing Pharma	Improving Quality Outcomes Through Health Information and Technology
89	Team-Based Decision Support in Diabetes: Outcomes and Costs	Improving Quality Outcomes Through Health Information and Technology
PSEC4	Enhancing Pharmacist Intervention by Implementing CDS for Pregnant Patients	Improving Quality Outcomes Through Health Information and Technology
PSEC7	The Impact of Prescription Drug Monitoring Programs on Patient Outcomes	Improving Quality Outcomes Through Health Information and Technology

ID	タイトル	トピック分類
108	Unlocking the Value of Clinical Data	Improving Quality Outcomes Through Health Information and Technology
129	A Validated Strategy to Reduce Error in Electronic Orders	Improving Quality Outcomes Through Health Information and Technology
146	Integrating Acute and Post-Acute Care to Improve Outcomes	Improving Quality Outcomes Through Health Information and Technology
157	Building Continuity of Care for Chatham County Jail Inmates	Improving Quality Outcomes Through Health Information and Technology
163	Clinical Quality and Patient Safety Considerations	Improving Quality Outcomes Through Health Information and Technology
174	Using Real-Time Analytics to Improve Patient Clinical Outcomes	Improving Quality Outcomes Through Health Information and Technology
185	Real-Time Adverse Event Predictive Model Reduces Readmissions	Improving Quality Outcomes Through Health Information and Technology
192	Clinical Optimization: One Approach to Integration	Improving Quality Outcomes Through Health Information and Technology
199	Balancing Value & Burden: CMS Electronic Quality Reporting	Improving Quality Outcomes Through Health Information and

ID	タイトル	トピック分類
		Technology
209	A Business and Clinical Case for Continuous Surveillance	Improving Quality Outcomes Through Health Information and Technology
216	Health Information and Technology in Primary Care: Learnings from CPC+	Improving Quality Outcomes Through Health Information and Technology
226	Amplifying Primary Prevention with Artificial Intelligence	Improving Quality Outcomes Through Health Information and Technology
242	Missouri Model for Optimizing Data for Population Health Management	Improving Quality Outcomes Through Health Information and Technology
243	Improving Sepsis Care with Data Analytics	Improving Quality Outcomes Through Health Information and Technology
264	Artificial Intelligence for Organ Transplantation	Improving Quality Outcomes Through Health Information and Technology
272	Surviving Sepsis: How Health IT Saves One Life Per Week	Improving Quality Outcomes Through Health Information and Technology
275	Reducing Burden Interfacing Public Health and Clinical Care	Improving Quality Outcomes Through Health Information and Technology
277	New Mexico Reduces Avoidable ED Visits with Technology	Improving Quality Outcomes Through Health

ID	タイトル	トピック分類
		Information and Technology
294	Diabetic Retinopathy Screening in the Primary Care Setting	Improving Quality Outcomes Through Health Information and Technology
295	Improving Depression Screening In Primary Care With Health IT	Improving Quality Outcomes Through Health Information and Technology
296	Creating SNF Preferred Provider Networks to Drive Quality Outcomes	Improving Quality Outcomes Through Health Information and Technology
298	Improvement of Quality Scores	Improving Quality Outcomes Through Health Information and Technology
299	Reducing Catheter-Associated Urinary Tract Infection	Improving Quality Outcomes Through Health Information and Technology
300	Improving Pediatric Asthma Outcomes	Improving Quality Outcomes Through Health Information and Technology
302	Achieving the Triple Aim for Children with Medical Complexity	Improving Quality Outcomes Through Health Information and Technology
303	Decreasing CAUTI Through Resilience in Workflow and IT Redesign	Improving Quality Outcomes Through Health Information and Technology
GC19	Scaling Your Startup: A Workshop for Entrepreneurs	Innovation,

ID	タイトル	トピック分類
WS-WKSP 3		Entrepreneurship and Venture Investment
BC1	Moving Toward Conscious Competence: Onboarding for Blockchain in Healthcare	Innovation, Entrepreneurship and Venture Investment
INV1	Overcoming Overwhelming Disruption: What to Do NOW	Innovation, Entrepreneurship and Venture Investment
BC2	I Understand Blockchain, What Else Do I Need to Know?	Innovation, Entrepreneurship and Venture Investment
INV2	Aligning Innovation Strategy to Overall Strategy	Innovation, Entrepreneurship and Venture Investment
BC3	A Top Down look at Blockchain - the Federal Perspective	Innovation, Entrepreneurship and Venture Investment
INV3	Building a Regional Innovation Program: Lessons from Across the Pond	Innovation, Entrepreneurship and Venture Investment
BC4	From Pilot to Process – Implementing Blockchain into the Episode of Care Part 1	Innovation, Entrepreneurship and Venture Investment
INV4	The Playbook for Building Win-Win Startup Partnerships	Innovation, Entrepreneurship and Venture Investment
BC5	From Pilot to Process – Implementing Blockchain into the Episode of Care Part 2	Innovation, Entrepreneurship and Venture Investment
INV5	The Blueprint for Putting Patients at the Center of APIs	Innovation, Entrepreneurship and Venture Investment
BC6	Closing Keynote: The Path Forward	Innovation, Entrepreneurship and

ID	タイトル	トピック分類
		Venture Investment
INV6	Frontline Perspectives on Consumer-Driven Technologies for Better Health Through Information and Technology	Innovation, Entrepreneurship and Venture Investment
21	Enabling Digital Health Innovation: A Real-World NHS Journey	Innovation, Entrepreneurship and Venture Investment
PHF02	Keynote: The Journey to a More Patient-Focused Sustainable Health System	Innovation, Entrepreneurship and Venture Investment
WS3	Developing an Effective Sales Strategy	Innovation, Entrepreneurship and Venture Investment
PHF04	Emerging Trends: Life Sciences, Payers and Value-Based Care	Innovation, Entrepreneurship and Venture Investment
42	Smart Nation, Smart Health: Building a Future-Ready and Sustainable Healthcare System	Innovation, Entrepreneurship and Venture Investment
WS4	Marketing for Healthcare Startups	Innovation, Entrepreneurship and Venture Investment
PSEC9	Startup Intake: How iHub/Healthcare Transformation Lab Collaborates with Startups	Innovation, Entrepreneurship and Venture Investment
VC0	Breakfast & Registration	Innovation, Entrepreneurship and Venture Investment
VC1	Welcome and Introduction	Innovation, Entrepreneurship and Venture Investment
VC2	Health Tech Investment and Market Trends	Innovation, Entrepreneurship and Venture Investment

ID	タイトル	トピック分類
111	Reactions from the Field: Innovation	Innovation, Entrepreneurship and Venture Investment
VC14	Unique Exposures Facing Digital Health Companies	Innovation, Entrepreneurship and Venture Investment
VC3	Traditional VCs and Their Position on Digital Health in 2019	Innovation, Entrepreneurship and Venture Investment
VC4	Coffee Break and Networking	Innovation, Entrepreneurship and Venture Investment
VC5	Series A Pitch Competition Presentations	Innovation, Entrepreneurship and Venture Investment
VC6	Networking Luncheon	Innovation, Entrepreneurship and Venture Investment
145	Digital Medicine Transformation: The New Skill for CIOs	Innovation, Entrepreneurship and Venture Investment
MK20	NursePitch™ Roundtable	Innovation, Entrepreneurship and Venture Investment
VC11	Real Life Lessons Learned: Early Stage Stories	Innovation, Entrepreneurship and Venture Investment
MK21	NursePitch (Pre-Seed and Series A Pitch Competition) Presentations	Innovation, Entrepreneurship and Venture Investment
V16	ThirdEye Sponsor Announcement	Innovation, Entrepreneurship and Venture Investment
VC7	Strategic Investing Pt. 1: Healthcare Organizations	Innovation, Entrepreneurship and

ID	タイトル	トピック分類
		Venture Investment
V8	Strategic Investing Pt. 2: Payers	Innovation, Entrepreneurship and Venture Investment
VC9	Coffee Break and Networking	Innovation, Entrepreneurship and Venture Investment
V10	Real Life Lessons Learned: Late Stage Strategies	Innovation, Entrepreneurship and Venture Investment
VC12	Announcement of Series A Pitch Winners & Closing Remarks	Innovation, Entrepreneurship and Venture Investment
VC13	Health 2.0 VentureConnect Reception	Innovation, Entrepreneurship and Venture Investment
202	Consumer Innovations in Less Than 90 Days	Innovation, Entrepreneurship and Venture Investment
219	State of the Healthcare API Economy	Innovation, Entrepreneurship and Venture Investment
222	Clinical Supply Chain Integration in a Data-Driven Healthcare Environment	Innovation, Entrepreneurship and Venture Investment
236	Innovative Startup Partnerships: Tapping Into Creativity and Experience of Entrepreneurs	Innovation, Entrepreneurship and Venture Investment
251	Navigating Our Way to a Digital Experience	Innovation, Entrepreneurship and Venture Investment
280	Leveraging Blockchain to Transform Clinical Credentialing	Innovation, Entrepreneurship and Venture Investment

ID	タイトル	トピック分類
282	Developing an Internal Innovation Competency and Culture	Innovation, Entrepreneurship and Venture Investment
PTS03	Empathy by Design	Leadership, Governance, Strategic Planning
RCSS03	Keynote: Securing the Consumer-Driven Revenue Cycle	Leadership, Governance, Strategic Planning
CIO1	Opening Keynote	Leadership, Governance, Strategic Planning
RCSS07	Meet the Patient As Payer	Leadership, Governance, Strategic Planning
CIO2	Mid-Morning Keynote	Leadership, Governance, Strategic Planning
RCSS08	The Patient Behind the Bill: Creating a More Satisfying Financial Journey	Leadership, Governance, Strategic Planning
RCSS09	Re-engineering Check-in to Improve the Patient Experience	Leadership, Governance, Strategic Planning
CIO3	Mid-Afternoon Keynote	Leadership, Governance, Strategic Planning
RCSS11	Machine Learning and Other Technology Redefining the Revenue Cycle	Leadership, Governance, Strategic Planning
PMED13	Precision Medicine's "Last Mile" Problem	Leadership, Governance, Strategic Planning
CIO4	Closing Keynote	Leadership, Governance, Strategic Planning
RCSS13	Break Down Silos to Improve the Patient Financial Experience	Leadership, Governance, Strategic Planning
12	Leveraging Business Acumen to Help Clinicians Get IT!	Leadership, Governance, Strategic Planning
22	Ethics of AI in Healthcare: Developing the Right Framework for Innovative Clinical Delivery	Leadership, Governance, Strategic Planning
26	Colorado's Health IT Success: What's Our Secret Sauce?	Leadership, Governance, Strategic Planning
45	Reinventing Organizations through Profound Digital	Leadership, Governance,

ID	タイトル	トピック分類
	Transformation: Lessons Learned from Across Europe	Strategic Planning
57	Aligning Digital and Provider Enterprise Strategies: One Organization's Experience	Leadership, Governance, Strategic Planning
GVTP01	State Policy Learning Lab: Statewide Health IT Roadmaps: Realizing the Value of Advancing Health IT in your State:	Leadership, Governance, Strategic Planning
77	Communicate Value and Build Support for Enterprise Analytics	Leadership, Governance, Strategic Planning
135	Case: Building a Quality-Driven Narrow SNF Network	Leadership, Governance, Strategic Planning
150	Capacity Planning for Inpatient Units	Leadership, Governance, Strategic Planning
162	Innovation at HHS	Leadership, Governance, Strategic Planning
167	Can Information and Technology, Nursing and Informatics Shape Operations? A Case Study	Leadership, Governance, Strategic Planning
184	Achieving Legacy System Retirement and Data Consolidation	Leadership, Governance, Strategic Planning
190	The Intersection Between Interoperability and Value-Based Care Delivery	Leadership, Governance, Strategic Planning
203	Maximizing Synergy Between Federal Health Information and Technology Programs	Leadership, Governance, Strategic Planning
225	Change Management Playbook: Leading Change in Healthcare	Leadership, Governance, Strategic Planning
238	A Practical Approach to Medical Technology Capital Planning	Leadership, Governance, Strategic Planning
BP1	Opioid Stewardship Through Utilization of Opioid Risk Tools	Population Health Management and Public Health
BP2	Perioperative Care, Enhanced Recovery After Surgery and Reducing Opioid Dependency	Population Health Management and Public Health
BP3	Leveraging Analytics to Change Opioid Prescribing Behavior	Population Health Management and Public

ID	タイトル	トピック分類
		Health
BP4	Standardizing Opioid and Drug Abuse Referrals to Rehabilitation	Population Health Management and Public Health
BP5	Anticipating and Preventing Adverse Drug Events from Opioid-related Complications	Population Health Management and Public Health
BP6	Treating Emergency Room Opioid Withdrawal with Buprenorphine	Population Health Management and Public Health
2	Population Health As Ecosystem Engineering	Population Health Management and Public Health
73	Pediatric Population Outcomes Using Health Registries	Population Health Management and Public Health
78	Achieving EMRAM Stage 6: A Collaboration with the Turkey Ministry of Health	Population Health Management and Public Health
83	Bidirectional eReferrals Between Health Systems and YMCAs	Population Health Management and Public Health
96	Smart States and the Push towards Health IT Modernization	Population Health Management and Public Health
PSEC1	Development and Application of an Overall Health Metric	Population Health Management and Public Health
106	Lessons from Israel: Finding Cancers with AI and EHR Data	Population Health Management and Public Health
123	Leveraging Local Data for Public Health with "SMART Scatter"	Population Health Management and Public Health

ID	タイトル	トピック分類
140	Data-Driven Clinical Transformation in an Unhealthy Region	Population Health Management and Public Health
144	Identifying Homelessness Through Data	Population Health Management and Public Health
GVTP0 2	State Policy Learning Lab: Smart Cities & Smart Health Ecosystems: Exploring societal impact & making a difference in underserved communities	Population Health Management and Public Health
159	Predictive Analytics for Data-Driven Care Management	Population Health Management and Public Health
176	Adapting Guidelines for Emergencies in the Digital Age	Population Health Management and Public Health
178	Improving the Flow of Immunization Information: IIS-EHR Interoperability	Population Health Management and Public Health
237	Utilizing Predictive Analytics to Increase the Value of Care	Population Health Management and Public Health
244	Data Analytics As a Population Health Compass	Population Health Management and Public Health
GVTP0 3	State Policy Learning Lab: Bridging the Gap: Health IT Policy Strategies to Connect the Spectrum of Care During Emergencies	Population Health Management and Public Health
278	How to Save Costs Beyond Targeting the Most Costly Patients	Population Health Management and Public Health
304	Managing Populations With An Automated Clinical Risk System	Population Health Management and Public Health
311	AMR Biosurveillance System in the Italian Region of Veneto	Population Health Management and Public Health

ID	タイトル	トピック分類
		Health
PMED 21	Final Thoughts and Closing Comments	Precision Medicine and Genomics
PMED 03	Overcoming Obstacles, Seizing Opportunities, and Curing Cancer	Precision Medicine and Genomics
PMED 04	State of the Industry: Bench to the Bedside	Precision Medicine and Genomics
PMED 06	Chronic Care Management: Bridging the Gap Between Daily-Living and Clinical Settings	Precision Medicine and Genomics
PMED 08	Synchronizing Precision Medicine Operations Across Two National Community Health Systems	Precision Medicine and Genomics
PMED 12	Determining Value of a Precision Medicine Program	Precision Medicine and Genomics
PMED 18	The mCODE Project: Improving Cancer Care Through Better Interoperability	Precision Medicine and Genomics
PMED 11	Moving Genomics to General Practice	Precision Medicine and Genomics
PMED 15	Ensuring Access to Personalized Medicine: Coverage, Reimbursement and Clinical Implementation	Precision Medicine and Genomics
PMED 09	Four Legal Issues for Providers of Precision Medicine	Precision Medicine and Genomics
PMED 16	Closing Keynote: A Doctor-Patient's Holistic Perspective	Precision Medicine and Genomics
38	Augment Healthcare Decisions with Pharmacogenomics	Precision Medicine and Genomics
59	From Real-World Data to Digital Twins: Paving the Way for Personalized Healthcare	Precision Medicine and Genomics
100	Technology to Enable the Clinical Genomics Revolution in Australia	Precision Medicine and Genomics
117	Future of Precision Medicine Platform in South Korea	Precision Medicine and Genomics
134	Implementing Genomics in EHRs: Present and Future	Precision Medicine and Genomics
220	Novel Genomic De-Identification Method to Enable	Precision Medicine and

ID	タイトル	トピック分類
	Research	Genomics
WS1	Creating and Sustaining Process Improvement: Applying Lean & Six-Sigma Tools and Change Management to Achieve Organizational Success	Process Improvement, Workflow, Change Management
WS2	Project Management: Prioritizing, Managing and Controlling your Project and Application Portfolios	Process Improvement, Workflow, Change Management
RCSS06	Closing Comments	Process Improvement, Workflow, Change Management
5	Leveraging EHR Data to Improve OR Operations - A University Hospital Case Study	Process Improvement, Workflow, Change Management
36	Metric Driven Strategy for EHR Continuous Improvement	Process Improvement, Workflow, Change Management
53	Using RTLS Data to Increase Ambulatory Care Capacity	Process Improvement, Workflow, Change Management
86	Mergers and Acquisitions: CIO Change Management Strategies	Process Improvement, Workflow, Change Management
PSEC6	A Holistic Approach to Telehealth Training as Part of Service Development	Process Improvement, Workflow, Change Management
118	Digital Transformation: Uniting the Full Continuum of Care	Process Improvement, Workflow, Change Management
122	Restore Human Connections with Collaboration and Technology	Process Improvement, Workflow, Change Management
138	Uniting and Standardizing Healthcare Provision Across Dubai	Process Improvement, Workflow, Change Management

ID	タイトル	トピック分類
139	Move from Traditional Change Management to Agile Methodology	Process Improvement, Workflow, Change Management
156	Leveraging Technology to Improve Prior Authorization	Process Improvement, Workflow, Change Management
173	Improving Corridor Compliance Through Inventory Analytics	Process Improvement, Workflow, Change Management
191	Managing Multi-Site Workflow in the Era of Consolidation	Process Improvement, Workflow, Change Management
205	Operational Readiness: Often Overlooked Key Success Factor	Process Improvement, Workflow, Change Management
231	Overhauling Information and Technology Service Delivery: A Success Story	Process Improvement, Workflow, Change Management
241	Moral Distress with Burden of Documentation: Call to Action	Process Improvement, Workflow, Change Management
255	The Power of One: A Transformation Journey	Process Improvement, Workflow, Change Management
276	Hold Effective Meetings and Increase Employee Satisfaction	Process Improvement, Workflow, Change Management
305	Census Reporting and Clinical Pathway Management to Optimize Patient Care	Process Improvement, Workflow, Change Management
313	OR Charge Capture Optimization	Process Improvement, Workflow, Change Management
307	Commitment to Results: The Essential Clinical Dataset	Process Improvement, Workflow, Change

ID	タイトル	トピック分類
		Management
87	Interoperability and Patient Engagement	Public Policy, Reporting, and Risk Management
PS3	Attack Modeling and Mitigation Strategies for Networked Medical Devices	Public Policy, Reporting, and Risk Management
177	You've Experienced A Data Breach—Now What? A Crisis Simulation Exercise	Public Policy, Reporting, and Risk Management
250	Applying the Fraud and Abuse Laws in Digital Health	Public Policy, Reporting, and Risk Management
151	Real-Time Patient Safety Monitoring in Clinical Trials	Safe Information and Technology Practices for Patient Care
166	Reporting and Learning from Health IT-Related Events Toward Safer Healthcare	Safe Information and Technology Practices for Patient Care
281	Postanalytic Risk Reduction in Pathology Results Reporting	Safe Information and Technology Practices for Patient Care
312	Decreasing Falls with the Automation of the Beers Criteria Medications	Safe Information and Technology Practices for Patient Care
75	Bending the Cost Curve with Whole-Person Care	Social, Psychosocial & Behavioral Determinants of Health
161	Going Deep into Our Communities with Advanced Data Platform	Social, Psychosocial & Behavioral Determinants of Health
183	Using AI and NLP to Uncover Population Social Determinants of Health Factors	Social, Psychosocial & Behavioral Determinants of Health
213	Developing a Social Determinants of Health Data Model for PRAPARE	Social, Psychosocial & Behavioral Determinants of Health
84	Exploring Critical Success Factors for Telehealth	Telehealth

ID	タイトル	トピック分類
	Implementation	
301	Virtual Care and Clinical Decision Support Improves Sepsis Alert	Telehealth
10	The Real Challenges of Telehealth Adoption	Telehealth
55	Telehealth 301: Beyond the Basics	Telehealth
141	Adapting an Information Technology Infrastructure Library (ITIL) for Effective Telehealth Service Management	Telehealth
172	Virtual Acute Care: Pediatric Physiotherapy with Telehealth	Telehealth
186	Telehealth Urgent Care for Off-Shore Oil and Gas Platforms	Telehealth
189	Telehealth Reimbursement: The Times They Are a Changin'!	Telehealth
193	Implementing a Statewide School-Based Telehealth Program	Telehealth
221	Telehealth and Rising Demand for Behavioral Healthcare	Telehealth
232	Telemedicine Fraud and Abuse Under the Microscope	Telehealth
254	Tele-ICU: The Strategy That Delivers	Telehealth
268	Developing a Large-Scale Tele-Dermatology Program	Telehealth
28	Bring Digital to Life	User Experience, Usability, & User-Centered Design
69	The Human Side of Informatics: Promoting Wellness	User Experience, Usability, & User-Centered Design
136	Three Secrets to Take Control of an Unruly Order Set Catalog	User Experience, Usability, & User-Centered Design
164	Transforming EHR Interactions Using Voice Assistants	User Experience, Usability, & User-Centered Design
181	If You Build It, Build It Well: User-Centered Design and Agile Development Provides User-Delight	User Experience, Usability, & User-Centered Design
247	Software Development for an Exceptional Clinician Experience	User Experience, Usability, & User-Centered Design
CLO01	Networking Breakfast & Badge Pick-up	(none)
MLAIO	Networking Breakfast & Badge Pick-up	(none)

ID	タイトル	トピック分類
1		
PMED 01	Networking Breakfast & Badge Pick-up	(none)
PTS01	Networking Breakfast & Badge Pick-up	(none)
RCSS0 1	Networking Breakfast & Badge Pick-up	(none)
CLO02	Welcome Remarks	(none)
MLAI0 2	Welcome Remarks	(none)
PMED 02	Welcome Remarks	(none)
PTS02	Welcome Remarks	(none)
RCSS0 2	Welcome Remarks	(none)
MH1	Opening Keynote: The Scope, Challenges, and Complexity in Support of the Military Medical Care Mission	(none)
MES	Middle East Summit	(none)
RCSS0 4	Transparency and other Hallmarks of the Patient-Centered Revenue Cycle	(none)
PMED 05	Networking Break	(none)
MH2	Data Flow Dynamics While Transitioning through Echelons of Care	(none)
PTS17	Connecting People, Systems, and Settings to Drive Action and Engagement	(none)
CLO05	Networking Break	(none)
PTS05	Networking Break	(none)
MLAI0 5	Networking Break	(none)
RCSS0 5	Networking Break	(none)
MLAI0 6	AI and Imaging: Your Data as a Strategic Asset	(none)
MH3	Advancing Technology: The Impact on Military Medicine	(none)

ID	タイトル	トピック分類
FT01	First Timers Conference Orientation	(none)
MLAI10	Networking Lunch	(none)
PMED10	Networking Lunch	(none)
PTS10	Networking Lunch	(none)
RCSS10	Networking Lunch	(none)
CLO10	Networking Lunch	(none)
MH4	Clinician Panel: What Matters on the Front Line, What Information is Necessary	(none)
RCSS12	Get Utilization Review Right With Physician Advisors: Here's How	(none)
MH6	Closing Keynote: What's Our Why?	(none)
MLAI14	Networking Break	(none)
PMED14	Networking Break	(none)
PTS14	Networking Break	(none)
CLO20	Networking Break	(none)
RCSS14	Networking Break	(none)
RCSS16	AI, Workforce Development, and Other Key Takeaways	(none)
CLO17	Closing Comments	(none)
MLAI20	Final Thoughts and Takeaways	(none)
PTS15	Final Thoughts and Takeaways	(none)
1	Opening Keynote: Will Consumer-Directed Exchange Disrupt the Healthcare Marketplace?	(none)
7	Congressional Forum	(none)
14	FDA Digital Health Software Pre-Certification Program	(none)
17	First Timers Conference Orientation	(none)
24	About HIMSS: An Orientation to Our Organization	(none)

ID	タイトル	トピック分類
PHF01	Lunch	(none)
LAS	Latin America Summit	(none)
PHF11	Opening Remarks	(none)
41	For Students Only: An Orientation	(none)
48	Federal-State Response to the Opioid Crisis	(none)
PHF05	Networking Break	(none)
60	Reserved for Department of Veterans Affairs Session	(none)
61	Connected Care Delivery Across the World: A HIMSS Multi-National Session	(none)
LL01	HIMSS19 Learning Lounge	(none)
PHF12	HIMSS President & CEO Remarks	(none)
PHF09	Networking Reception	(none)
LL02	HIMSS19 Learning Lounge	(none)
93	Value-Based Care: Defining Value - Including the Patient Perspective	(none)
MSE01	Welcome and Overview of Microsoft in Health	(none)
110	Structuring Data for Value-Based Care	(none)
112	Reserved for Department of Veterans Affairs Session	(none)
127	Integrated Meets Value-Based Care: Aligning Stakeholders' Incentives	(none)
130	The Policy Aspects of International Data Protection Laws: A HIMSS Multi-National Session	(none)
BRS	Brazil Summit	(none)
GCS	Greater China Summit	(none)
LL03	HIMSS19 Learning Lounge	(none)
WHIT MM01	Women in Health IT Mentor Meetup	(none)
CHC06	Lunch	(none)
249	Reserved for Department of Veterans Affairs Session	(none)
CHC11	Networking Break	(none)
293	Healing from Within: Leading Change, Inspiring Action	(none)
314	Closing Keynote: Not Impossible: Pushing the Bar on Innovation	(none)

5. 略語集

ACO	Accountable Care Organization
ADL	Activities of Daily Living
ADS	Authoritative Data Sources
AHIC	American Health Information Community
AHIMA	American Health Information Management Association
AHRQ	Agency for Healthcare Research and Quality
AMA	American Medical Association
ARRA	American Recovery and Reinvestment Act of 2009
ASTM	American Society for Testing and Materials
BPMN	Business Process Modeling Notations
CAH	Critical Access Hospital
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CBT	Cognitive Behavioral Therapy
CCBT	Computer-Based Cognitive Behavioral Therapy
CCD	Continuity of Care Document
CCDA	Consolidated Clinical Document Architecture
CCHIT	Certification Commission for Health Information Technology
CCN	CMS Certification Numbers
CCR	Continuity of Care Record
CDA	Clinical Document Architecture
CDC	Centers for Disease Control and Prevention
CDIS	Clinical Decision Intelligence System
CDISC	Clinical Data Interchange Standards Consortium
CDS	Clinical Decision Support
CDW	Clinical Data Warehouse
CHIME	College of Healthcare Information Management Executives
CHIP	Children's Health Insurance Program
CHIPRA	Children's Health Insurance Program Reauthorization Act of 2009
CIO	Chief Information Officer
CITL	Center for Information Technology Leadership
CKD	Chronic Kidney Disease

CLIA	Clinical Laboratory Improvement Amendments of 1988
CM	Clinical Modification
CMO	Chief Medical Officer
CMS	Centers for Medicare & Medicaid Services
CORE	Council on Operating Rules for Eligibility
CPOE	Computerized physician order entry
CPT codes	Current Procedural Terminology codes
DBR	Disease-Based Registries
DCH	Department of Community Health
DICOM	Digital Imaging and Communication in Medicine
DoD	U.S. Department of Defense
DOQ-IT	Doctor's Office Quality - Information Technology
DPRP	Diabetes Provider Recognition Program (of NCQA)
DQIM	Data Quality Improvement Methodology
DSN	Data Sharing Networks
EA	Enterprise Architecture
EBM	Evidence-based Medicine
EBP	Evidence-based Practice
EHR	Electronic Health Record
EMR	Electronic Medical Record
EP	Electrophysiology
ePHR	electronic Personal Health Record
EPO	Exclusive Provider Organization
FACA	Federal Advisory Committee Act
FDA	U.S. Food and Drug Administration
FDIS	Final Draft International Standard
FFP	Federal Financial Participation
FFS	Fee-For-Service
FFY	Federal Fiscal Year
FNPRM	Final Notice of Proposed Rulemaking / Further Notice of Proposed Rulemaking
FQHC	Federally Qualified Health Center
FTE	Full-Time Equivalent
HCIT	Healthcare Information Technology

HEDIS	Healthcare Effectiveness Data and Information Set
HHS	U.S. Department of Health and human Service
HIE	Health Information Exchange
HIMSS	Healthcare Information and Management Systems Society
HIOs	Health Information Organizations
HIPAA	Health Insurance Portability and Accountability Act of 1996
HIT	Health Information Technology
HITECH	Health Information Technology for Economic and Clinical Health Act
HITPC	Health Information Technology Policy Committee
HITSP	Healthcare Information Technology Standards Panel
HL7	Health Level Seven
HMO	Health Maintenance Organization
HOS	Health Outcomes Survey
HPSA	Health Professional Shortage Area
HRSA	Health Resource and Service Administration (of HHS)
HSPs	HIE service providers
IAPD	Implementation Advanced Planning Document
ICD	International Classification of Diseases
ICD-9-CM Modification	International Classification of Diseases, Ninth Revision, Clinical Modification
IEC	International Electrotechnical Commission
IFR	Interim Final Rule
IHE	Integrating the Healthcare Enterprise
IHS	Indian Health Services
IOM	Institute of Medicine
IPA	Independent Practice Association
IRR	Internal Rate of Return
ISO	International Organization for Standardization
LOINC	Logical Observation Identifiers Names and Codes
MA	Medicare Advantage
MAC	Medicare Administrative Contractor
MCO	Medicaid managed care organization
MITA	Medicaid Information Technology Architecture
MMIS	Medicaid Management Information Systems

MRI	Magnetic Resonance Imaging system
MSA	Medical Savings Account
NCQA	National Committee for Quality Assurance
NCVHS	National Committee on Vital and Health Statistics
NeHC	National eHealth Collaborative
NHIN	Nationwide Health Information Network
NIST	National Institute of Standards and Technology
NLM	National Library of Medicine
NPI	National Provider Identifier
NPRM	Notice of Proposed Rulemaking
NPSG	National Patient Safety Goals
NQF	National Qualifications Framework
NVLAP	National Voluntary Laboratory Accreditation Program
ONC	Office of the National Coordinator for Health Information Technology
P4P	Pay for Performance
PACS	Picture Archiving and Communication Systems
PAHP	Prepaid Ambulatory Health Plan
PAPD	Planning Advanced Planning Document
PCD	Patient Care Device
PCHR	Personally Controlled Health Records
PCMH	Patient-Centered Medical Home
PCPI	Physician Consortium for Performance Improvement
PCS	Procedure Coding System
PDA	Personal Digital Assistant
PFFS	Private Fee-For-Service
PHM	Population Health Management
PHO	Physician Hospital Organization
PHR	Personal Health Record
PHS	Public Health Service
PHSA	Public Health Service Act
PIHP	Prepaid Inpatient Health Plan
POC	Point-of-Care
POCT	Point-of-Care testing
POEM	Patient-Oriented Evidence that Matters

POS	Problem Oriented System
PPO	Preferred Provider Organization
PQRI	Physician Quality Reporting Initiative
PSO	Provider Sponsored Organization
QOL	Quality of Life
RHC	Rural Health Clinic
RHIO	Regional Health Information Organization
RLS	Record Location Services
ROI	Return On Investment
RPM	Remote Patient Monitoring
RPPO	Regional Preferred Provider Organization
RSNA	Radiological Society of North America
RxNorm	a standardized nomenclature for clinical drugs and drug delivery devices
SMHP	State Medicaid Health Information Technology Plan
SNOMED-CT	Systematized Nomenclature of Medicine - Clinical Terms
SNS	Social Networking Service
SSA	Social Security Administration
SSN	Social Security Number
SSO	Single Sign-On
TIN	Tax Identification Number
UML	Unified Modeling Language
VLER	Virtual Lifetime Electronic Record
WHO	World Health Organization
XDS	Cross Enterprise Document Sharing

おわりに

「530 億円の公費を投入しても IT 医療は一向に進んでいない」これは、今年の 3 月に報道された日本の医療 IT 事情です。誰のため・何のためにデータを共有するのでしょうか？

米国では「診療データは患者のものだから患者に返す」と宣言し、ついに法案が提出されました。このメッセージは単純で強力です。私たちはみな患者としての側面を持っていますから、このメッセージに逆らうのはとても難しいです。患者としての私たちの意識改革を促すものでもあります。政府主導の動きに民間も追随していくようです。

さて、キラーアプリ・キラーサービスを生み出すのはどこの誰でしょうか？

この報告書が会員各位の事業発展の一助になれば幸いです。

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