VHA Innovation Program eBook
Quarterly Portfolio

VHA Innovation Program Recent Highlights NEW FEATURE!!

New eBook Features

The VHA Innovation Program eBook has been redesigned to be a fresher and more concise publication. The words "NEW FEATURE!!" are located throughout the eBook to indicate where we have added new sections or redesigned the format. These updates include:

- **VHA Innovation Program Recent Highlights**: Includes introductions to the most recently launched innovation projects and pilots, new ways to stay updated with VHA Innovation news, and other programmatic news and accomplishments.
- **Contact the Innovation Coordinator**: Enables you to directly email a knowledgeable Innovation Program representative, ensuring a faster response to your inquiries.
- **Quick Look/Fast Facts sidebar**: Includes basic facts, interesting tidbits, and an "Innovation Multimedia" link *(currently available only to VA employees)*. Clicking this link on the sidebar of each project page will take you to the VHA Innovation Program intranet site multimedia page, which features innovation project flashcards, videos, photos and more.

the Innovation Station Blog

In August 2015, the VHA Innovation Program launched a blog, *the Innovation Station*, which highlights new innovative work taking place within VA. New blog posts are released the second Friday of each month and often include pictures and videos. If you'd like to receive an email when the new blog is available, please click here to register for auto-send. *Please note, currently the blog is only available to VA employees.*

New Innovation Projects Launched

Every quarter, the Innovation Program will highlight a few of our newly launched projects. The following projects are new for this quarter:

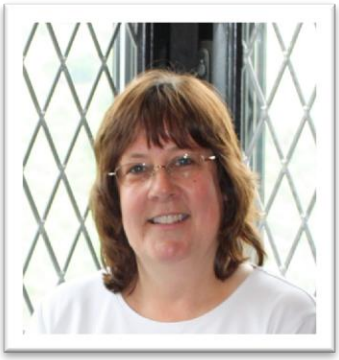
1) *Remote Ordering and Reporting of Lab and Radiology Tests:* This project works to eliminate the process inefficiencies associated with placing and reviewing lab or radiology orders for Veterans aligned to a facility outside of the ordering provider's facility's catchment area. This innovation will expand upon existing laboratory and radiology ordering functionality in CPRS to enable providers to place a laboratory or radiology order at any VA facility. It will also allow the lab or radiology department that performs the test to automatically report it to the ordering provider regardless of their location and enable the standard set of alerts that exist in VistA/CPRS to notify providers when a new lab or radiology exam is available for review.
2) *Benefits Claims Decision Support (BCDS):* This project utilizes decision support to produce probabilistic models for rating disability claims for the hearing and musculoskeletal body systems, which represent the highest frequency of disabilities claimed. In partnership with the Veterans Benefits Administration (VBA), this project creates a software platform to implement probabilistic models to rate disability claims.

eBook Archives

Looking for previous versions of the eBook? The first three editions of the eBook can be found on the VHA Innovation Program intranet page. If you do not have VA access, click here to contact us and we will send you a copy.

Featured Innovator

Liesl Wilson



Liesl Wilson is the lead innovator for the Laboratory Auto Verification project. Auto-verification uses software logic (rule algorithms) to define “normal” and “abnormal” lab result criteria. The software automatically approves and instantly routes normal results to the clinician. With the exclusion of normal results from the medical technologist’s workload, he or she can concentrate exclusively on abnormal results and provide diagnostics to the clinician more quickly.

Laboratory Auto Verification improves patient safety by adding consistency, uniformity, and speed to the result review process, as well as improving laboratory efficiency by automatically verifying “normal” results and allowing technologists to focus on “abnormal” results requiring professional analysis and judgment. This solution positively impacts any Veteran with laboratory test orders, physician and nursing staff awaiting diagnostic results to proceed with clinical treatment plans, laboratory staffing requirements, and employee job satisfaction.

Liesl graduated with a Bachelor of Science degree in Medical Technology (MT-ASCP) from the University of Missouri, Kansas City in 1990. She has been with VA for 20 years and previously worked at the National Institutes for Health in the Microbiology Department. Upon her return to Kansas City she began her career at the Kansas City VA Medical Center (VAMC), where she worked full-time in an array of departments until 2001 when she became an intermittent employee to take care of her newborn son. Liesl returned to full-time status in 2005 working in the Blood Bank. She was promoted to Laboratory Information Manager (LIM) in 2007. She is currently the Laboratory Information Manager (LIM) and Bar Code Expansion Coordinator (BCE).

Liesl started working with VA programmer Terry O’Bryan and the Data Innovations team to write and test laboratory auto-verification software. VA was unable to take advantage of auto-verification software on the market due to VistA’s inability to auto accept and post results. Terry and Liesl began coding and testing VistA in 2012, and their project was chosen as a VHA Innovation Employee Competition awardee in 2013. The Laboratory Auto Verfication pilot project was highly successful; the product went live in April 2015. It has produced a greater than 90% auto-verification rate; improved turnaround time by 8%; and reduced the time spent by medical technologists releasing reports from 52.4 hours per month to 4.4 hours per month.

The success of this project could not have been possible without Liesl’s hard work and extra effort. She has worked tirelessly to make the project a victory. The VHA Innovation Program thanks her for her dedication and passion for innovation and serving the Nation’s Veterans.

This Quarter in Innovation

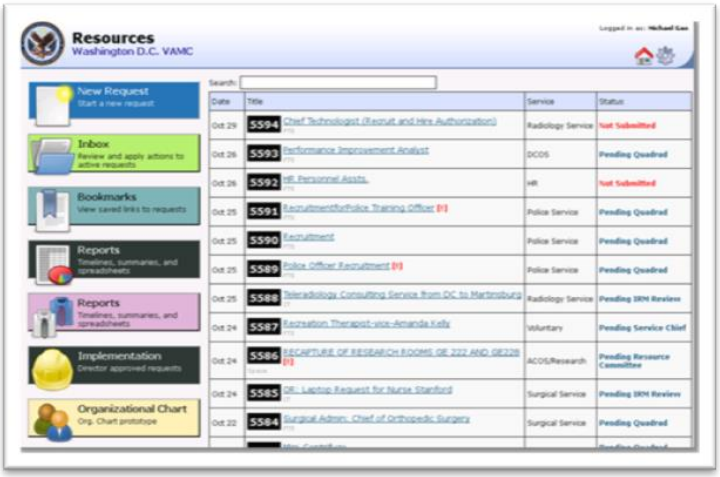
This quarter, the Innovation Program is featuring the following four projects. Quick summaries are below with more detailed information about each of the projects in the pages after.

Making Allergy Information More Accessible (eHMP Allergies)
This project adds prominent allergy information to the cover sheet and top tool bar of every page of the VA Enterprise Health Management Platform (eHMP) to it make it easier for providers to view allergy information on every page of the eHMP.

Chemotherapy Mechanized Ordering Management System
Chemotherapy Mechanized Ordering and Management System (COMS) is an automated tool that enables end-to-end tracking of chemotherapy regimen, including pharmacy orders, order templates, provider notes, end of treatment summaries, and a database of relevant information. Clinicians can use the tool to access and query the chemotherapy-related clinical data needed for a variety of reporting needs.

Light Electronic Action Framework
Light Electronic Action Framework (LEAF) allows VA staff to rapidly digitize processes, such as travel and tuition reimbursement, full time employee requests, and resource requests. LEAF expanded its reach in 2013, as an Employee Innovation Competition awardee. Today, it is utilized in eight Veterans Integrated Service Networks (VISNs) with more than 3,000 active users.

Kidney Disease Registry
The Kidney Disease Registry when fully established would provide the capability to accurately identify those with kidney disease, distinguish Veterans within VA who are actively seeking VA-based health care from those who are not, link the patient with a facility, provider-type and/or specific providers, and track patient outcomes.



LEAF DASHBOARD

Making Allergy Information More Accessible (eHMP Allergies)

Description:
This effort includes a fully functional and tested eHMP prototype within the VA Future Technologies Laboratory that places and stratifies remote pharmaceutical and allergy information on the eHMP cover sheet (home page) to supplement the local allergy information that is already displayed. Both local and remote pharmaceutical allergies information will be displayed in a more prominent fashion and will be visible from any required tab within eHMP.

Goals:
This project is designed to highlight clinically important allergy information for providers at the point of care to reduce the chance of a Veteran receiving a medication to which the Veteran is allergic and improve the safety of medication prescribing in eHMP. The ability to place and stratify the additional allergy information on the eHMP cover sheet will reduce potential errors by the ordering provider. These changes to eHMP will simply the ordering provider ability to cross reference patient allergy conditions prior to submitting medication orders.

Outcome/Result:
During the project's 12-month lifecycle, changes were made to improve the eHMP cover sheet and toolbar functionality; including adding a new patient header allergies section, patient allergy report improvements, new added allergy dialog improvements, and allergy detail dialog improvements. These changes were tested in the Future Technology Laboratory and will be integrated into eHMP when it is rolled-out nationally.

WANT MORE INFORMATION?

CONTACT THE INNOVATION COORDINATOR NEW FEATURE!!

QUICK LOOK NEW FEATURE!!

VA recently embarked on the VistA Evolution program to evolve, replace and enhance existing VistA EHR systems to achieve interoperability, clinical and technical objectives. A major part of this program is the Enterprise Health Management Platform (eHMP).

*VA Innovator **Dr. Jennifer Cowart** is a hospitalist physician at the Houston Michael E. DeBakey VA Medical Center.*

This project was selected from the 2014 Employee Innovation Competition.

FAST FACTS NEW FEATURE!!

BUSINESS OFFICE CONNECTION: Pharmacy Benefits Management (PBM) Services*

INNOVATION COORDINATOR:
BRIAN STEVENSON

MULTIMEDIA LIBRARY:
eHMP Videos

** CLICK TO LEARN ABOUT ADVERSE DRUG EVENTS ACCORDING TO PBM*

Chemotherapy Mechanized Ordering Management System (COMS)

Description:
VA's EHR currently has limited ability for direct order entry of chemotherapy. VHA's oncology processes are a mix of paper-based and computer-based ordering with a large potential for error, adverse events, and inefficiencies; making them a patient safety risk. COMS is a web-based application that enhances the clinical environment and safety for oncology patients through development and implementation of an automated ordering and management process available within the VHA clinical practice setting. COMS came about as a result of the VA Center for Innovation (VACI) 2010 Employee Innovation Competition. COMS satisfies the unique needs of chemotherapy ordering and standardizes capabilities to meet direct entry of chemotherapy orders consistent with oncology practice. Clinicians can use the tool to access and query chemotherapy-related clinical data to support patient care and meet a variety of reporting needs.

Goals:
COMS aims to enhance safety for VHA oncology patients by providing a standardized, automated way to order chemotherapy medications based on best practice regimens and protocols. It removes error-prone manual calculations for chemotherapy medication dosing, provides chemotherapy treatment documentation in VistA, and allows for tracking of patient reactions and disease response to the chemotherapy.

Outcome/Result:
COMS was piloted for about a year at the Durham VAMC and the Puget Sound Health Care System (Seattle VAMC, Tacoma VAMC). The pilot ended in August 2015. COMS is undergoing further enhancement in preparation of eHMP integration. COMS will be a part of a software suite of oncology services within eHMP.

WANT MORE INFORMATION?

CONTACT THE INNOVATION COORDINATOR

QUICK LOOK

Approximately 45,000 new cases of cancer occur in VA patients each year. Cancer is the second leading cause of death among Veterans.

***Dr. Michael Kelley**, National Chief of Oncology, at the Durham VA Medical Center is the COMS Lead Innovator. Dr. Kelley saw the need for a software based ordering system to assist in treating patients and has been a champion of the COMS application since its inception.*

COMS fulfills legal and professional requirements, fosters Joint Commission compliance, stores documentation in VistA, and enhances patient safety.

FAST FACTS

BUSINESS OFFICE CONNECTION:
PATIENT CARE SERVICES

INNOVATION COORDINATOR:
DEVIN HARRISON

MULTIMEDIA LINK: COMS Homescreen Photo

Light Electronic Action Framework (LEAF)

Description:

Originally developed in 2008, LEAF is designed to digitize paper-based processes for VA facilities and teams. It allows VA staff to rapidly digitize processes, such as travel and tuition reimbursement, employee requests, resource requests, phone books, organizational charts and document trackers. More specifically, for resource requests, LEAF moves from paper to electronic processing with real-time reporting while locating and inventorying space and equipment. For employee requests, an electronic database stores and reports position title, position name, some employee personal identification information, justifications and auto-generation of time stamps.

Goals:

LEAF digitizes any process you can draw in a flowchart. LEAF's centralized hosting configuration allows it to serve facilities across the country on-demand. It incorporats reporting features to provide real-time reporting to facility and team leadership.

Outcome/Result:

Long-time LEAF supporter Natalie Merckens, Associate Director of the Eastern Colorado Healthcare System, said:"[LEAF] is a critical part of our daily operations. It is reliable and agile to meet the needs of the facility, and can be customized to the unique operations and terminology used by different facilities. Staff are excited to have the program." LEAF is currently utilized in eight VISNs with more than 3,000 active users. VACI recently developed a plan to support 10 additional LEAF sites, and acquire national sponsors for LEAF's long-term sustainment.

WANT MORE INFORMATION?

CONTACT THE INNOVATION COORDINATOR

QUICK LOOK

*LEAF was originally developed by **Michael Gao** at the Washington DC VAMC.*

LEAF was a 2013 Employee Innovation Competition selection.

Interested in utilizing LEAF's capabilities? Contact the Innovation Coordinator!

FAST FACTS

BUSINESS OFFICE CONNECTION:
OFFICE OF INFORMATICS AND ANALYTICS

INNOVATION COORDINATOR:
BLAKE HENDERSON

MULTIMEDIA LINK: LEAF Flashcard

VA Kidney Disease Registry

Description:

In 2013, more than 900,000 Veterans were affected by chronic kidney diease (CKD) with over 18,000 of who reached end stage renal disease (ESRD) and required dialysis and/or kidney transplant. The innovation creates a comprehensive kidney registry of VA patients who are affected by CKD to enable the comparative effectiveness analyses needed to evaluate the impact of different disease management strategies and detect disparities.The registry identifies Veterans treated at VA with kidney disease, links patients with the facility, provider-type and specific providers, and tracks disease progression and outcomes. Ultimately, the goal is to develop strategies that will enable clinicians to intervene earlier and manage the disease more effectively, so as to slow disease progression.

Goals:

The Kidney Disease Registry, provides the capability to accurately identify individuals with kidney disease, distinguish Veterans within VA who are actively seeking VA-based health care from those who are not. It also links patients with facilities, provider-type and/or specific providers, fully track disease progression, capture screening and management strategies, including referral for specialist care, utilization of specific medications, laboratory tests, procedures (i.e., kidney biopsy and renal replacement therapies), and essential preventive and support services, and tracks patient outcomes. In addition, the Kidney Disease Registry provides the data structure for detection of disparities, comparative effectiveness research, impact of disease management strategies and other novel technologies, and educational initiatives.

Outcome/Result:

During the project's three-year history, the prototype demonstrated feasibility of constructing the world's first comprehensive National CKD Registry, leveraging the existing infrastructure and merging in data sources outside of VA. This demonstrated the ability of the registry to monitor and identify CKD and perform preliminary quality and cost analyses. The prototype also quantified the cumulative burden of advanced CKD borne by enrolled Veteran population, highlighted changes in Veteran ESRD treatment modality, increased adoption of self-care by Veterans, and analyzed cost effectiveness of transplantation between VA and non-VA care.

WANT MORE INFORMATION?

CONTACT THE INNOVATION COORDINATOR

QUICK LOOK

The cost of treating CKD increases substantially with disease progression, with an average annual treatment cost of $1,500 in Stage 2, $3,000 in Stage 3 and $12,300 in Stage 4.

***Dr. Susan Crowley**, of the National Kidney Disease Program, serves as the lead subject matter expert for the innovation.*

VHA Innovation is also supporting development of a portable kidney dialysis machine- AWAK.

FAST FACTS

BUSINESS OFFICE CONNECTION: NATIONAL KIDNEY DISEASE PROGRAM

INNOVATION COORDINATOR: CLINT LATIMER

MULTIMEDIA LINK: AWAK FLASHCARD