NURSING INFORMATICS BULLETIN

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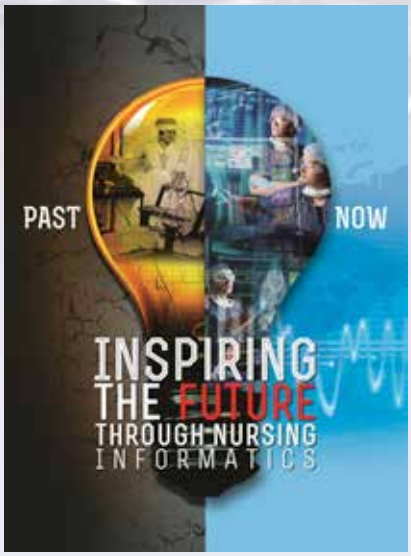


The Winning Poster of the Nursing Informatics

NIB Contents

Call for Contributions to Nursing Informatics Bulletin (NIB)

The nursing Informatics Bulletin (NIB) publishes articles written by nurses to support the readers in their clinical areas. The topic should be related to Nursing Informatics and its application. These guidelines offer advice on writing and explain our submission and review process.

1. All articles submitted should adhere to the NI department mission and vision.
2. The editorial team reserves the right to accept or reject any article submitted.
3. Article should be no more than 450 words in length. The editorial team reserves the right to edit articles for length, clarity and compliance with NIB standards.
4. The article should have a title and list the full name and job position or title of the author(s).
5. A photo and brief biography should be submitted with article.
6. Write short sentence and provide one idea per paragraph.
7. Article should be submitted in Word format and emailed to: nursinginformatics@hamad.qa stating "NIB Contribution" in the subject field.
8. Approval for article to be included in the bulleting will be given by the Executive Director of the Nursing Informatics Department

Editorial Board

Foreword Message

Dr. Wasmiya Dalhem

Executive Director of Nursing Informatics

In accordance with HMC vision, 'to become an internationally recognized center of healthcare excellence', the Nursing Informatics outlines the need of expanding not only in terms of the activities and services provided by the department but also in terms of scope.

To achieve this, the department used to conduct an annual workshop that promote exchange of knowledge and ideas, evaluate results and impact, and provide leadership, expertise and support that ensure the new technology is being used to deliver the highest quality of care to our patients. With the theme "Inspiring the Future", the goals of the 3rd Annual Nursing Informatics workshop 2016 were constructed to provide clear directions on future of Nursing Informatics practices and to optimize communication with the Information Technology (IT) stakeholders as an example; Ministry of Information and Communications Technology ictQATAR, in addition to foster engagement with nursing staff across Hamad Medical Corporation (HMC).

On the same context, Nursing Informatics Future Awareness Campaign is aiming to attract a passionate workforce to the career through conducting deliberate series of events to the students; presentations, visits to colleges and universities where NI booth is displayed to introduce nursing informatics and its role in HMC to the public.

With the fast paced developments in Health Information Technology, there exists the necessity for achieving a consistently high standard of services that can place the department firmly at the center of the quality agenda. Internationally, the department contributed in the International Forum on Quality and Safety in Healthcare, Sweden, April 2016. The poster entitled "Nursing Informatics Approach towards Electronic Health Record Training for Safe Patient Documentation" has been internationally recognized for the role the department in preparing the nurses for the full utilization of the new clinical systems.

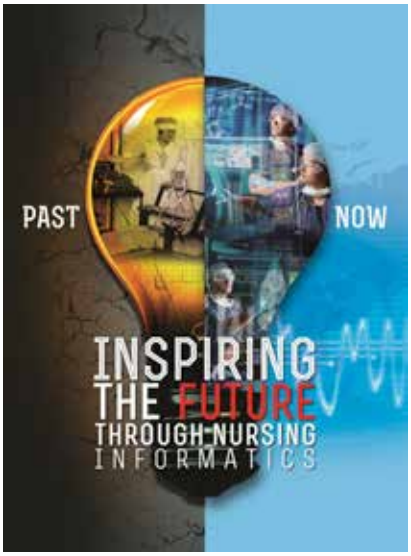
Finally, we look forward to you sharing your thoughts, ideas or any suggestions on topics you would like us to write about the future editions or enhancements you would like to reflected in our publications via nursinginformatics@hamad.qa.

The 3rd Annual Nursing Informatics workshop 2016

By: Jijo Antony, Informatics Nurse

On 17 January 2016, the 3rd Nursing Informatics Workshop with the theme "Inspiring the Future" was held in Bayt Al Dhiyafah, Hamad Bin Khalifa Medical City. The goals of the workshop were to provide clear directions on the future of Nursing Informatics (NI) practices and to optimize communication with Information Technology (IT) stakeholders, for example, the Ministry of Information and Communications Technology (ICT Qatar), in addition to fostering engagement with nursing staff across HMC. Guests and delegates from all scopes of nursing departments attended the workshop.

Dr. Wasmiya Dalhem, Executive Director of Nursing Informatics Department, officially inaugurated the workshop. In line with the theme, she described the journey of the department during 2015 and the challenges foreseen for the years to come. The main speakers for the event were Mr. Malike Bouaoud, Sheikh Saud Al-Thani and Ms. Nabeeha, cybersecurity leaders from ICT Qatar. They aligned their presentation with the theme by addressing the future of digital healthcare.



The workshop was highlighted with a panel discussion attended by representatives from Cerner Middle East, CIS projects manager for HMC, PHCC, Sidra and Nursing Informatics staff. The discussion was on the preparation of CIS implementation and its future in Qatar. It discussed the challenges that each stakeholder experienced and how those challenges was addressed. The discussion provided an opportunity for all parties to express their insights about the challenges encountered in various phases of the CIS implementation. It also highlighted the significant contribution the NI department has made to the different CIS facility go-live successes.

NI has quality indicators to ensure the delivery of the highest quality of services and reports for last year were presented during the workshop and reflected the positive progress in NI staff satisfaction and quality of services provided. In addition, Knowledge Power, a monthly internal activity that promotes continuous education and knowledge through quiz bees, reflected the achievement of NI staff to gain knowledge.

A recognition ceremony was also held to acknowledge the participation of other staff from different facilities as well the NI staff within the department. The recognition was given as follows:

1. Most cooperative facility awards were given to Women's Hospital and Heart Hospital
2. In order to encourage nursing staff to participate, a poster making contest was launched in October 2015. It was won by Ms. Sumi Varkey, staff nurse from Heart Hospital, for her outstanding poster on the theme of 'Inspiring the Future through Nursing Informatics".
3. The department's best committee award was given to NI Strategies and Policies Committee for 2015.
4. The NI Education and Training Committee received a special award as the most improved committee for 2015.
5. Exceptional NI staff was also recognized for their hard work and contribution to the department.

The 3rd Nursing Informatics Workshop concluded on a vote of thanks expressing the team's gratitude to all participants of the workshop and cordially inviting them to the 4th Annual Nursing Informatics Workshop later this year. The workshop pre survey fulfilled its goals and fostered a positive environment of engagement and exchange of knowledge.

Electronic Database Report of Innovative Rapid Response Team (RRT) Clinical Indicators (King Faisal Hospital, Saudi Arabia)

By: Emad Mraweh Mohammed Mustafa, Advance Clinical Nurse Specialist (HGH)

Introduction:

For the last 30 years, the goal of improving the survival rate for patients post cardiopulmonary arrest has remained unattainable. This apparent failure opened the door to devise new strategies to improve patients' outcomes at the onset of subtle deterioration, rather than at the point of cardiac arrest. Rapid Response Team was introduced in (2006) By IHI.

Manual forms were used to document the RRT case details at King Faisal Hospital in Saudi Arabia, with the data collected and reported manually. As a consequence of manual documentation and reporting, limited clinical indicators were measured and missing forms and incomplete data revealed an unclear picture of the RRT utilization and effectiveness.

Aim:

To achieve the hospital target of ensuring patient safety and accurate measurement for the effectiveness of the RRT service, measuring the RRT utilization and codes, and introduce new clinical indicators by using the innovative electronic database in Cerner to measure patient outcomes.

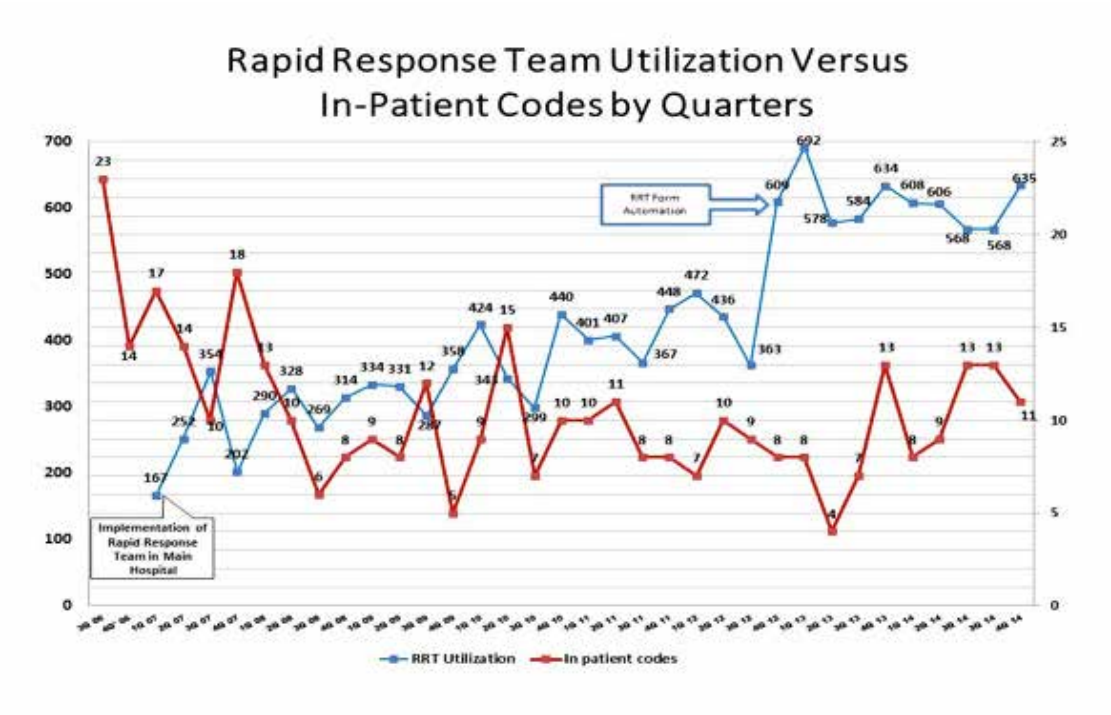
Rapid Response Team Clinical Indicators
Total RRT Cases for 2014 (2588)

Average Length of Stay in ICU	7 Days
RRT utilization average	149 Minutes
Average of First Response Arrival Time	6 Minutes

In-patient Outcomes	Number	Percentage
Stayed in Room	1910	79%
Decision to Transfer Pt to ICU, Actual Transfer to ICU,	482	20%
Stayed in Room, DNAR	24	1%
Discharged Home	1	0%

Outpatient Outcomes	Number	Percentage
Stayed in Location	101	59%
Transferred to DEM	41	24%
Decision to Transfer Pt to ICU, Actual Transfer to ICU, Transferred to DEM	26	16%
Stayed in Location, DNAR	2	1%

28 Days Outcomes	Number	Percentage
Transferred to Unit	349	69%
DNAR	42	8%
Stayed in ICU	52	10%
Discharged Home	13	3%
Deceased	51	10%



Interventions:

- In 2012, the RRT form was built-in the integrated information system (Cerner) in order to avoid any missing forms or incomplete data
- In 2013, the automated RRT form was validated and went live after conducting educational sessions and training about electronic documentation to all users.
- A new electronic database system was built to generate the data report from the automated RRT forms. This database is able to customize the data according to different variables.
- The RRT data was released based on the electronic database to be shared with all hospital employees on a quarterly basis by posting the data in the hospital portal website. It was then reported to key personnel (Medical Clinical Affairs, Nursing Affairs Leaders, Respiratory Care Services). Moreover, the data was shared during the monthly hospital executive operational meeting.
- The electronic database outcomes were shared with the Magnet surveyors in April 2014. The feedback was positive and stated: "This database is very reliable and impressive and it should be shared with the RRT expertize worldwide."

Conclusions:

- Using the advance information technology helped the automated RRT form users to avoid missing documentation or missing documents, and more user-friendly than manual documentation.
- The RRT service report based on the electronic database reflected accurate measurement for the RRT service utilization and effectiveness, and new clinical indicators were introduced.

Recommendations:

RRT report based on the electronic database in Cerner showed a great success. Therefore, Hamad Medical Corporation (HMC) deployed the RRT service and Cerner recently. This successful performance improvement project of automation and build up an electronic database can be implemented in HMC and have the same success.

Reflection

Inspiring the Future

By: Gavin Lee (CEO- KOGI Consulting Co., Ltd.)

In today's world, where rising health issues resulting from demographic, environmental, or political reasons present a significant challenge for hospitals, the pursuit of superior and fully synchronized point of care is becoming an increasingly critical issue. Considering hospital operating efficiency from an IT perspective, the answer to this challenge becomes planning a seamless integration between modern IT Infrastructure, healthcare information systems, and infection controlled interfaces with application-oriented solutions in order to achieve "truly smart" hospitals for the benefits of patients. Once this is successfully adapted, the next-generation hospitals will be born - with caregivers benefiting from streamlined workflows supported by the latest health technologies in a preventive infection controlled environment. This will enable hospitals to not only function faster, but also provide a safer and cleaner treatment environment for both patients and caregivers.

KOGI Consulting Co., Ltd., a Taiwan-based consulting company, is adopting bolder initiatives to further explore how we may satisfy the ever-increasing demands of today's hospitals and patients. KOGI professionals anticipate that in 5 to 10 years, human-droid assistants will drive the provision of dynamic care worldwide, especially to one of the most important teams in hospitals providing point of care – the Nursing Informatics teams. In this future, these human-droids will be able to interact with patients via visual, tactile, and auditory cues. With KOGI's highly selected IT partners having already developed many of the necessary technologies, such as voice-activated control, antimicrobial components, input sensors, and motion capture devices, this future does not seem that far away from becoming reality.

Developing Techno-Intelligent Nurses

By: Sonny Dela Rosa;
Nursing Informatics Coordinator Reflection

Technological innovations are not confined to information technology (IT) professional alone. All professional can be creative and innovative when performing their task. Here are some ways using Health care advanced technology innovated by nurses to improve quality of care delivered.

Starting with innovations that are targeting patients, the Hacking Technology was initiated in a health care environment. Dr.Margaret McCabe, PHD, Director of Nursing Research in the Medicine patient services at Boston Children's Hospital (BCH) and a mother of four developed an approach to improve pediatric pain management by launching "Hacking Pediatrics". It was one of the most innovative mobile solutions established by nurses where the emotional state of the patients experiencing pain are measured through a wearable device known as pain away. It helps parents to manage their children pain experience in a hospital setting.

Another advancement that was made by nurses was the developments of virtual intensive care unit that help nurses improve data collection remotely and on site. The development of smart pulse oximeter used for neonatal intensive care unit (NICU has been enhanced by a wearable device pulse oximeter where data can be monitored in real time to determine the patient pain status for neonate.

This wearable device was developed by Jon Morris who worked in NICU at Boston Children Hospital.

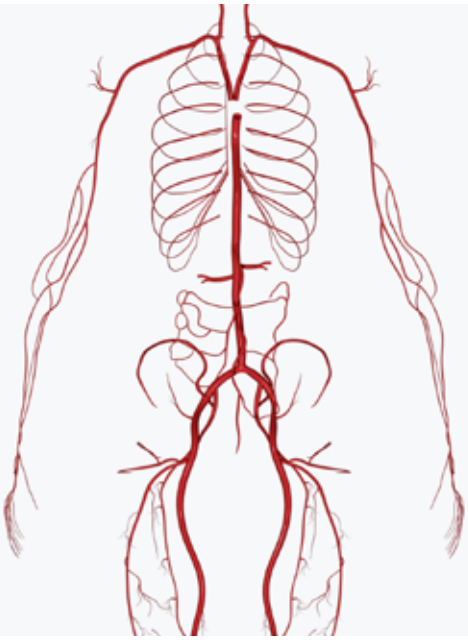
In the same line, education in health care among nurses using new technology is a major challenge. Nursing Informatics Department came up with new ways to enhance nurses IT skills and knowledge and improving their learning experience through the development of The CIS E-library in Hamad Medical Corporation (HMC).the E-library comes with interactive workflow animation that helps nurses understand how the new CIS implementation will improve the healthcare delivery for patients.

This is only some of the many innovations that nurses were able to develop and improve delivery of patient care.

Useful links:

http://vector.childrenshospital.org/2013/09/hacking-pediatrics-improving-the-patient-experience/
www.hl7.org/documentcenter/public/wg/healthcaredevices
http://www.healthcareitnews.com/news/microsoft-johns-hopkins-join-forces-safer-icu-device-integration
http://www.innovativelearning.com/
http://www.innovativelearning.com/learning_management/index.html
http://www.sciencedirect.com/science/article/pii/S0925527310001842

VTE Advisor Solution Goes Live Across HMC Facilities



By: Alexis Ivory Llamas, Informatics Nurse

The Venous Thromboembolism (VTE) Prevention Program is a significant patient safety project for HMC. HMC's Center for Healthcare Improvement, in alliance with HMC senior medical executives and all eight HMC hospitals, supported by a team of international VTE experts from Brigham Women's Hospital, affiliated Harvard Medical School teaching hospitals and University of California, have launched the VTE prevention program throughout HMC's hospitals. Since then, it has won the Managing Director's Special Award at the 2014 Stars of Excellence. This project was established to ensure that patients at the age of 18 and above will be risk-assessed upon admission at any HMC facility as an inpatient, upon transfer to ICU, and also when there is significant change in their condition. The project's aim is to provide timely and proper preventive care to such patients at risk for VTE. Through this strategy, VTE-related morbidity and mortality will be prevented.

VTE is a disease that includes both deep vein thrombosis (DVT) and pulmonary embolism (PE). It is a common (but often overlooked) potentially fatal disorder that affects hospitalized and non-hospitalized patients. It recurs frequently and can lead to chronic complications. However, there is a strong evidence that the risk of in-hospital VTE can be decreased by >60% with effective thrombo prophylaxis. Hence the implementation of the VTE prevention program across all HMC hospitals is a top priority for quality improvement and safety.

Now that HMC has adopted the use of electronic health records, physicians and nurses were trained to use the VTE advisor solution via Web-Based Training prior to its implementation. On 7 November 2015, the VTE advisor solution went live in Cerner-live facilities. In light of this transition to the paperless environment, the Nursing Informatics Department extended their support to the different facilities.

The application of VTE in the Cerner platform allows clinicians to assess, provide prophylactic interventions and monitor treatment and outcomes using structured tools that conform to HMC standards and protocols. This combines the VTE risk assessment and the prophylaxis order into a single form, a strategic intervention leading to achieve breakthrough levels of adequate prophylaxis in a variety of inpatient settings. This initiative offers a systematic, standardized application of health-related knowledge that enables providers to make informed clinical decisions at the point of care.

Furthermore, this project developed a dashboard that displays a standard monthly reporting tool from sampled number of admissions to track VTE performance for the entire corporation, by hospital, and by patient care unit.

Meanwhile, the VTE advisor solution is set to go live in Hamad General Hospital in May 2016. To learn more about VTE, visit https://cis.ulearn.cerner.com

References:

https://itawasol.hamad.qa/EN/News/2014/October/Pages/HMC-celebrates-staff-achievements-with-awards-ceremony.aspx
https://itawasol.hamad.qa/Lists/GrandRounds/DispForm.aspx?ID=5

Nursing Informatics Approach Towards Electronic Health Record Training for Safe Patient Documentation

Presented by Ms. Elizabeth Varughese, Nursing Informatics Coordinator and Mr. Rocky V. San Pedro, 4Informatics Nurse

The fundamental responsibility of preparing nurses to embrace technological advancement in HMC lies with Nursing Informatics Department. To surpass major challenge of Clinical Information System conversion, the department adopted a multi-step training program (as shown in Figure 1).

The entire training journey consisted innovative methodology to establish error-free patient health documentation; the steps are summarized in poster entitled "Nursing Informatics Approach towards Electronic Health Record training for safe patient documentation" presented as a poster in International Forum on Quality and Safety in Healthcare, in Sweden April 2016. The poster is a collaborative work lead by Dr. Wasmiya Dalhem, Executive Director of Nursing, Ms. Wahag Al Mashaer El Hag, Nursing Informatics Project Manager ,Ms. Elizabeth Varughese, Nursing Informatics Coordinator and Mr. Rocky San Pedro , Informatics Nurse.

Nursing Informatics Department encountered following challenges in the conversion phase of CIS implementation : Tool to quantify computer skills of nurses was highly required, Comprehensive database to reflect computer skills of nurses was not available, there was no pre-set criteria to identify nursing CIS super users and Plans to audit EHR documentation of nurses post CIS go-live was unclear. In order to overcome those challenges a purposive sample of 572 nurses from Heart Hospital, which had CIS implemented on February 20, 2015 is taken as the focus group. The aim of the project was to assess documentation compliance to Joint Commission International standards and enhancing patient safety by eliminating medical errors caused by improper documentation. The Nursing Informatics Heart Hospital team developed CIS training journey of nurses with clear timelines, approaches and milestones (Figure 1). The result reflected competent usage of EHR and safe patient documentation (Figure 2). The average rating of satisfaction on training provided by NI was 4.67 when evaluated on Likert scale of 1-5 (Figure3).

In conclusion, the training program implemented had a positive impact on enhancing IT skills among nurses, easy adaption of nurses to Clinical Information System evident by EHR audit report and on improving the nursing staff quality of documentation. (Figure 2)

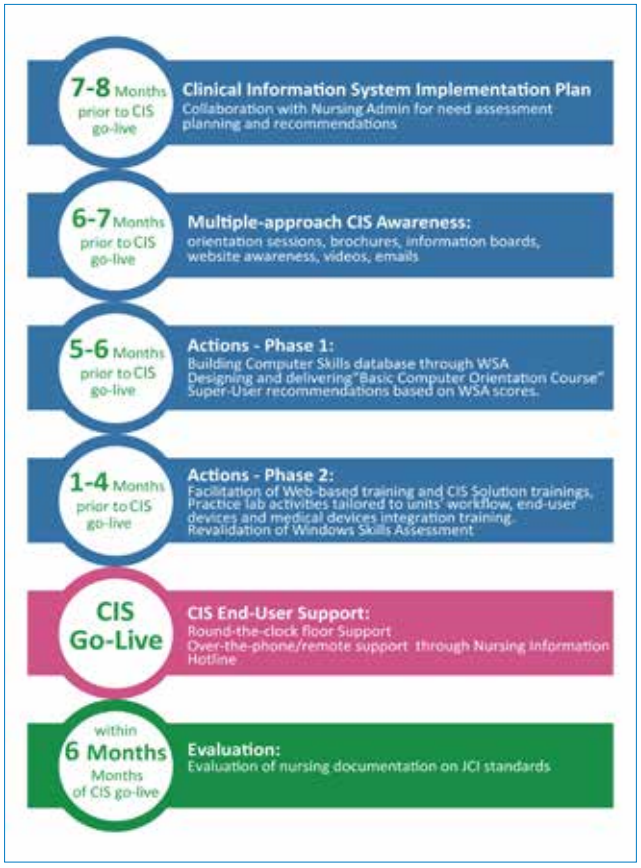


Figure 1. Implementation timeline

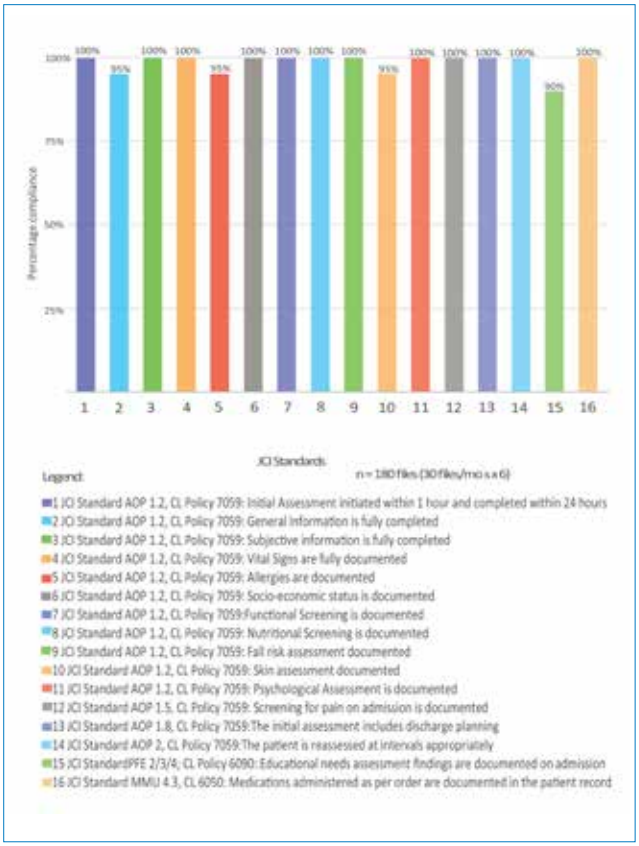


Figure 2. Nursing Documentation Evaluation as per JCI standards

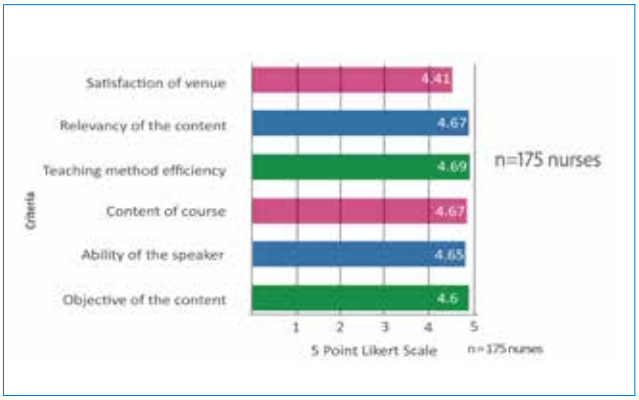
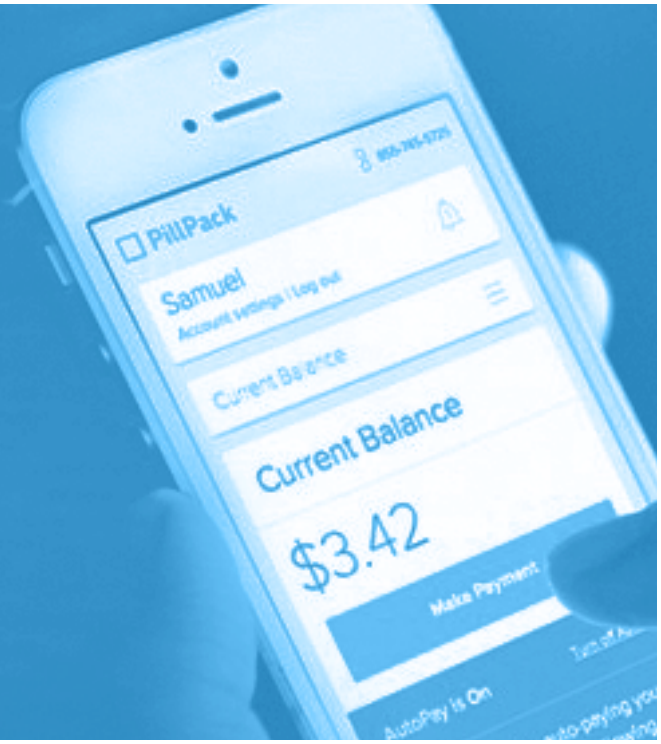


Figure 3. Basic Computer Refresher Course training feedback using Likert scale

Mobile Apps That Are Changing Healthcare



Presented by:

Eyad Tubishat
Nursing Informatics Coordinator

Smartphones, tablet computers and websites are widely used by clinicians to support patient care and by patients to inform and help themselves to information. The use of mobile technology has empowered patients to become more active in their care. This technology can be useful to gain patient participation but can present new difficulties for the already hard-working clinician who is not adequately prepared; hence they are also called "disruptive innovation in healthcare".1

Overview

The use of mobile technology has seen rapid growth globally. The use of mobile gadgets enables users to quickly access information anywhere over the Internet. This information sharing has become a market on its own, giving rise to a new technology trend called "mobile apps". One key feature of the smartphone is the ability to install such mobile apps. A mobile application (or apps) is software that can be run on mobile devices and distributed or downloaded via services such as the iTunes store for Apple devices or through Google Play for Android devices. It was predicted that by 2017 the app market would be worth $26 million, with the aging population driving the healthcare apps sector increase. The benefits of mobile technology for clinicians include the ability to make decisions more quickly with fewer errors, the ability to improve the quality of care, and better data management. As patients have more access to a variety of data, they are now driven by information, hence allowing them to take more responsibility for their health. This has revolutionized healthcare as we know it. Below are the mobile apps that are changing healthcare in the US:

Consultation mobile applications

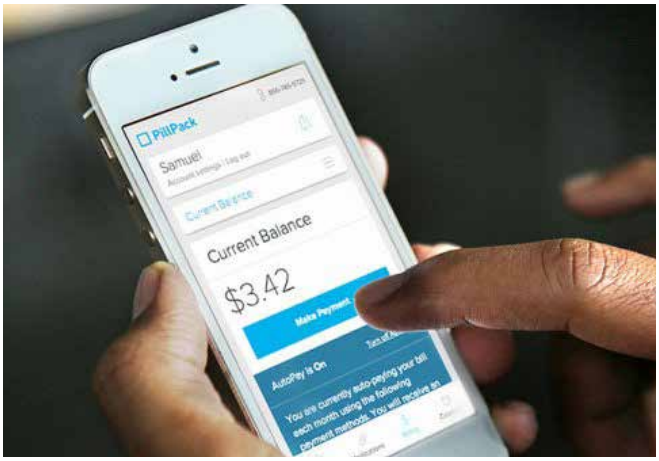
Include DoctoronDemand, LiveHealth Online and Health Tap. It provides a video consultation, where the doctor write a prescription or answer questions according to the need of the person.

PillPack

PillPack is a prescription-by-mail service that puts your medications into date-and-time stamped single packets that come out of a dispenser in the order you should take them. Each packet is also labeled with the name and dosage of each medication and any additional instructions,

HelloMD

HelloMD specializes in finding specialists, but not in getting you immediate care. When you need to see the best expert, such as a neurologist or a radiologist, for a very specific condition, HelloMD connects you with the right certified doctor or surgeon. An appointment, usually set up within 24 hours, can then take place in the online platform via video call.



Rev Up by MD Revolution

Rev Up by MD Revolution is an app and website where you connect with a team of health and wellness experts who help you track relevant health data and provide you with guidance and recommendations along the way.

Vida Health Coach

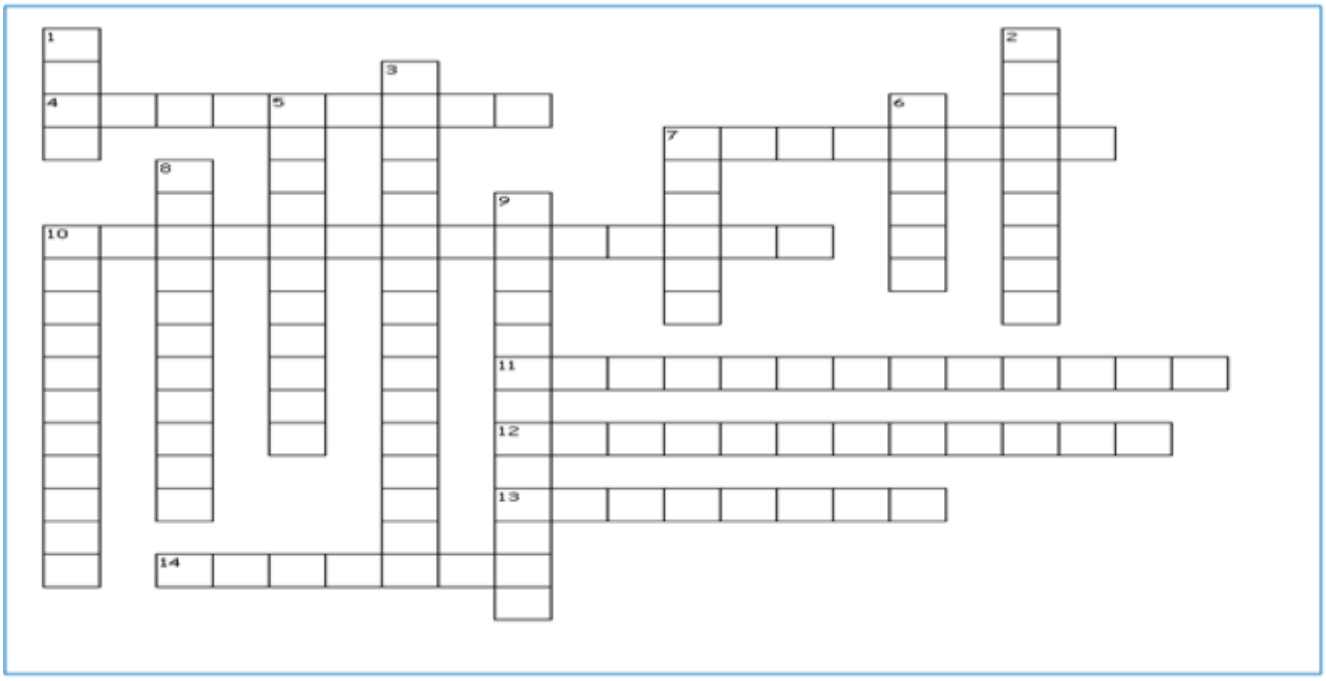
Vida Health Coach is an iPhone app that sets you up with a personal health coach. The coach's area of expertise and certifications depend on what conditions you want to address and manage, from weight loss to diabetes to stress. The health coach customizes your app with different data points you can track, such as weight or dietary fat intake.

Text4Baby

The free Text4baby app makes it even easier for you to get critical health and safety information.

References:

BY PC MAG ME TEAM
Paula McNiel, DNP, RN, APHN-BC; Erin C. McArthur, MLIS
HONcode standard for trustworthy health
This guidance was produced in consultation with the MHRA and GMC.



Across

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Down

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Tickle Your Brain

1. An old man was looking at a photograph of a young man. Somebody asked him who it was. The man's answer was the following: "Brothers and sisters, I have none. But that man's father is my father's son." Who was in the photograph?

   His nephew — His grandfather
   His cousin — His son

2. If there are 3 apples on the table and you take 2 of them, how many will you have?

NIB Quiz (win a prize)

Q. In all Cerner Solution, how many video tutorials can be viewed in the NI CIS E-Library?

NIB Quiz Winner 3rd Edition: Shahak Shamsudeen Kunju / HICT

NI-stagram

The 3rd Annual NI Workshop

PEC Alsaad CIS Go-live

Hamah General Hospital OPD Advanced Super Users

Dialysis Super User

Airport HIA CIS Go live

Bone and Joint CIS Go-Live Celebration