

## **Addressing the Health IT, Health Informatics, Healthcare Software Development and Data Analytics Skills Gap**

In order to support the long-term robust vision of the CHDWG a conscious investment in the attraction and education of individuals capable of having careers in the areas needed to support the concepts outlined in proposals to date. There already exists a significant gap in the needs of employers, the state government and our educational institutions for employees skilled and knowledgeable to best fill these roles. Many job postings exist for data scientists, software engineers, health informatics specialists, chief nursing informatics officers, chief medical informatics officers and staff savvy in data abstraction and analysis. Often these positions have been filled with senior individuals without optimal training, requiring on-the-ground and often vendor sponsored training. Developing new technologies that take advantage of emerging software standards for Electronic Healthcare Records and other promising technologies such as remote disease monitoring tools or predictive analytics performed on aggregated data requires enhancements to skills and knowledge across the entire spectrum of healthcare providers, Health IT support, Software Development, and data analytics arenas.

There has arisen a new class of health informatics professionals ranging from those at the bachelors level all the way to advanced degrees in Health and Biomedical Informatics for a range of professionals from healthcare providers to software developers. Many large institutions have begun offering substantive coursework and training (on-line and classroom or experience based)

### **Proposal to evaluate and invest in Health Informatics Training at a variety of levels:**

- Undergraduate degree programs in Health and Biomedical Informatics from our 4 year colleges and universities.
- Masters programs in Health and Biomedical Informatics and Healthcare Data Analytics
  - Addition of Health Informatics training options to a number of other Masters programs such as our MPH programs, nursing, pharmacy and engineering programs
  - One such program exists at Sacred Heart University today and a track exists on paper for the UConn School of Engineering but it is not adequately funded.
- PhD programs with an emphasis on Health Informatics and healthcare data analytics

- These could have an additional focus on Personalized / Precision Medicine, Predictive analytics, development and testing of tools for healthcare information exchange or behavioral, ethical and social factors needed in the healthcare data economy.
- Increased training options for fellowship programs in Clinical Informatics for physicians and other healthcare professionals, including regional support for a UConn program. (Yale has a small program currently)
- Support for adult learning options for certificate programs training workers who are already working in the healthcare field who wish to receive retraining or additional skills ranging from nurses to IT professionals to healthcare business

Additional investments need to be made to develop centers of excellence, departments of health and biomedical Informatics, recruit new faculty leads and develop robust research programs. A number of states have begun to invest heavily in this area including the development of whole schools of Health Informatics and CT lags in the development of a skilled workforce.