

Executive Summary

Item 291B of the 2016 Appropriation Act requires the Virginia Department of Health (VDH) to report on efforts to address changes to the Electronic Death Registry System that would improve the system to make it easier for filing death certificates, address interoperability concerns by users, and provide technical assistance to system users, and other improvements.

The Virginia Department of Health's Division of Vital Records is responsible for managing and securing all vital events' occurring in the Commonwealth of Virginia. This includes births, deaths, marriages, divorces, spontaneous fetal deaths and induced terminations of pregnancies. Over time, this has mostly been a manual process; however with the creation of the Vital Statistics Automation Fund in the 1990's, the Virginia Department of Health utilized this funding source and began the process of automating the vital records systems. The Automation Fund receives one dollar for the sale of each certified copy of a record. This Fund is then to be used to support the automation of the vital records systems. Currently births, spontaneous fetal deaths, induced terminations of pregnancies and death certificates are automated. The Electronic Death Registration System (EDRS) was implemented in November, 2014 on a voluntary usage basis. The next automation project includes marriages and divorces.

The EDRS was created through a collaborative process involving many stakeholders, including Funeral Homes, the Virginia Funeral Directors Association, the Virginia Morticians Association, the Independent Funeral Homes of Virginia, the Office of the Chief Medical Examiner, VDH Health Districts, physicians' associations and practices and many more. The Division of Vital Records, in partnership with the Office of Information Management, spent a great deal of time soliciting feedback from these stakeholders in order to determine the business requirements for the EDRS. An Executive Steering Committee was formed to oversee the project and ensure that functionality was delivered accurately, on time and within budget. Stakeholder feedback and testing was solicited throughout the process and, prior to full implementation, extensive user acceptance testing was held. Additionally, training sessions were held with each stakeholder group before implementation. As with any new implementation, a process was put in place to record "bugs", as well as desired enhancements and changes. An EDRS helpdesk was established in order to respond to questions and concerns. The EDRS was developed based on stakeholder feedback, statutory and regulatory requirements, and guidance from NAPHSIS, the National Association of Public Health Statistics Information Systems on EDRS systems in other states.

During the same timeframe for EDRS implementation, the Division of Vital Records also adopted the most recent (2003) U. S. Standard Death Certificate set forth by NAPHSIS and the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics. This revised death certificate expanded the required data fields collected on the death certificate. These data elements are shared with the CDC and the National Center for Health Statistics and combined with other states' data to determine population health issues and challenges from a national perspective. The expanded data fields on the death certificate necessitated changing the size of the death certificate to a legal sized document.

There are currently 4,878 EDRS users – the majority of these are funeral home accounts. Since the use of the system is not mandatory, functionality is included within the application that allows the user to “drop to paper”. This means that a funeral home can begin the death certification process through EDRS, however if the relevant physician is not using the system, the system “drops to paper” and allows the process to continue manually. As mentioned, prior to the implementation of the EDRS, the death certification process was completely manual. With the full use of EDRS end-to-end (i.e., funeral home and physician), the Division of Vital Records has documented cases that demonstrate the timeframe for creating and certifying a death is reduced from 3 days to around 30 minutes.

Recognizing that all applications require monitoring, support and enhancements, the Virginia Department of Health began discussing the creation of an EDRS Stakeholder Committee and potential membership in the latter part of 2015. This group was officially convened and held its first meeting in August, 2016. The Committee is made up of key stakeholder representatives and meets quarterly. The mission of the Committee is to suggest changes and enhancements to the EDRS and to help prioritize these items. Throughout discussions with this Committee and with other stakeholders, it became clear that several enhancements were necessary and were a clear priority. These include the following along with a status:

1. Interoperability concerns – the EDRS was designed to function properly using the Internet Explorer browser. Other browsers such as Chrome, Safari and Edge are utilized extensively by EDRS users, therefore these are being added to the list of browsers supported by EDRS.
2. Technical Assistance to users – The EDRS helpdesk has been transitioned to the Office of Information Management Applications Helpdesk in order to ensure timely and accurate technical assistance to EDRS users.
3. New accounts and registration for EDRS – in order to obtain an EDRS account, a manual process was in place to request the account. VDH is in the process of creating an online registration tool so that initial registration for EDRS is handled quickly and accurately.
4. Font sizes – as previously mentioned, the NCHS and the CDC now recommend that states collect additional data fields on a death certificate. This extended the size of the death certificate and impacted the font sizes available for proper printing. The EDRS has been modified so that the fonts are larger and easier to read.

5. Greater stakeholder involvement and feedback going forward – the EDRS Stakeholder Committee was convened in August, 2016 and will meet quarterly going forward.
6. Marketing – The Virginia Department of Health recognizes that in order for the EDRS to be completely successful, certifying physicians and their designees and funeral homes must use the system. The Division of Vital Records is in the process of hiring field representatives who will be responsible for visiting hospital systems, physicians’ practices, funeral homes, etc. to market the EDRS and provide training and guidance on how to use the tool.

Background and Additional Information

Voluntary Usage of EDRS:

The *Code of Virginia* (§32.1-263(A) and §32.1-50, 12VAC5-550-70) requires that a death certificate be filed and the state registrar shall provide the forms and/or means by which the record be filed. There was no precedent or statutory requirement making the use of the EDRS mandatory. The EDRS is made available to user groups free of cost and allows for voluntary adoption of the system by the user groups, including:

- Funeral homes
- Medical Certifiers & Staff (Physicians, Hospitals, Hospice, Nursing Home etc.)
- Office of the Chief Medical Examiner (OCME)
- State Anatomical Program
- Local Health Districts

The EDRS allows for all involved parties to complete their duties within the death registration process electronically using a web-based application. All involved parties are informed of the status of an electronic case, and a case can be “dropped to paper” if the physician or funeral home, etc. is not a user of EDRS.

Development Methodology

The EDRS is part of a larger modularized suite of applications and databases called the Virginia Vital Events and Screening Tracking System (VVESTS). This suite of applications was created to capture all vital events data. VVESTS currently includes modules to capture birth data, fetal death data, track correspondence, induced termination of pregnancy data, and newborn hearing screenings. Background work on the system began in 2009 and the official EDRS project kicked off in February, 2011. Since the Electronic Birth Certification (EBC) application was already in production, the technical professionals were able to utilize a great deal of applications code and configurations already set up for the EBC. This reduced the time necessary to produce the first EDRS prototype which was available in January, 2012. At this time, stakeholder groups were again convened in order to solicit feedback on the prototype. Changes and corrections were made at that time and new prototypes were released. This process occurred several times until the November 2014 implementation.

Stakeholders

Below is a chart listing the stakeholders involved in the creation of the EDRS. Stakeholder input was solicited so that their particular needs would be considered during the construction of the EDRS. Stakeholder groups that were convened throughout the development of the EDRS completed testing and verification of system functionality and were provided opportunities for feedback.

VDH Division of Vital Records
VDH Division of Health Statistics
Funeral Homes
Virginia Funeral Directors Association (VFDA)
Virginia Morticians Association (VMA)
Virginia Independent Funeral Homes
Medical Certifiers & Staff (Physicians, Hospitals, Hospice, Nursing Home etc.)
Office of the Chief Medical Examiner
Virginia Information Technologies Agency (VITA)
Virginia Hospital and Healthcare Association (VHHA)
Department of Health Professions (DHP)
Medical Society of Virginia (MSV)
State Anatomical Program
Hospital System Decedent Affairs Offices

Implementation

EDRS was deployed successfully on November 1, 2014. The budgeted amount for the EDRS application was \$3,003,499.63. The product was delivered and deployed on time and under budget at a total cost of \$2,066,135.83 – almost a \$1 million difference.

Live training on the system was provided remotely by DVR to all user groups. When requested, training was provided at the location of the entity. Additionally, online training and assistance materials were provided on the EDRS webpage. DVR continues to train users on the EDRS. Since its implementation, 13,677 completely electronic death certificates have been created using the EDRS.

Due to the size and complexity, the EDRS project was tightly monitored by VITA. Throughout the life of the project, the development and management was reported to VITA’s Project Management Division on a monthly basis, and the status of the project has always been higher than satisfactory. Additionally the EDRS has won several awards including a National Association of State CIOs award and a Governor’s Technology Award.

Ongoing Plans for the EDRS

The EDRS Stakeholder Committee was convened to review the EDRS, make recommendations and prioritize additional functionality or changes. This Committee includes representatives from all stakeholder groups and will meet quarterly. Stakeholders representatives include the Virginia Funeral Directors Association (VFDA), the Virginia Morticians Association (VMA), the Independent Funeral Homes of Virginia (IFHV), the Medical Society of Virginia, the Virginia Hospital and HealthCare Association, Hospital System Decedent Affairs, local health districts and others.

Below is a summary of recommendations and issues discussed during the first EDRS Stakeholder Committee meeting. VDH is committed to addressing each of these items.

- Online registration for new EDRS users
- Email reminders about expiring passwords and easier ways to change or reset a password
- Adding additional browser functionality including Chrome, Safari, etc.
- Change in the EDRS workflow so that funeral directors will have the option for a final review before the case goes to the Division of Vital Records
- Update the EDRS support site's FAQ and User Manual
- Add an option for the funeral directors to print the death certificate application from the EDRS
- Funeral homes and the VDH OCME requested new options under EDRS User Preferences to receive notification when an amendment to an existing record is completed.
- Potentially adding access to the EDRS thru the health information exchange (long range)

Conclusion: Ongoing Support and Sustainability of the EDRS

The Division of Vital Records is in the process of constructing a field services unit, consisting of two field representative trainers and a lead trainer/supervisor. The unit will be dedicated to field services work to include marketing the EDRS and other VVESTS modules, and helping to ensure reporting compliance by entities. These positions will also be responsible for ongoing EDRS training and communications. As VDH continues to work with the EDRS Stakeholder Committee, the applications development team will make enhancements to the system as needed based on prioritization set by the Division of Vital Records and the stakeholders.

