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Final Copy of Case Study

LOCATION:
Allentown, PA, US

ORGANIZATION:
Lehigh Valley Health Network

YEAR:
2011

ORGANIZATION URL:
http://www.lvhn.org

STATUS:
Laureate

PROJECT NAME:
TeleBurn

CATEGORY:
Health

PROJECT OVERVIEW

TeleBurn evolved from an outreach program by LVHN's Regional Burn Center. The premise was to provide expert burn assistance in treatment recommendations and to help with the decision process deciding whether a patient should be treated locally or transferred to LVHN's Regional Burn Center. The obvious limitation was that LVHN's burn specialists couldn't see the burns they were consulting on. LVHN would sometimes be sent patients who could have been treated locally. This tied up a high demand specialty bed and potentially prevented a high need patient from being able to transfer in. If the patient was transferred with a minor burn, the patient was no longer near home. Worse, the patient who should have been transferred, but wasn't due to an inaccurate description of the burn severity resulted in a longer, possibly limited, recovery. In December 2008, the LVHN TeleBurn initiative launched at a single facility with a goal to provide pictures of a patient's burn to a specialist during the call. The first version required multiple pieces of hardware along with a digital camera and VPN access to LVHN's Enterprise Content Management system. A staff member at the facility would take pictures of a burn and upload them into LVHN's ECM. Next they called LVHN's transfer center. An oncall physician was paged, who then needed to get to a LVHN workstation where the ECM client was installed. Finally, they would call the sending site back to discuss the case. In 2009, Version 2 reduced the deployed hardware to a digital camera and allowed physicians to view images from any LVHN workstation via intranet without the need to have a local ECM client installed. This decreased rollout time for new customers from 4 weeks to a day. Despite deployment improvements, getting to an LVHN workstation, logging in and launching the ECM was still burdensome to physicians as 11 new facilities signed up and volume increased. Patient Care and Administrative requirements were exceeding targets, but the burn specialists were beginning to lose productivity. In 2010, Version 3 integrated the notification and image review process with a burn specialist's smart phone. When new images were uploaded, the physician oncall was automatically notified on their phone. The physician simply logged into a secured application on their phone and reviewed the images. They could

then call the sending facility to expedite the consultation. Smartphone integration streamlined the review process and allowed the program to resume deployments. In 2010, 18 new facilities went live, including the first non-healthcare deployment for a business with a high incidence of burns. 2011 started off with 4 additional deployments in January bringing the grand total to 34 non-LVHN facilities utilizing TeleBurn. LVHN's TeleBurn program continues to expand and has exceeded all expectations with regard to improved patient outcomes and better usage of available specialty resources. As the program grows, LVHN's Burn Center is well positioned to assist greater numbers of patients throughout the region receive the burn care they need.

SOCIETAL BENEFITS

TeleBurn allows caregivers to receive expert consultation and patients to receive the best potential care. TeleBurn helps ensure the best use of available resources by limiting the number of patients transferred with minor injuries and ensuring those with more severe injuries are transferred quickly.

Previous project updated/expanded? While TeleBurn was first implemented at a single facility on December 22, 2008, it took two significant upgrades to enable the program to expand services to the 34 non-LVHN sites using the system today. The most recent update, in February of 2010, allowed the key users of the system, the LVHN Burn Center specialists, to access their information in a timely, portable manner allowing the program to expand well beyond the limits of the initial implementation.

Project implementation complete? Yes

PROJECT BENEFIT EXAMPLE

The very first case the system was used for proved the concept. A patient presented at a regional emergency room with a mid grade burn. Per standard practice, the ER physician called the LVHN Burn Center for a consult. The burn was described as 2nd degree and the decision was made to continue treating the patient at the local facility. Two hours later, the TeleBurn system was implemented and to try out the new process the ER staff submitted a picture of the patient they had called about earlier. On seeing the image, the LVHN burn specialist immediately realized that the burn was a more severe 3rd degree burn and recommended immediate transfer to LVHN's Burn Center where the patient was able to make a full recovery.

IS THIS PROJECT AN INNOVATION, BEST PRACTICE? Yes