Information Communication Technology for Social Development

Universal HL7 Interpolation For International Interoperability

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The Medical fraternity and the healthcare sector have long acknowledged the benefits of IT investment. The use of *Electronic Health Records* (EHRs) worldwide can levitate service levels, improve patient care and safety, and lower costs. The clamour for new, smart computer systems for healthcare is allied with a commensurate need for standardized, regulated global operation, facilitating the free but controlled exchange, storage, management, and access to valued healthcare information. Enhancing *Semantic Interoperability* is key, which is the meaningful interchange of healthcare information with homogenous understanding. But of tantamount importance is also the implemented standard's ubiquitous appeal, facilitating *International Interoperability*.

Health Level Seven (HL7) is the predominant *interoperability-related* global healthcare standard in operation today. Introduced in 1987 by the *HL7 International Inc.*, its current version 3 has a few issues. Besides being difficult to implement and maintain, true *international interoperability* the germinal thought behind *HL7*, is still an illusion. Member countries need to be able to exchange healthcare information expeditiously and efficiently. The *EHR* of any patient should be available to the treating medical practitioner irrespective of the geographical location of the patient or his migration habits. Current *HL7* implementations are deficient in this respect, and as such the achievement of these goals undercore the thrust of this research.

This paper presents a pragmatic and practical approach to achieving true *HL7*-based *International Interoperability*. It discusses challenges to the global use of the standard, and examines deleterious adaptations which subvert exchange. Systematic expansion of *HL7's* use is recommended, capitalizing on the abounding benefits afforded, and manifold cogent considerations in the present day's context are discussed. *Uniform*, *universal*, *HL7* use overarching socio-economic boundaries and other demographic stratifications is advocated, confluent towards our principle, superlative *interoperability* goal.

Current implementations of the *HL7* standard are *non-uniform*, *non-contiguous*, *nationally-oriented pockets* of *interoperability*; true international exchange is veritably subverted. This paper propounds an unerring, reliable, and secure approach to actualize *ubiquitous* exchange and *International Interoperability*.

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