10ᵗʰ World Congress on

Control and Prevention of HIV/AIDS, STDs & STIs

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54ᵗʰ International Conference on

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Health equity at the bottom of the pyramid through opensource models on the elastic cloud

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India has been majorly a paper-based Healthcare System and Digital health has seen varied yet limited gains in the country. However, there have been pockets of isolated success in transforming paper-based processes to electronic systems. Serendipity positioned a very strong National leadership that could collate these fragments together for building the National Digital Health Ecosystem (NDHE).

The Indian Public Health System is struggling with the multiplicity of information systems used at central as well as state levels. The data recorded is diverse and lacks quality and seldomly conformant to Health IT standards. This has resulted in systems that are unable to exchange data and information with each other. The intent of NDHE together with MDDS for Health was to promote the growth of e-Governance within the country by establishing interoperability.

The need for the Minimum Viable Product [MVP] arose because each vendor is selling a different bundle of modules, functions, and data elements without much attention to semantic interoperability. MVP is the minimal functionality that fulfills the primary requirement, sufficient to deliver the core value and will fail if you go any lower or remove any functionality from it for example, Registration, Appointment, etc. The rest of the functionality is fluff or Add-Ons which can be added to the core product to enhance its value.

A Module consists of multiple functionalities and each functionality has single or multiple Microservices. Microservices provide an architectural style that structures an application as a collection of services that are highly maintainable and testable, loosely coupled and independently deployable. It enables the rapid, frequent, and reliable delivery of large, complex solutions. Microservice further consists of multiple data elements taken from MDDS. It is like a set of Lego blocks that can be use to build your own applications.

The Legacy systems which were developed by different agencies and vendors lacked complete adoption of Health IT standards. These were developed without much attention to semantic interoperability. eObjects are an effective solution for legacy systems and can help them communicate.

Provider eObjects help in attaining Provider-to-Provider interoperability. For instance, all primary and public health applications may not have the same data elements and related code sets but can communicate via eObjects and the data can seamlessly flow across healthcare facilities. When application A sends the ANC data for facility 123, the receiving application B should understand ANC and uniquely identify facility 123. Another example is if a hospital application sends the insurance reimbursement bill to insurance company/ government, the recipient application should be able to understand and represent the same meaning of the bill

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information. The eClaim object creates a Financial Lever for the market. If the providers submit the claims in standard eClaim Object format the turn around time for their payments can be expected to be much faster. Clearly eObjects and MVPs are an innovative breakthrough.

Have now published an opensource library of Data Elements, Code Directories, HIS/EMR MVP and Interoperability eObjects to support our mission of Health equity at the bottom of the pyramid through opensource models on the elastic cloud.

Biography

Pankaj Gupta is having a rich combination of medical background, IT experience and specialization in General Management from Indian Institute of Management Bangalore. For over 2 decades, he has been working in healthcare/pharma technology business and healthcare/pharma process standardization. He started with running his primary care clinics for 8 years before getting into healthcare IT and management roles globally. He came back full circle to lead the total IT and process transformation of Max Healthcare Group of Hospitals. His global experience includes starting and leading business units at US/global corporations e.g. Cerner, FCG/CSC, Perot/Dell, Infosys. He has managed IT and Quality Departments of US hospitals and delivered business transformation by process standardization. Also, he worked in Bioinformatics, Large Pharma IT and Clinical Trials IT. He was instrumental in writing the Meta Data and Data eHealth Standards for MoHFW Govt. of India.