

## Systems and Methods for Electronic Coordination of Healthcare

Coordination and sharing of electronic medical information is an integral part of the healthcare system. Although currently there are multiple methods of sharing medical information, their fragmented structure and technical inadequacies result in delays and inefficiencies in implementation. To determine possible avenues of improving coordination of data sharing, patient access and communication with medical professionals, NSU researchers formed a clinician-led task force, comprised of physicians and community experts in South Florida. The findings of this task force indicated that there is a significant unmet need for creating a digital platform that will support physicians, caregivers and patients. Considering the complexity and extent of healthcare information, it is necessary to develop a platform that allows timely and seamless communication of information among patients, clinicians and other healthcare providers. Researchers at NSU developed a novel digital platform that will enable more efficient management and sharing of healthcare information by both patients and medical professionals. This "Patient Navigator" will offer assistance to patients and providers for navigating the healthcare system. Composed of user-friendly tools, it creates the ideal digital platform to empower patients and assist healthcare professionals.

### Technology

The digital platform or Patient Navigator will act as a healthcare coordination system for medical professionals and patients. It will provide user-friendly tools to navigate the continuum of healthcare services. This process of coordination of electronic healthcare information will be particularly beneficial in the management of chronic diseases such as diabetes and cancer. Implementing this electronic system will allow seamless and timely management of flow of data among patients, clinicians and caregivers. The design of this architecture enables the platform to evolve and grow over time and offers the system flexibility, scalability and security. The architecture required for the proper functioning of this Patient Navigator consists of four tiers managed by NSU's Office of Innovation and Information Technology and supported by Microsoft's Azure Database and Security platform. The architectural tiers making up this platform are Web Tier, Business Tier, Data Tier and Analytics. To ensure proper functioning and security, information security and application management will be implemented throughout the tiers.

### Application

- This healthcare coordinating system brings together various isolated components across the healthcare continuum and makes it easier for patients to manage and share electronic healthcare data.
- This system will be specifically beneficial to patients and healthcare professionals who are involved in management and treatment of chronic diseases such as diabetes or cancer.

## Advantages/Benefits

- The Patient Navigator will allow better communication and data sharing between patients and caregivers and allow direct messaging between patients and caregivers.
- This electronic system offers patients better access to their own medical records as well as better access to points of care.
- The platform eases and expedites transitions of patients from primary care to specialty care.
- Access to care will be greatly enhanced for all, including minorities and underserved populations of people.

## Status of Development

- The system architecture of the Patient Navigator has been designed and constructed. Many details of the web application architecture are supported by existing and proven platforms within the Microsoft framework. This sound architecture will provide key attributes such as: flexibility, scalability, elasticity and security and allow for the platform to grow overtime.

**Intellectual Property** – Provisional Patent Application submitted on April 2, 2019.

## Information on Inventors



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**Johannes Vieweg** – Dr. Vieweg is the Founding Dean and Chief Academic Officer and Professor of Surgery in the NSU Dr. Kiran C. Patel College of Allopathic Medicine. Dr. Vieweg is board certified by the American Board of Urology and served a five-year term as chair of the American Urological Association’s Research Council. He received his medical degree from the Technical University of Munich, Germany.



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