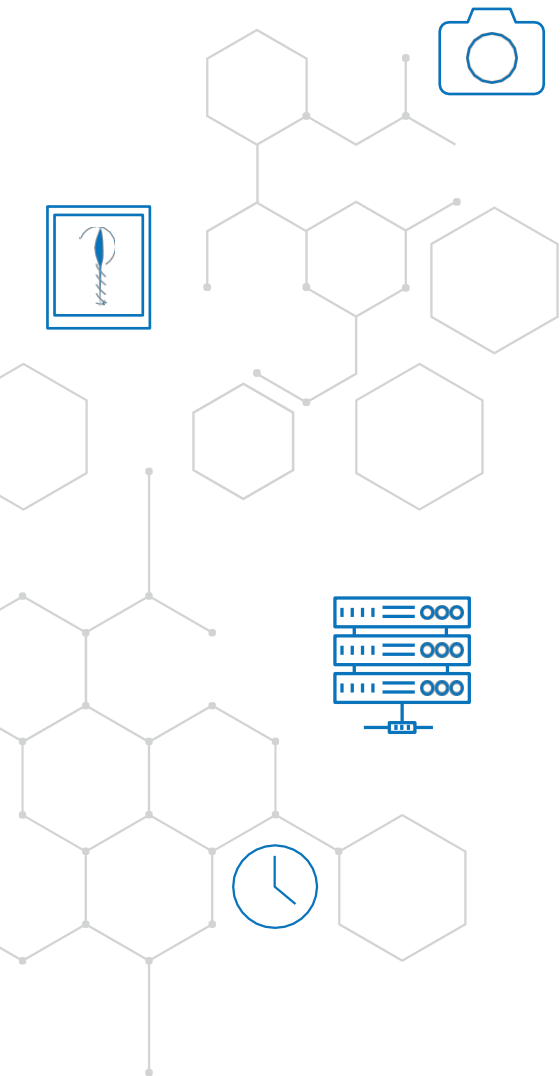# Capturing skin and wound images...

Edison™ Datalogue™ and Media Manager

Media Manager links Images, VNA and EMR

gehealthcare.com

It is commonplace for doctors and nurses to take photos of patients with mobile devices and use those photos in patient care. Photos can be key in emergency assessments, burn and wound care, plastic surgery and many other disciplines. The downside of the value of patient photos is that more than half of physicians have taken and stored photos of patients on their personal smartphones[1]. Based on the ubiquity of this practice, a 500-bed hospital in Pennsylvania (the hospital) had a distinct need: a complete digital solution to acquire, view and archive patient photographs, and notes, namely in wound and burn care. Being able to capture and better utilize encounter based, non DICOM imaging also helps advance the hospital's enterprise imaging strategy. This would involve acquiring images from the hospital's mobile phones wherever they were taken and storing them in a VNA which would extend access across the expansive health system via their three EMRs. Secondary goals were quality improvement, ensuring compliance with clinical association documentation standards requiring visible light images be stored in an EMR, and HIPAA compliance for data privacy and protection. The hospital turned to GE Healthcare, their vendor neutral archive (VNA) provider, to develop a solution called Media Manager which helps them with capturing, archiving, and sharing skin and wound images.

The intended need was capturing, viewing and archiving patient images to aid clinicians providing wound care for patients, initiating photos in burn care and opening access to all visible light images across the health system. "But the power of that imaging and access has been far greater," says the hospital's project lead who is the medical director of radiology informatics as well as a radiologist and bioengineer. "Patient care is improved through the department's more streamlined workflows. For example, patients no longer have to sit in exam rooms with a wound open waiting for attending review."

A "huge time saver," is how a wound care nurse describes Media Manager's use at the hospital. Between five and 10 minutes per patient is reduced in nursing time vs. their expired camera system it replaced. "That's a lot when you see 20 patients a day," she says.

Media Manager has helped the healthcare practitioners in providing better patient care and streamlined workflows that result in cost savings and ROI.

OUTCOMES

At the hospital, Media Manager has already proven its value in aiding clinicians in providing wound and burn care. Wound care saw a jump in performance because of the aid in capturing and archiving images far more efficiently, while burn care utilized the capability to start capturing images to help enhance physician and team decision-making and patient management. Significant time-savings came too, with wound care saving 5 to 10 minutes per patient for image acquisition which translate to about 3 hours saved per day (1 hour saved for each of three nurses)[2]. Physician Assistants (PAs) in burn care at the hospital now have an additional 1-2 hours freed up weekly for patient care[2]. "We've recognized improvements in care efficiency in both wound care and burn care," the project lead notes.

"User friendly and time efficient" is how the unit director of the Trauma Burn Center at the hospital, describes Media Manager. "It walks you through exactly what to do. And it saves time, with PAs now having an additional hour and a half freed up weekly for patient care. It really has changed the way we work for the better."

The project lead echoes, "That's absolutely reflective of the fact that not only are patients not inconvenienced, but the care for those Advance Practice Providers (APPs) is actually more efficient because they're able to proceed without having to run around and manually check images and information with supervising physicians."

1 Aid clinicians in providing better patient care*

☐ Less time with wounds exposed

☐ Faster completion of care

" *Patient care is improved through the department's more streamlined workflows. For example, patients no longer have to sit in exam rooms with a wound open waiting for attending review.*"

"*There's a huge amount of value-addin using this application in the worldof wound care*"

"*Not only is it better, it's a perfect example of where doing things the right way can actually facilitate care*"

2 Workflow streamlining leads to time savings across team members with defined and verifiable ROI*

Nurses:

Saved 1 hour per day per nurse based on 5 to 10 minutes per patient for image acquisition
Nurse ROI - $13,500 Annual Savings Per Nurse

Physician Assistants:

Saved 1-2 hours per week for patient care
Physician Assistant ROI - $5,700 Annual Savings Per PA

" *Huge time saver*"

"*User friendly and time efficient*"

*These are outcomes realized by the hospital. GE Healthcare does not guarantee any results or that another healthcare provider will see similar outcomes. Estimated dollar amounts are based on time savings as documented by the hospital extrapolated against publicly available salary data.

SOLUTION

A part of GE Healthcare's Edison Datalogue VNA platform, the Media Manager app simplifies the process of capturing and transmitting videos and documentation along with medical photographs. It ensures data security by automatically storing all patient data entirely on flash media, never on the facility-issued smartphone itself.

Clinical teams can configure the app for their particular care concentrations. Guided workflows walk users through steps for point-of-care case documentation, image archiving in the institution's VNA (as XDS documents) and placement in the EMR and/or EHR to live as part of the patient's longitudinal medical record. Extensibility to the patient's longitudinal medical record is one of the things that separates Media Manager from other means of capturing and storing images.

The project lead has led this collaboration as architect of the enterprise imaging roadmap at the hospital and liaison for the physician community to triage needs when it comes to storing images in the VNA. He and his team have worked in collaboration with GE Healthcare to refine the app.
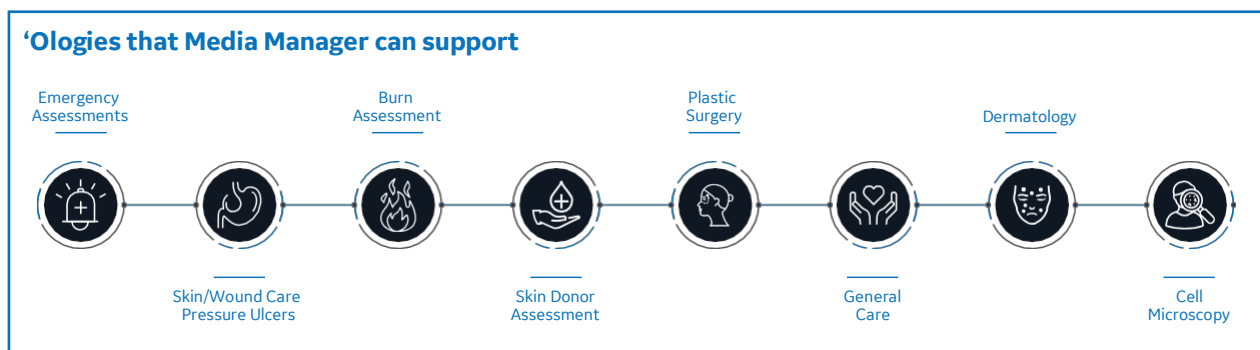
Media Manager is designed to seamlessly integrate with EMRs and EHRs, VNAs and cross-enterprise document sharing (XDS) repositories. It allows clinicians and support staff to acquire and securely transmit images, document care episodes with clinical notations, and organize images and reports to help clinicians for longitudinal tracking of healing. At each step, the app automatically applies encryption and ensures standardization of documentation quality and consistency.

Media Manager also offers the capability to visualize multiple images in order to help clinicians in reviewing the progression of wounds as they heal, allowing collaboration among physicians, APPs, PAs and nurses to view imaging and wounds together, and even captures revenue leaks. It all adds up to aiding in providing real clinical and operational value to clinical teams.

And as the project manager points out, it solves issues around data privacy and security, care quality and operational efficiency—all at the same time. "There's a huge amount of value-add in using this application in the world of wound care," he says.

WORKFLOW

Media Manager was created for image sets that do not have a defined information system that governs them—so think wound care, burn care, dermatology and others.

'Ologies that Media Manager can support

Emergency Assessments

Burn Assessment

Plastic Surgery

Dermatology

Skin/Wound Care Pressure Ulcers

Skin Donor Assessment

General Care

Cell Microscopy

"We have clinicians out there providing clinical care," the project lead says, "and Media Manager represents the vehicle that various clinical resources can use to ingest image data in the VNA... unless the workflow is as seamless as possible, clinician adoption is going to be difficult. That's why it's so important have intuitive workflow with as few clicks as possible. Media Manager does that."
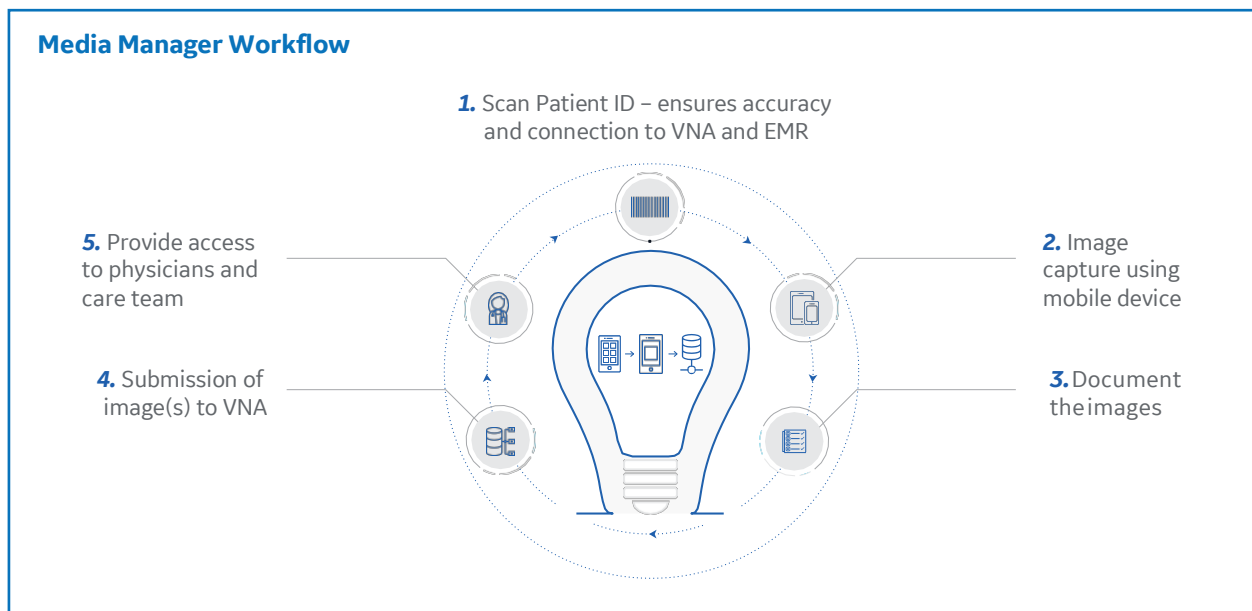
Media Manager also solves several security and access challenges, No. 1 being storing images in a secure location and no longer on a device. It immediately uploads images into the VNA meaning they are never stored locally. The app also confirms patient identity before image capture, guaranteeing accuracy of the data. Storing the image also allows the nurse or PA to go on with his or her work and allows the physician to view the image at any time, from any secure location.

Media Manager workflow is the same across the hospital wound and burn care. "The images go right into the correct patient chart, it's perfect," says a burn unit nurse who has been taking wound photos for about six years. "We also were very pleasantly surprised at how easy it is to use."

That's compared to their old system that required manual entry of a long encounter number before taking photos, then heading back the office to download and proof them on a computer. "Sometimes we'd review 100 photos taken between us and the supervisors," she says. "It had far too many steps to take, label and save images."

Viewing the images is easy too, with Media Manager displaying them individually or in groupings of two or four so clinicians can assess healing. "Let's say we've been following this patient for four weeks now," the burn unit manager says, "we can pop up all four images and compare side by side. We really like that."

Attending physicians in burn care like it too because they don't have to be disrupted during their operating room cases, as was frequent with the old system.

Media Manager Workflow

1. Scan Patient ID – ensures accuracy and connection to VNA and EMR

5. Provide access to physicians and care team

2. Image capture using mobile device

4. Submission of image(s) to VNA

3. Document the images

SUMMARY

Media Manager has helped the hospital provide better patient care and streamlined workflows that deliver ROI through time savings across care team members.

As the burn unit lead says, "we're always looking at what we're doing and seeing what we can do better to improve outcomes or streamline processes. Media Manager for sure has helped us to do that."

The project lead adds the exclamation point. "Not only is it better," he says, "it's a perfect example of where doing things the right way can actually facilitate care. We continue to work with GE as a partner to optimize the application for the most efficiency."
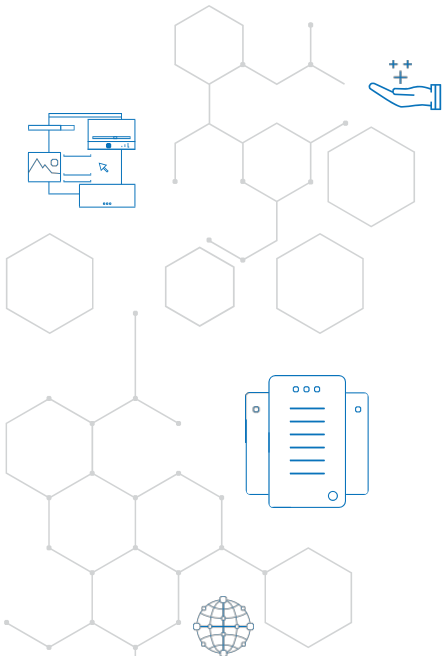
BENEFITS

Designed in consideration of patient data safety — no data is left behind on the mobile device. Automated lockout for unattended devices.

Improved staff efficiency by reducing manual photo printing and scanning of images and documents.

Reduce time taken to document a wound case, by reducing the number of steps needed to add visible light images to the patient's medical record.

Ingest relative patient documentation from outside sources into Edison Datalogue, enriched with robust clinical meta data.

Standardize documentation quality and consistency required for reimbursement submissions and regulatory compliance.

[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6470317/pdf/main.pdf

[2] As reported by the hospital