

PFARRKIRCHEN, GERMANY

DIGIHEALTHDAY-2020

GLOBAL DIGITAL HEALTH – TODAY, TOMORROW, AND BEYOND

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Ort, Datum
Pfarrkirchen,
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WEBINAR: DATA INTEGRATION AND INTEROPERABILITY May 11-13, 2020, 14:00-17:15 (CET)

ABSTRACT

The objectives of this workshop are to:

- Generate knowledge in data integration and interoperability with experience in a controlled environment
- Interact with the different devices of the DIT-ECRI lab
- Identify how to use semantic standard terminologies in the interoperability process
- Understand how the HL7 messaging and HL7 CDA flow in an interoperability context, using an interoperability engine
- Understand the FHIR resources and interact with an FHIR server
- Learn the principles of DICOM standard
- Understand the role and practice with some tools of IHE
- Know the principles in data integration and data sharing

AGENDA

DAY 1. THEORETICAL CONCEPTS ON DATA INTEGRATION		
Date	Time, Speaker	Topic
Monday, 11th May 2020	14:00 - 15:30 Jonathan Okereke	<ul style="list-style-type: none"> ➤ Presentation - Context of the workshop, a brief description of the context and the methodology and goals of the activity for the three day. ➤ Theoretical Concepts <ul style="list-style-type: none"> • Introduction to Data Integration. • Medical Informatics Initiative • Federated Health Information Exchange • Data Sharing and Security <ul style="list-style-type: none"> ▪ Authentication ▪ Authorization ▪ DFN (Deutsches Forschungsnetz) • Data privacy (GDPR §) • Introduction to FHIR • SMART on FHIR
	15:45 - 17:15 Samir Irshadi	<ul style="list-style-type: none"> ➤ Lab devices <ul style="list-style-type: none"> • Description of the devices of the DIT-ECRI Campus. • How to use it. • Clinical functionalities, measures, units, value range. • Outputs and interpretation ➤ OpenEMR <ul style="list-style-type: none"> • Main functionalities of the application • Focus on clinical process in orders and results, analysis

DAY 2. INTEROPERABILITY FUNDAMENTALS

Date	Time, Speaker	Topic	
	<p align="center">14:45 - 15:30</p> <p align="center">Fernando Portilla-Vicuna</p>	<p>➤ HL7 V2 Messaging & HL7 V3 Documents</p> <p>Main components, parsing and sending an HL7 V2 Message. Understanding and validating an HL7 CDA Document.</p> <p>➤ Messaging HL7 V2</p> <ul style="list-style-type: none"> • Messaging structure • Patient Demographics, ADT • Order, ORM • Results, ORU • HL7 Parser • Use cases 	<p>➤ Clinical Documents HL7 CDA</p> <ul style="list-style-type: none"> • CDA Fundamentals • Componentes • CDA levels • CDA Validator • Use cases <p>➤ HL7 FHIR</p> <ul style="list-style-type: none"> • Resources • FHIR server • REST operations
<p align="center">Tuesday, 12th May 2020</p>	<p align="center">15:45 - 17:25</p> <p align="center">Jonathan Okereke</p>	<p>➤ DICOM</p> <ul style="list-style-type: none"> • DICOM Standard/File Structure • DICOM Viewer(s) • DICOM Header/Metadata • PACS/RIS • DICOM ETL Process (Practical Session - Metadata to RDBMS Experiment) • Use case (Sharing DICOM images using NEXTCLOUD™) 	<p>➤ IHE</p> <p>IHE PROFILES</p> <ul style="list-style-type: none"> • PIX/PDQ • BPPC, APPC (XaCML) • ATNA • XDS.b and XDS.i • MHD • Use cases (Document/Image sharing, Consent Management)

DAY 3. SEMANTICS INTEROPERABILITY & DATA INTEGRATION TECHNIQUES		
Date	Time, Speaker	Topic
Wednesday, 13th May 2020	14:00 - 15:30 Fernando Portilla-Vicuna	<ul style="list-style-type: none"> ➤ Terminologies and semantic interoperability <ul style="list-style-type: none"> • Use and application of clinical terminologies in interoperability • How to use it in HL7 Messaging, CDA documents, and HL7 FHIR. ➤ Interoperability Engine: Mirthconnect <ul style="list-style-type: none"> • Channels: inputs, transformation, and outputs. • Different type of sources and Destinations
	15:45 - 17:15 Jonathan Okereke	<ul style="list-style-type: none"> ➤ Data Integration Techniques <ul style="list-style-type: none"> • Medical Data Integration Architecture • ETL Pipeline (Extract, Transform, Load) • Pseudonymization techniques (GDPR §) • Consent management – Privacy • Preserving Record Linkage technique (PPRL)

