The Continuity of Care Maturity Model (CCMM)

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Regional Director

HIMSS Analytics

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HIMSS Vision

- Improve health through the better use of technology and information.

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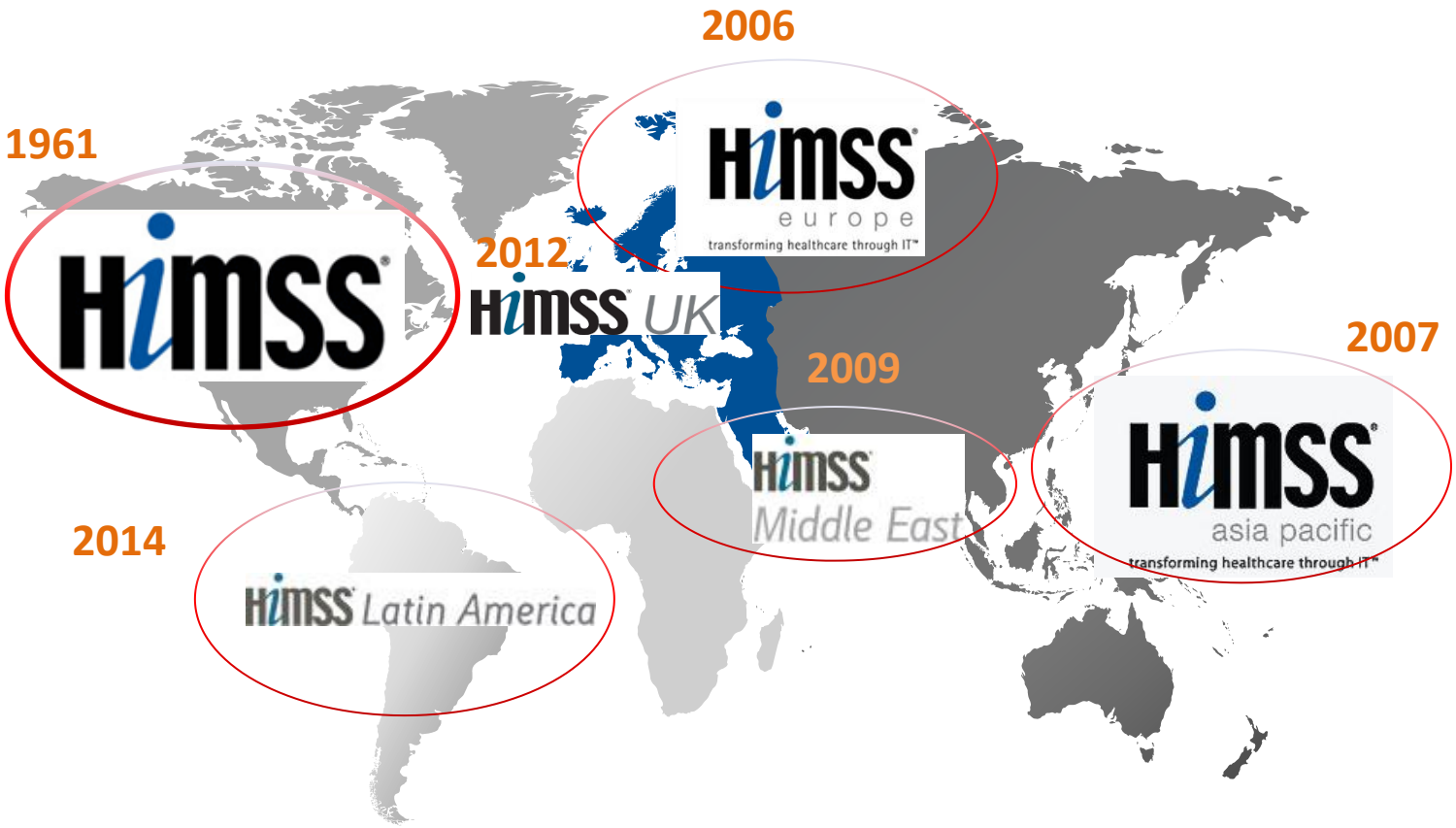
Global presence and influence..



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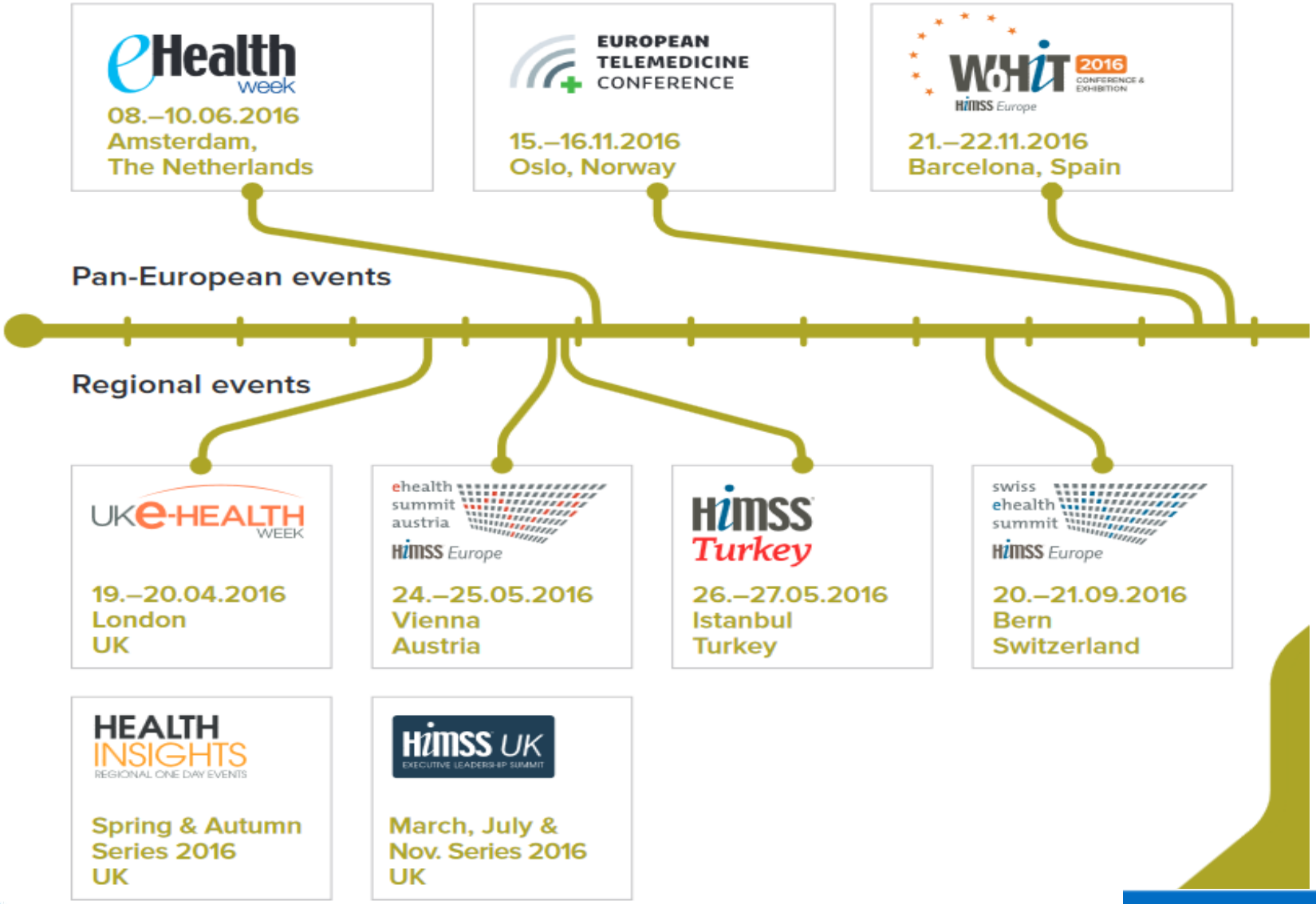
EVENTS IN 2016



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MEDIA – EUROPEAN HEALTH IT NEWS AND VIEWS

HEALTH IT CENTRAL
HIMSS Europe

WWW.HITCENTRAL.EU

Insights HIMSS Europe — The quarterly IT journal for healthcare leaders across Europe – in print & online

British Journal of Healthcare Computing HIMSS Europe — The positive voice of healthcare IT in the UK – available online

HealthTech Wire HIMSS Europe — The eHealth business news channel online – both in English and in German

"As a decision maker, HIMSS Insights provides an excellent understanding of industry best practices and trends that take place throughout Europe."

Vicent Moncho Mas, CIO, Hospital de Denia Marina Salud, Spain

All HIMSS websites:

40,000 visitors/month

all combined

HIMSS media products:

15,000 readers/month

across Europe

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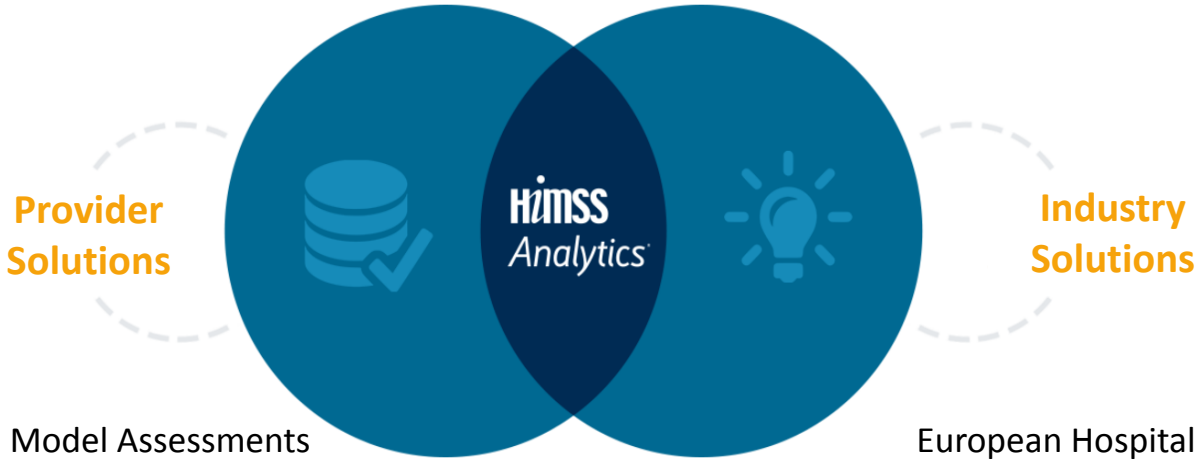
ANALYTICS

Uniquely positioned
at the intersection of **data and insight**



Maturity Model Assessments

Stage 6/7 Validations and Mock Visits

Best Practice Hospital Excursions

IT Implementation and Benefits Realization Consulting

Certified Educator Programme

European Hospital Database

Proprietary Market Research

Maturity Model Consulting

Market Reports and Executive Briefings

Certified Educator Programme

We have data from

2,000+ European hospitals

EMRAM Stage 6 Award

60+ European hospitals

EMRAM Stage 7 Award

3 European hospitals

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Going beyond the EMRAM…

- The whole system approach
- Recognising transfers of care
- Hospitals are not always at the centre
- Care is managed by several providers in a number of care settings

Continuity of Care – What is it?

Citizens' perspective…

"Non-disruption of my care as I move across care settings and care providers."

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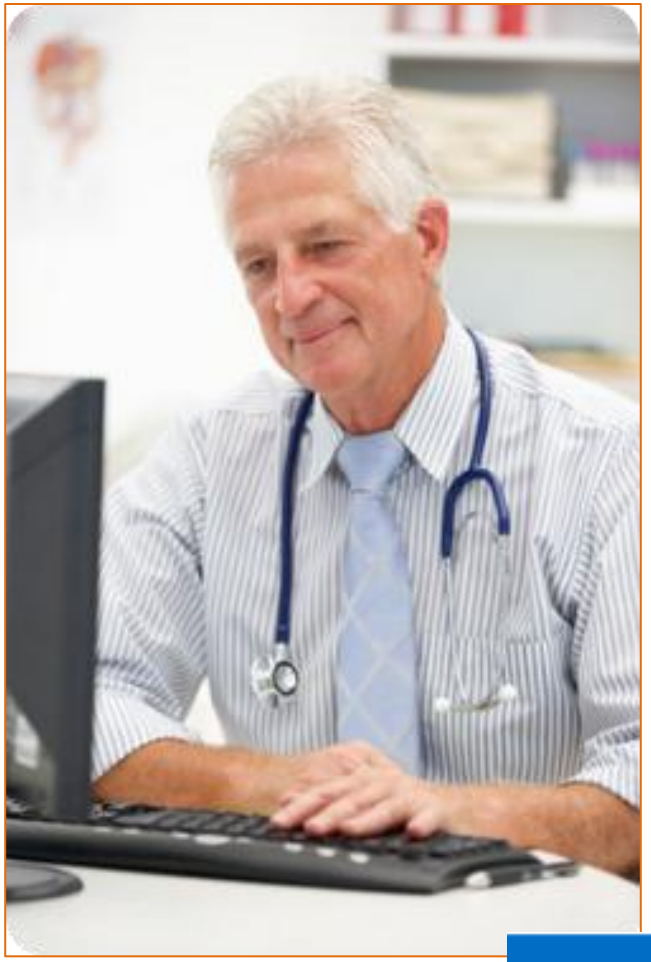
Continuity of Care – What is it?

Health care providers perspective:

"Alignment of healthcare resources, across care settings, coordinated in a way that delivers the best healthcare services and value possible for a defined population"



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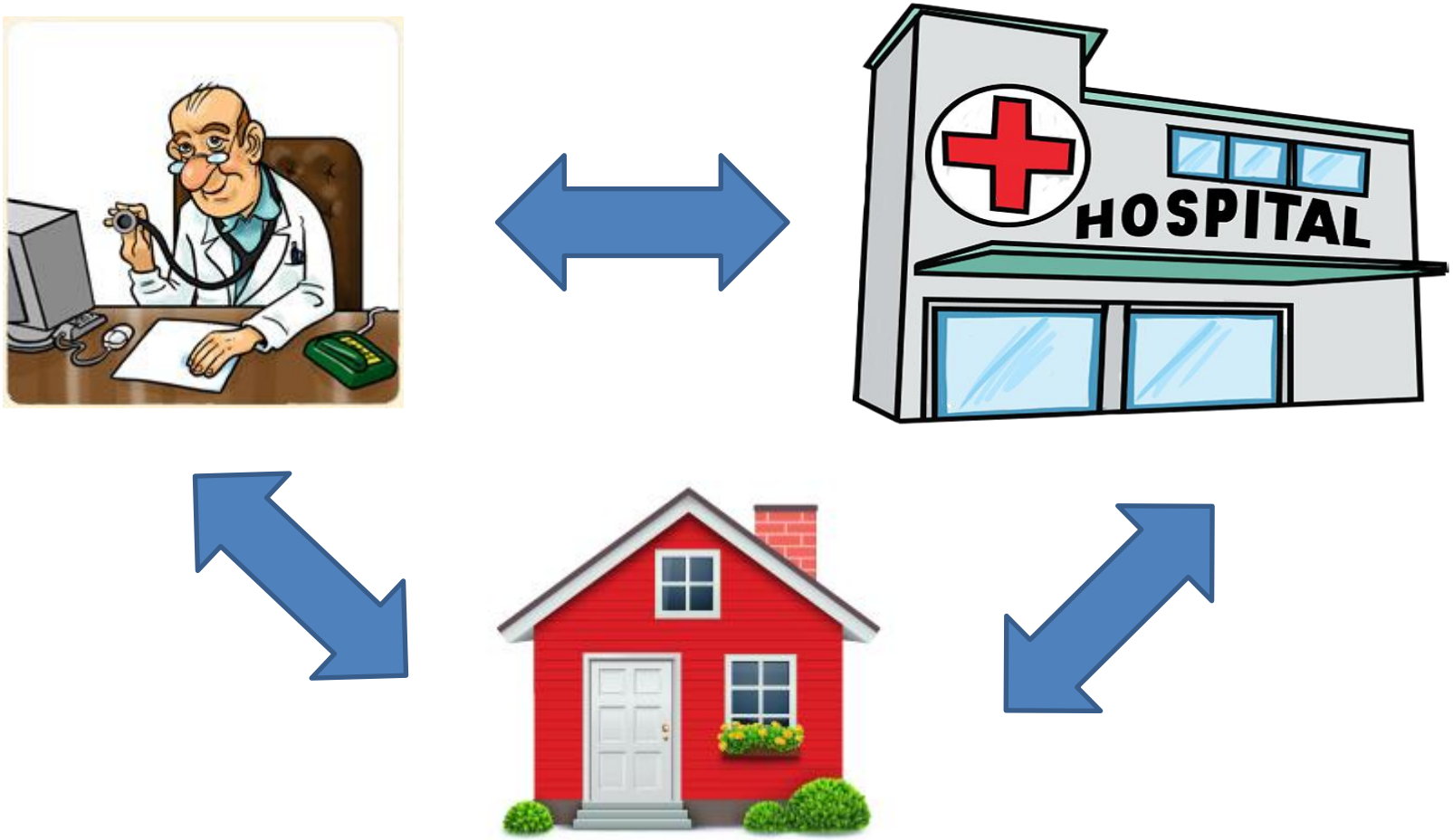
Transfers of care…



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Some Enablers of Integrated Care…

- Exchange of Information
- Culture and Leadership
- Procedures
- Funding
- Attitude to risk
- Patient choices
- Governance
- Clinical Practice
- Patient Engagement

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Patient scenario - Ana…

- Discharged home after routine surgery
- Poor pain relief
- No physiotherapy
- Delayed discharge summary
- **Post op complication**
- **Anti-coagulants required**

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Patient scenario - Frank…

- Contradicting directives
- No social care intervention
- Confused patient
- Poor medicines compliance
- No district nurse
- **Fall**
- **Re-admission**

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Patient scenario - Robert

- Heart Surgery in Acute Care facility
- Discharged with no way to monitor heart rhythm
- Poor medicines compliance
- Weight gain
- Emergency Department visit and readmission to hospital

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Some of the key barriers…

- Separate information systems or ones that are not interoperable
- No single assessment process
- Money doesn't follow the patient
- Highly risk averse organisations
- Service users exercising absolute choice
- Clinical responsibility is not clear
- Unwillingness to transfer care
- Culture – where is the power?

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Coordinated Care – Robert….

- Discharged with mHealth weighing scale
- Care coordinator explains best practice follow-up
- Weight tracked by technology, alerts sent if issues arise
- Care coordinator verifies adherence to medications and therapy regime
- Alerts for patient and core care team when problems arise
- Patient engagement is strong
- Consistent coordinated care and care across all care settings

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CCMM – Why do we do it?

- Provide orientation, knowledge, awareness
  - What characterises good continuities of care
  - Benchmarking
    - How am I doing, how are my peers doing?
  - Action and strategy
    - What gaps do I need to close
- Global applicability and comparison
- Recognise that holistic integrated care is the gold standard

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CCMM….

HIMSS Analytics Continuity of Care Maturity Model

STAGE 7	Knowledge Driven Engagement for a Dynamic, Multi-vendor, Multi-organizational Interconnected Healthcare Delivery Mode	Optimization
STAGE 6	Closed Loop Care Coordination Across Care Team Members	
STAGE 5	Community Wide Patient Record using Applied Information with Patient Engagement Focus	Pt engagement
STAGE 4	Care Coordination based on Actionable Data using a Semantic Interoperable Patient Record	Internal first, then external
STAGE 3	Normalized Patient Record using Structural Interoperability	
STAGE 2	Patient Centered Clinical Data using Basic System-to-System Exchange	Resolve ID issues HIE focus
STAGE 1	Basic Peer-to-Peer Data Exchange	
STAGE 0	Limited to No E-communication	

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Multiple Model Stakeholders..

Administrators
CEO/COO/CFO/CSOs

Forge agreements, policies, and standards that allow and enable progress

Drive clinical activities that enable and enhance coordinated care, pop health

Clinical/Medical Leaders
CMIO/CNO/CNIOs

Technology Leaders
CIOs

Build out Information & Technology that facilitates key strategies

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Three perspectives…

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Governance Focus

HIMSS Analytics CCMM Governance Focus

STAGE 7	National and local policies are aligned.
STAGE 6	Policies address non-compliance.
STAGE 5	Best clinical practices are derived from care community healthcare data and operationalised across the community
STAGE 4	Policies in place for collaboration, data security, mobile device use, and interconnectivity between healthcare providers and patients
STAGE 3	Data governance across organisations
STAGE 2	Policies drive clinical coordination, semantic interoperability. Change management is documented and standardised
STAGE 1	Policies for CofC strategy, business continuity, disaster recovery, And security & privacy. Data governance is active
STAGE 0	Governance is informal and undocumented

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Clinical Focus

HIMSS Analytics CCMM Clinical Focus

STAGE 7	Comprehensive pop-health. Completely coordinated care across all care settings. Integrated personalised medicine
STAGE 6	Dynamic intelligent patient record tracks closed loop care delivery. Multiple care pathways/protocols. Patient compliance tracking
STAGE 5	Community-wide patient record with integrated care plans, bio-surveillance. Patient data entry, personal targets, alerts.
STAGE 4	Shared care plans track, update, task coordination with alerts and reminders. ePrescribing. Pandemic tracking and analytics.
STAGE 3	Multiple entity clinical data integration. Regional/national PACS. Electronic referrals, consent. Telemedicine capable.
STAGE 2	Patient record available to multi-disciplinary internal and tethered care teams. EMR exchange. Immunization and disease registries.
STAGE 1	Limited shared care plans outside the organization. Leverage 3rd party reference resources. Basic alerts.
STAGE 0	Engaged in EMRAM maturation

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IT Focus

HIMSS Analytics CCMM IT Focus	
STAGE 7	Near real-time care community based health record and patient profile
STAGE 6	Organisational, pan-organisational, and community-wide CDS and population health tracking
STAGE 5	Patient data aggregated into a single cohesive record. Mobile tech engages patients. Community wide identity management
STAGE 4	All care team members have access to all data. Semantic data drives actionable CDS and analytics. Comprehensive audit trail
STAGE 3	Aggregated clinical and financial data. Medical classification and vocabulary tools are pervasive. Mobile tech supports point of care
STAGE 2	Patient-centered clinical data presentation. Pervasive electronic automated ID management for patients, providers, and facilities
STAGE 1	Some external data incorporated into patient record.
STAGE 0	Data is isolated

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Methodology…

- **Defining the Whole System**
  - The population who's continuity of care is being profiled
- **Client selected" care settings**
  1. Primary Care
  2. Acute Care
  3. Home based Care
  4. Urgent Care
  5. Long Term Care
- **Data collection**
  - Several quality assurance rounds
  - Stakeholder by focus area discussions / workshops
- **Data Analysis and Reporting**
  - Executive summary with scores
  - On-site presentation of the results

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SCORING TUTORIAL…..

7

Stage model, like the EMR Adoption Model

- Lowest is Stage 0, highest Stage 7
- Compliance measured using a 5-point Likert Scale

%

Overall and stage level achievement reported as a percentage

- Conveys overall achievement against requirements
- Color scale shows % achievement against each stage (from red to green)
- Shows areas of strength and opportunity

70%

Achieving a stage requires 70% or more compliance

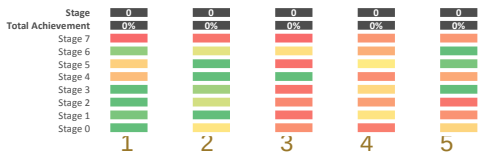
- On that stage and all previous stages
- Your “Stage” standing is the highest stage achieved
- Accommodates different approaches in priorities, resources types, and execution of healthcare advancements

Stage Progress (example data)

OVERALL RESULTS

Stage	1
Total Achievement	41%
Stage 7	9%
Stage 6	27%
Stage 5	35%
Stage 4	47%
Stage 3	37%
Stage 2	55%
Stage 1	72%
Stage 0	83%

CARE SETTING RESULTS



STAKEHOLDER

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Example Results

Information Tech Stakeholder Achievements

Stage Achievement: Stage 1
Overall Achievement: 33%

Total	33%
Stage 7	0%
Stage 6	13%
Stage 5	39%
Stage 4	35%
Stage 3	42%
Stage 2	40%
Stage 1	70%
Stage 0	75%

Information Technology Stakeholder Group Achievement

Info Tech

Primary Care	
Total	38%
Stage 7	0%
Stage 6	25%
Stage 5	58%
Stage 4	32%
Stage 3	30%
Stage 2	36%
Stage 1	67%
Stage 0	75%

Acute Care	
Total	55%
Stage 7	0%
Stage 6	25%
Stage 5	67%
Stage 4	55%
Stage 3	90%
Stage 2	77%
Stage 1	75%
Stage 0	100%

Post Acute Care	
Total	23%
Stage 7	0%
Stage 6	8%
Stage 5	21%
Stage 4	27%
Stage 3	50%
Stage 2	23%
Stage 1	83%
Stage 0	75%

Home Based Care	
Total	22%
Stage 7	0%
Stage 6	8%
Stage 5	17%
Stage 4	36%
Stage 3	20%
Stage 2	32%
Stage 1	67%
Stage 0	75%

Long Term Care	
Total	23%
Stage 7	0%
Stage 6	0%
Stage 5	33%
Stage 4	27%
Stage 3	20%
Stage 2	32%
Stage 1	58%
Stage 0	50%

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Example Results

Acute Care Setting Achievements

Acute Care

	Overall
Total	40%
Stage 7	7%
Stage 6	30%
Stage 5	29%
Stage 4	51%
Stage 3	56%
Stage 2	63%
Stage 1	80%
Stage 0	56%

	Governance
Total	31%
Stage 7	10%
Stage 6	24%
Stage 5	16%
Stage 4	46%
Stage 3	50%
Stage 2	63%
Stage 1	86%
Stage 0	40%

	Clinical
Total	48%
Stage 7	
Stage 6	56%
Stage 5	19%
Stage 4	56%
Stage 3	55%
Stage 2	50%
Stage 1	73%
Stage 0	50%

	Info Tech
Total	55%
Stage 7	0%
Stage 6	25%
Stage 5	67%
Stage 4	55%
Stage 3	90%
Stage 2	77%
Stage 1	75%
Stage 0	100%

Recommendations

Gov

- Work with Info Tech Stakeholders to document and implement an overarching information and communications technology strategy
- Develop master patient, provider and facility indexes that are common

Clinical

- Develop an overarching care coordination strategy, focusing on higher volume care settings and eventually extending into all care settings
- Develop care plans that can be shared and leveraged across all care settings as appropriate

IT

- Build a patient-centered data repository supporting analytics, patient engagement, and coordinated care
- Aggregate clinical and financial patient data into repository, including some externally sourced data
- Further expand multi-level clinical decision support systems (CDSS) including into other care settings (e.g.: across acute care facility service lines, in all facilities)
- Provide actionable clinical decision support and advanced analytics (batch and on-demand), including drug interaction, age and sex appropriate findings, and diagnosis recommendations

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STEP BY STEP PROCESS……

- **Define Care Population**
- **Define Care Settings**
- **Define Stakeholders**
- **HIMSS distributes survey**
- **Completion Phase**
- **Quality Assurance**
- **On-Site Workshops**
- **Report**
- **Results Presentation**

Responsible

- Client

Objective

- Define the population who‘s continuity of care is being profiled (e.g. all citizens in a certain geographic region, only citizens with chronic diseases, only citizens >65 years etc.)

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STEP BY STEP PROCESS……

- Define Care Population
- **Define Care Settings**
- Define Stakeholders
- HIMSS distributes survey
- Completion Phase
- Quality Assurance
- On-Site Workshops
- Report
- Results Presentation

Responsible

- Client

Objective:

- Define the care settings that should be profiled.

- *Currently proposed:*
  - Primary Care
  - Acute Care
  - Emergency Care
  - Social/Home Care

→ Please add a definition (or examples from facilities/tasks) for each of those care settings.

Please note:
HIMSS accepts a maximum of 3 different responses per capability requirement from within each care setting (e.g. you could have multiple hospitals within your Acute Care Setting that might have different capabilities in terms of Continuity of Care. HIMSS accepts to survey a maximum of 3 hospitals from this Acute Care Setting.
The same applies to Primary Care, Long-term care, Ho

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STEP BY STEP PROCESS……

- Define Care Population
- Define Care Settings
- **Define Stakeholders**
- HIMSS distributes survey
- Completion Phase
- Quality Assurance
- On-Site Workshops
- Report
- Results Presentation

Responsible

- Client

Objective

- Ideally each care setting nominates a representative from each stakeholder group (Clinical, IT, Governance) that completes the survey.
- HIMSS accepts a maximum of 3 different responses per capability requirement from within each care setting.

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STEP BY STEP PROCESS……

- Define Care Population
- Define Care Settings
- Define Stakeholders
- **HIMSS distributes survey**
- Completion Phase
- Quality Assurance
- On-Site Workshops
- Report
- Results Presentation

Responsible

- HIMSS

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STEP BY STEP PROCESS……

- Define Care Population
- Define Care Settings
- Define Stakeholders
- HIMSS distributes survey
- **Completion Phase**
- Quality Assurance
- On-Site Workshops
- Report
- Results Presentation

Responsible

- Client

Objective

- Completion of CCMM Checklist by relevant stakeholders
- Ideally each care setting nominates a representative from each stakeholder group (Clinical, IT, Governance) that completes the survey.
- HIMSS accepts a maximum of 3 different responses per capability requirement from within each care setting.

Duration

- Maximum 3 weeks

Administrative requirements

- Each respondent needs to have access to MS Excel

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STEP BY STEP PROCESS……

- Define Care Population
- Define Care Settings
- Define Stakeholders
- HIMSS distributes survey
- Completion Phase
- **Quality Assurance**
- On-Site Workshops
- Report
- Results Presentation

Responsible

- HIMSS (with support from survey respondents)

Objective

- Merge all data into 1 “database” containing relevant responses from all 4 care settings and all 3 stakeholder groups.
- If multiple facilities within 1 care setting have participated (e.g. 3 hospitals for the Acute Care Setting) HIMSS will consolidate different responses so that only one (“average”) response is left per capability item.

Duration

- Maximum 2 weeks (depends on how quick responses to clarification questions will be provided by participants)

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STEP BY STEP PROCESS……

- Define Care Population
- Define Care Settings
- Define Stakeholders
- HIMSS distributes survey
- Completion Phase
- Quality Assurance
- **On-Site Workshops**
- Report
- Results Presentation

Responsible

- HIMSS and Client

Objective

- Discuss current status and challenges with relevant stakeholders.
- Clarify open questions from the survey process and achieve consensus about responses with all relevant stakeholders.
- Workshops will be separated by the 3 key stakeholder groups: Clinical, IT and Governance.

Duration

- 2 hours (per Workshop), i.e. 6 hours in total (plus breaks). To be done in 1 day

Audience

- Stakeholders from the different care settings assessed. Ideally have at least 1 representative from each care setting, separated by focus area.

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STEP BY STEP PROCESS……

- Define Care Population
- Define Care Settings
- Define Stakeholders
- HIMSS distributes survey
- Completion Phase
- Quality Assurance
- On-Site Workshops
- **Report**
- Results Presentation

Responsible

- HIMSS (with support from survey respondents)

Objective

- Calculation of final Achievements (Scores) and preparation of Executive Summary, incl. recommendations.

Duration

- Minimum of 1 day

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STEP BY STEP PROCESS……

- Define Care Population
- Define Care Settings
- Define Stakeholders
- HIMSS distributes survey
- Completion Phase
- Quality Assurance
- On-Site Workshops
- Report
- **Results Presentation**

Responsible

- HIMSS

Objective

- Present the findings of the CCMM assessment to relevant stakeholders and enable a discussion around those findings and conclusions.
- Depending on the discussion HIMSS will make some updates to the final report.

Agenda

- Review of methodology
- Facts & Figures about the organization
- Achievements & Recommendations overall, by stakeholder group and by care setting
- Wrap-up, discussion, next steps

Duration

- 2 hours

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Thanks!!

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