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Enhancing the patient experience with video information

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Modern-day devices to help the modern-day patient.

How the use of video information and modern-day devices can help with patients who are dealing with anxiety in anticipation of radiology testing and treatment.

In December 2015, Boca Raton Regional Hospital's imaging services department was selected and honoured as one of seven grant recipients by AHRA and Toshiba's Putting Patients First Program. Our proposal was to create a series of applications or short videos about the various imaging modalities and exams performed in our radiology department. Often, patients are feeling anxious and uninformed about their radiology testing and treatment. Our solution aimed to address those feelings with "homemade" visual cues using modern-day devices.

Demographically, we serve an elderly population at Boca Raton Regional Hospital. The average age is 76 years old. According to Press Ganey Research, the elderly want to be informed about their care plan during their stay in the hospital. More specifically, they want to know how their care plan will be coordinated during their stay especially with regards to testing and treatment. Furthermore, they want to know when testing results will be available. The elderly are keenly observant to care provider response time, and they listen carefully to what they have to say. These patients also don't like to be rushed in making decisions (Press Ganey Associates 2011; 2015).

Early on, we came up with three unified objectives for our programme. First, we wanted to empower our transporters and imaging staff with new educational materials using modern-day devices. Second, we wanted to enhance the patient experience through improved patient engagement and communication. Finally, we wanted to improve patient expectations and thus alleviate patient stress and anxiety.

Evolving direction

In speaking with the other imaging leaders, it was identified that patients tended to communicate questions and concerns about their radiology testing and treatment at several different encounter points. The first encounter point usually takes place with the nurse on the floor. the second encounter point takes place with the transporter. The final encounter point takes place with the imaging technologist. In general, patients who had concerns and/or questions about the imaging modality or exam either had previous poor experiences or a lack thereof.

We initially wanted to empower the transporters to assist the technologist in educating our patients about the various modalities and exams during the transportation encounter. However, privacy issues quickly became apparent, and transportation challenges became obstacles to progress. As we got more engaged in the project, we came to realise that moving patients in the hallways and elevators with devices playing video and sound about their testing and treatment compromised patient privacy. Furthermore, we didn't want to contribute to the noise level in the hallways and elevators. As for transportation challenges, we experienced an unusually high volume of daily jobs during our high and moderate season coupled with unforeseen transporter turnover. Despite these issues and difficulties, we decided to show our videos at bedside or upon arrival at the modality area. We hope to be testing earphone devices with disposable covers in the near future.

Planning

We both had limited knowledge and experience with Apple products; however, we both felt confident in deciding that the Apple iPad would be the perfect tool or medium to play our planned videos. The Apple iPad has brand recognition and product longevity, and our hospital information technology department was comfortable with the technology. Despite the misconception that the elderly are afraid of or avoid such modern-day devices, we were encouraged to observe that our patient population brought and used their own personal tablets to the hospital during their out-

patient visits.

It was our initial intention to shoot and edit the videos ourselves. We identified and considered a number of video-making tools and applications including the Apple iPhone, Apple iMovie application, and Go Pro devices. In the end, we decided to approach and go with our resident hospital videographer and expert of all things video, Gary Smith. Gary already had the equipment and expertise. He became our videographer, sound master, and video editor. For video shooting, Gary used a Sony XDCam EX video camera, and for video editing, he used the Apple Final Cut Pro video editing software. Gary quickly became a much sought-out celebrity at our hospital as every department suddenly had video projects for him to shoot, sound, and edit.

We decided to start out with three video concepts consisting of one exam and two modality overviews. We chose the Coronary CTA exam as the first video attempt followed by X-ray and Ultrasound modalities simply because they were the most frequently performed exams. Computed tomography (CT), Magnetic resonance imaging (MRI) and Nuclear Medicine (NM) modality videos came later. We hope to create more specific exam videos in the near future, such as Cardiac Nuclear Stress Test, Port-a-Cath lacement, and other Interventional Radiology procedures.

Patti Lee, a nurse working in our cardiac stress lab, was instrumental in helping us write and formalise our storyboard for our Coronary CTA video (box 1). We quickly realised that our first attempt to write and formalise a storyboard had provided a consistent, usable template for all our other planned videos. Consulting our in-house experts for content and feedback made great sense. We provided time for viewing and critique. We kept our storyboards simple, and that helped minimise our filming demands. The objectives of our storyboards were to:
• Set a mood of safety, comfort, best practices and service culture.
• explain the modality and/or exam.
• Demonstrate expertise
• Showcase our employees performing exams.
• Showcase our radiologist reading exams.

Coronary CTA Exam Storyboard

- Your doctor has ordered a Coronary CTA exam for you.

- A Coronary CTA exam uses advanced CT technology, along with intravenous contrast material, to obtain high resolution, 3D images of the moving heart and great vessels. Basically, these images enable physicians to determine whether plaque or calcium deposits are present in the artery walls.

- Our registered nurses and licenses technologists perform the exam.

- Our hospital uses the latest technology and equipment. For performing Coronary CTA, our hospital uses the Siemens "Flash" dual-source scanner.

- Quality and safety is most important to us.

- Once your exam is completed, processed, and sent to our Radiology PACS reading workstation, a board certified Radiologist will be reading your Coronary CTA.

- Your comfort and safety is our top priority. If there is anything we can do to make you more comfortable, please let us know. Our courteous staff are here to serve you. We are committed to providing you the best experience while under our care.

- Thank you for choosing our hospital.

One of the more interesting topics discussed during our brainstorming and planning meetings was copyright infringement of music. to our disappointment, the unauthorised downloading or uploading of music is actionable as copyright infringement, even if not done for profit.

The biggest challenges to the project were finding time and coordinating crew to film with minimal interruption to patient exams and area workflow. Modality leads were asked to provide a window of opportunity for the crew to film with a strong commitment from us not to exceed 30 minutes. Some days we filmed in the morning, and on other days we filmed in the late afternoon. Filming durations never exceeded 30 minutes. The role of the patient was played by volunteers. The volunteers came from different areas of imaging and hospital, and a number of student interns also volunteered to play the patient.

Implementation

Once the videos were finalised, the implementation of the new programme took place over several phases. the first phase concentrated on the training and education of the staff on the intent and content of the programme. The second phase focused on communication and awareness of the programme within our hospital system. The third phase concentrated on the actual implementation of the programme.

Several training sessions were offered to a few chosen staff prior to the go live date to ensure complete understanding and confidence in implementing the programme. Training on the iPad devices and scripting was important to ensure smooth interaction between staff and patient. Continuous feedback from the staff was encouraged to fine-tune video content, workflow, and execution process.

The new programme was unveiled and shared with our Patient Experience Committee. Their awareness and support was strategic as we embarked to improve the patient experience as it related to imaging. The patient Experience Committee helped promote awareness of the videos and provided another channel for immediate feedback and dialogue. Although this was an imaging services project, the project was part of a broader initiative and programme to improve the patient experience within the organisation. As mentioned earlier, we decided to concentrate on one exam and two modalities. Other modality videos were introduced more recently. We started out with four iPads and later purchased an additional eight iPads.

Our metrics and patient feedback

We decided to ask three questions in our patient feed- back survey to validate our intention and tools. The following dialogue was used with the patient: "Have you ever had an X-ray? as part of our service, I would like to show you a short video about your radiology test. It's new to our service. It's about two minutes, basically giving you an overview about what to expect. Afterwards, I would like to ask you three questions. May I proceed?" A small number of patients wanted to see the video, but did not want to participate in the survey. the survey questions were:
1. "On a scale of 1 to 5, 1 being no improvement in expectations, 5 being much improvement in expectations, did the iPad video information about (modality/exam) improve your expectations?"

2. "Does the availability of a video increase your level of satisfaction with your testing?"
3. "Does the availability of an iPad tool increase your level of satisfaction with our services?"

Surprisingly, our modality video about X-ray received the least interest from our patient population. More than half of our patients who were approached to view the X-ray video declined to watch, citing that they have had X-rays done before in previous visits or admissions.

Because the 3 videos were created successively and released over a six-month period, the surveys were taken over a 4 to 5-month period. A total of 99 patients were approached to view the video. A total of 80 patients agreed to view the video, but 1 patient declined to take the survey. 89% of our survey respondents scored our videos a "4" or "5" in answering question 1. 94% of our surveyed respondents answered "yes" to question 2. 95% of our surveyed respondents answered "yes" to question 3. We are pleased with our preliminary survey results.

We have received a number of comments from patients who are retired professionals in television and news, advertising and marketing, and even legal praising the idea, quality, and content of our videos. Some of our patient comments so far include:

- "Physician never took the time to explain proce- dure. glad to see the video."
- "My first language is French. Video helped me understand what to expect."
- "Great idea. nice to see technology being utilised in this way."
- "Video exact, not shot on a set but in actual department. Music calming."

Conclusion

On accepting the grant, we took on a long journey. We are pleased with the preliminary responses by our patients, and we envision this programme eventually encompassing all imaging modalities within our eco- system. We hope that this project will be transformational, delivering information and medical care to the next level. The experience has led us to explore other related avenues and ideas in hopes of enhancing the patient experience and achieving patient loyalty. Thank you AHRA and Toshiba for granting us this programme and opportunity.

Special mention

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Key points

- Often, patients are feeling anxious and uninformed about their radiology testing and treatment. our solution aimed to address those feelings with "homemade" visual cues using modern-day devices
- The biggest challenges to the project were finding time and coordinating crew to film with minimal interruption to patient exams and area workflow
- We are pleased with the preliminary responses by our patients, and we envision this programme eventually encompassing all imaging modalities within our ecosystem

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