Nursing Informatics Bulletin

CONTENTS

Foreword from Dr. Wasmiya Dalhem

Dr. Wasmiya Dalhem

I am delighted to present the first edition of the Nursing Informatics Bulletin (NIB). Since last year, the Nursing Informatics Department has undergone a significant transformation which has reflected considerably on the projects we are managing. In order to highlight this transformation, and reflect on our mission vision and values at HMC, we have introduced NIB, which is a powerful communication tool for enhancing the ties between us and all nursing staff across HMC. The NIB will be published on a quarterly basis and each issue will feature the department's latest initiatives, updates on education and research, technological innovations in healthcare and interviews emphasizing the contribution of nursing staff in our activities.

We hope that you will find NIB a valuable resource to enrich your knowledge and provide you with a different perspective about Nursing Informatics Department. We are look forward to your support, interaction, participation and feedback. For any suggestions or comments, kindly contact us on nursinginformatics@hamad.qa

Dr. Wasmiya Dalhem
Executive Director of Nursing Informatics

Vision and Mission Statements

Vision:

The Nursing Informatics Department will advance the best use of clinical information and technological systems for the improvement of healthcare systems and patient care delivery in HMC.

Mission:

The Nursing Informatics Department provides advanced healthcare informatics practices, education and research through the effective use of health information and information technology.

Nursing Informatics: Milestone in CIS Go Live

Presented by Sherman Dumaguin, Nursing Informatics Coordinator

CIS Implementation: The Nursing Informatics Role

A vital aspect of enhancing system change at HMC is integrating and improving its clinical information system. Nursing Informatics has taken steps to strengthen the role of nurses in providing the best healthcare practice by utilizing the new clinical information system.

Transforming nurses' behavior towards an information technology and patient centered care environment is a significant challenge for the department. Several brainstorming and orientation sessions were therefore held to introduce nursing informatics into nursing practice. There were also skills assessment programs to determine the IT needs of nursing staff. Among the major projects of the department was the successful completion of the International Computer Driving License (ICDL) training course by nominated Qatari and non Qatari nursing staff. Competencies were also developed to evaluate nurses' performance in IT related activities.

Collaboration and good communication at all stages of the project have been essential ensuring that the system will provide appropriate information support to the nursing process. Since the beginning of the CIS project, Nursing Informatics has been present in awareness and

The Nursing Informatics Department fully committed to support nurses in the implementation of all the phases of the Clinical Information System

orientation sessions provided by Cerner and Dell to nursing staff. Similarly, we have carried through this activity to all nursing staff. Our staff have also contributed to CIS committees and working groups. The team also guided the subject matter experts (SMEs) to support the design, build, adoption and testing of the system. They were also involved in the requirement and testing of medical and mobile computing devices including end user device training for nursing staff.

With the recent CIS go-live, the Nursing Informatics team has carried out a great deal of unit-based support training and adaptation activity to super users and end users. In addition to the training, quick guides were generated which were very beneficial to the nurses using them.

In addition, the team also played a key role in the implementation of Cerner Clinical Viewer (CCV) across the corporation supporting super users and end users from all nursing disciplines.

Selected Nursing Informatics staff have also completed the Cerner Certified Training Program (CCTP) to be certified educators, coaches and trainers and to enhance the quality of learning activities on the clinical information system.

The changes which will be evident from the time of the CIS implementation will be regarded as a positive development by the nursing staff.

Nursing Informatics as a discipline is concerned with finding ways to augment information management and communication in nursing and enhance the efficiency and quality of patient care.

The Nursing Informatics Department fully committed to support nurses in the implementation of all the phases of the Clinical Information System.

The Nursing Informatics Department is fully committed to supporting nurses across all phases of the Clinical Information System implementation.

Nursing Informatics Department contributes to the 12th International Congress in Taiwan

Presented by Noha Saleh, Nursing Informatics Coordinator

The Nursing Informatics Department recently participated in the 12th International Congress on Nursing Informatics in Taipei, organized by the Taiwan Nursing Informatics Association. Representing the department was Dr. Wasmiya Dalhem, Executive Director of Nursing and Ms. Noha Saleh, Nursing Informatics Coordinator who presented a research paper entitled: "The Impact of E–Learning on Nurse Professional Knowledge and Practice in HMC" which was also recently published in the Canadian Journal of Nursing Informatics, CJNI Journal, Vol 9 No 3 & 4,Summer/Fall 2014.

The research was a descriptive study to assess the impact of e-learning on nurses' professional knowledge and practice, and the factors influencing the effective utilization of e-learning in HMC (Hamad Medical Corporation). The paper was based on a survey of 70 nursing staff (29 percent of the population targeted) with the results conveying the positive impact of integrating e-learning courses as part of the educational opportunities provided for staff.

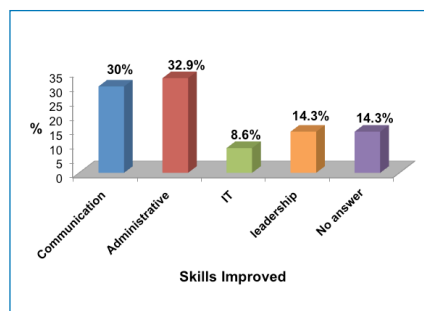However, the paper noted that e-learning, as an educational tool,

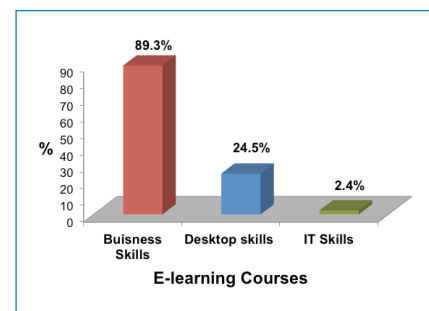Fig 1: Skills improved through e-learning courses

Fig 2: The effect of courses in improving performance in relation to nursing activities

Fig 3: The course mostly accessed by the participants

*Note that the methods are

Method 1: face to face formal training course in groups delivered by the Nurse Educator
Method 2: face to face training from the Nurse Educator
Method 3: E-learning courses
Method 4: Workshops to work through alone with access to tutor if needed.
Method 5: E-library to work through alone with access to tutor if needed
Method 6: participation in workshops to get help on specific topics.

Methods	Degree of Likeness n=69		
	Disliked	Neutral	Most liked
1	2(2.9%)	12(17.4%)	55(79.7%)
2	10(14.5%)	19(27.5%)	40(58%)
3	2(2.9%)	14(20.3%)	53(76.8%)
4	9(13%)	26(37.7%)	34(49.3%)
5	8(11.6%)	24(34.8%)	37(53.6%)
6	0(0%)	6(8.7%)	63(91.3%)

Table1: The methods of learning preferred by staff

still has comparatively low usage rates compared with other learning tools. The study recommended that nurses:
- Embrace e-learning modules built in-house relating to nursing and direct patient care, to ensure optimization of benefits
- Conduct additional studies including e-learning and the obstacles hindering its effectiveness, an in-depth study on e-learning methods and its effect on nursing staff

performance, and research efforts to improve features of e-learning environment.

References:

1. S. Kala, S. Isaramalai, A. Pohthong .Electronic Learning and Constructivism: A model for Nursing Education. Nursing Education Today, 2010.
2. L.Taylor,PA. Abott, K.Hudson. E-learning for Health-Care Workforce Development. IMIAYearbook of Medical Informatics 2008.

Theatre Nurses and Cerner Millennium: A Bright Future Ahead!

By Jimmy Angeles, Informatics Nurse

Theater Nurses at Al Khor Hospital have praised the recently introduced Cerner Millennium system following the go-live last year.

"Cerner Millennium is very promising. The training classes are informative. Though we found minor conflicts in the beginning, it does work wonders. I am very excited to use the system," said Ms. Jihan Saadawy, Head Nurse of the Operating Theatre in Al Khor following the completion of the CIS training program conducted at the hospital.

"The training was confusing at first, but as it progressed, we were slowly enlightened on how the system functions. The two-day class the nurses in my team attended was enough to get to know SurgiNet." she said.

Ms Jehan also added: "I just told them not to worry as they are not going to be alone, they will always be able to lend a helping hand each other. We will be working as a team during the system go live. I also provided a guide for them, so that when they got confused with the system, they could refer to the guide and get back on their feet quickly."

When Al Khor Hospital officially went live on the April 25th 2014, a support layout was mapped for them including a support team of selected super users" staff nurses from Al Khor Hospital, Nursing Informatics Department, HIS Department, and CIS Department to address issues that end users might encounter.

Ms. Jihan personally supported her nurses in the operating theater, where at the end of the day, all the charge nurses and super users gathered together. "We talked about issues and possible solutions, and consolidated all information. We then made a guide out of it. The guide contains detailed steps on how to document various nursing activities in the Cerner Millennium system," she added.

"Issues that were out of our grasp were forwarded to HIS helpdesk and tickets were raised."

"If there is one thing that I would suggest to the other facilities that will be going live soon, I'd tell them that it is important that we prepare our nurses to accept the system." she emphasized. "I told them a year ago that I am a member of the team who built the system, and that it is very easy and straightforward. Let them know that there will be adequate training, and that during go live, many people will be there to support them," she advised. "It is a big challenge for us. However, having to work with the Cerner Millennium will also boost our careers. It will take a little while to get used to it, and with enough dedication, I know that it will work. We have exciting days ahead of us!"

Ms. Jihan was working as a Charge Nurse, and was promoted to Head Nurse of the main operating theatre in 2007. She has been in the corporation for 10 years. She is also a subject matter expert (SME), a part of the team who tailored the Cerner Millennium system to the current Hamad Medical Corporation policies and unit workflow.

Ms. Jihan Saadawi, AKH Operating Theatre Head Nurse, as she worked with her team during the AKH Go Live last April 2014

Cerner Clairvia Solution: "Manages the Workforce and Helps You Achieve Optimal Patient Outcomes"

Presented by Noha Saleh, Nursing Informatics Coordinator

The demand for patient care services rarely remains static for a 24-hour period, or even a single shift. It constantly fluctuates based on events such as procedures, admissions, discharges, and transfers, as well as changes to a patient's clinical status.

Cerner Clairvia Solutions is designed to manage the workforce and helps hospitals achieve optimal patient outcomes.

The workforce management solution consists of several modules:

- **Staff Manager** ensures you are staffed correctly by providing accurate and actionable data-driven staffing information
- **Demand Manager** provides real time staffing targets driven by the patient care needs based off volume, patient
- **churn/turnover** (admissions, discharges, and transfers), length of stay, and clinical condition
- **Assignment Manager** facilitates the assignment of the best qualified caregiver based on the patient's needs and continuity of care
- **Outcomes-Driven Acuity** focuses on each patient's clinical progress toward desired
- **outcomes**, so that staffing levels can be based on the skill sets required to achieve the next level of wellness
- **Patient Progress Manager** helps manage the patient's visit based on patient's anticipated departure to the next desired level of wellness

The implementation project is led by the Nursing Informatics Department, divided into two groups: the project lead group which constitutes nursing leaders who are responsible for decisions related to the solutions, and the working group, which consists of nursing representatives from all facilities who provide HMC workflow and ensure that the solution designs align with current practices.

On April 1st 2015, Al Khor Hospital went live with Clairvia (staff manager/demand manager) as the first site for the implementation of CIS Nursing Workforce Management System. Cerner Clairvia replaces the current paper-based duty roster for nurses in HMC. The second phase of the implementation will be in May 2015 and will include Patient Outcomes-Driven Acuity, Patient Progress Manager and Assignment Manger. Cerner Clairvia replaces the currently practiced paper Duty roster for nurses in HMC. the second phase of implementation will be in MAy 2015 and will include Patient Outcomes-Driven Acuity, Patient Progress Manager and Assignment Manger.

References:
http://www.Clairvia.com

Employee Dashboard on Clairvia . This shows the current schedule, duty requests, overtime opportunities, shift swap requests, and many more.

Six Ways to Keep Your Smartphone Performing at its Best

Presented by: Hany Abdelsalam, Informatics Nurse

**Tip 1: Keep it fully charged**

Smart phones work effectively and last longer when kept fully charged. Most of the lithium-ion batteries in cell phones last between three to five years if they are properly taken care of. In addition, one should avoid using the cell phone in extreme temperatures, since this can affect the battery and lower its storage capacity.

Tip 2: Get Memory Management Software

Users can download and install memory management software. These programs are able to restore memory lost by defragmenting the hard drive or performing a recovery to find the lost information. Once the software is installed, one can click on the app at any time to run the program and free up some memory.

Tip 3: • Make it a Habit of Closing Unused Apps and Processes

Note that smart phones are not like desktop computers and they do not have the same amount of processing power. If you notice the gadget starts to slow down, do not ignore it, spare some time to close a few of the background programs. One can also end background processes running on the cell phone by using background task killer
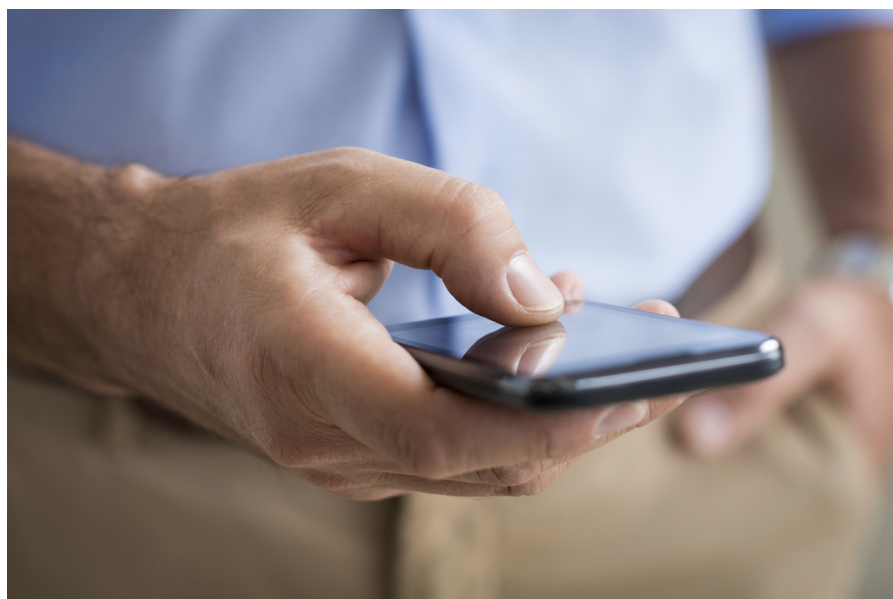
Is your smart phone feels slower because of unnecessary data ?

software. These programs work like the task manager on a desktop or laptop, closing background processes when they freeze or when they slow down the computer.

Tip 4: • Always Clear the Browser Cache

It is important to note that smart phones are also capable of surfing the web. Using the internet for long periods of time can lead to a build-up of data in the phone's active memory. The memory in the browser cache can start clogging the phone's active memory and can slow down the phone's ability to surf the web. When this happens, users should clear out their browser cache. To clear the history, open the browser and click on "Menu," then click on "Options," then go to "Settings," and finally click on the "Clear Cache" button.

Tip 5: • Delete Cookies and Unused Programs or Media

A smartphone is capable of storing a variety of information to refer back to or use. This information comes in the form of software apps, photos, files, and video. Other kinds of information stored on the phone come in the form of "cookies." Cookies are programs installed on a user's website browser to help keep track of their web usage history for marketing purposes. Taking the time to delete unwanted cookies, apps, and media can return a phone to its peak performance.

Tip 6: • Perform Factory Reset

If the phone becomes extremely sluggish and the user has trouble using it, then it may be time for a system restore. This tip should only be used as a last resort. It is worth noting that restoring the phone to its factory settings will delete all of its downloaded and saved files, therefore, so a lot of information will be lost.

Barcode Technology and Medication Administration Safety

Presented by: Mohamed Elmoghazi
Informatics Nurse

"Barcoding technology improves patient safety to the medication administration process"

It has been proven that using electronic barcodes can reduce medication errors. The technology improves the level of verification into the "five rights" of medication administration that nurses are already familiar with. These includes being sure the right medication goes to the right patient at the right time and frequency of administration is in the right dose, and through the right route of administration.

Electronic barcodes help in such a way that even at the patient's bedside, the nurse retrieves the medicine and scans its barcode along with the patient's bracelet. When each medication is scanned, the system tells the nurse that everything is correct. In case of an error, it brings up a warning that something is wrong. It is called a "closed-loop" system.

The main advantage of barcoding is that the medication order is tracked electronically through all the steps of the medication process including ordering, dispensing and administration. There are checks and balances at each step to ensure the patient receives the right medication.

Barcoding also helps in preventing medication errors at the bedside since this is the last stop before administration and therefore a critical place to prevent errors from occurring. This kind of technology

Barcoding drastically improves patient safety during medication administration.

can make an enormous difference when it comes to patient safety.

Even though this technology improves safety, some worry that barcoding will add more time to the workday. However, this is actually incorrect because after the initial learning curve, workflow is not heavily interrupted and the amount of barcoding taking place will lessen in the long term. In addition, the trade-off is patient safety.

It is worth noting that while barcoding technology works well in most inpatient departments, there are some settings where it will not work as well such as in an emergency department. This is because medication neede to be readily available in emergency situations. Codes and rapid responses when going through the scanning process can slow things down a little. In addition, in these situations the physician is right

there ordering the medication on the spot. The process is different because as the physician puts the order in and the nurse administers the medication at a later time as would typically occur in a traditional in-patient setting.

Though it may not work everywhere, when implemented in the right departments, bar coding can boost efficiency and add another layer of patient safety to the medication dispensing process.

References:

- Why Nurses Need to Know Barcode Technology. http://nursenews1.hubpages.com/hub/Why-Nurses-Need-to-Know-Barcode-Technology
- Barcode Medication Administration: Lessons Learned from an Intensive Care Unit Implementation. http://www.ncbi.nlm.nih.gov/books/NBK20569

Social Networking and Nurses

Presented by: Eyad Tubishat, Nursing Informatics Coordinator

Highlights

The use of social networking can have many benefits but also unintended consequences for an individual nurse's career. Remember that standards of professionalism are the same online as in any other circumstance.

Advantages of Social Networking

It is great to live in an age of social networking to find out what is happening in the world of nursing. As nurses, through the information we received through the nursing network, l equips us to educate our patients. We also direct patients to appropriate websites to ensure both the patient and their family have access to relevant information.

Many nurses use social networks as a means of professional networking and communication with colleagues.

Networking can disseminate research and evidence-based practice findings to colleagues. In addition, smart phones and tablets have entered the health care field and allow easy access of vital information that can help with the provision of effective care to the patient. The benefits of social networking are many, and will increase in the future.

Social Networking Concerns

As the technology develops, there are considerations which the nursing profession needs to take into account. Some of the concerns include inappropriate sharing of personal or work information that

One of the benefit that nurses get from social media is information dissemination. But how much information can we really share?

could portray a nurse in a way that may not be intended. It is worth noting that a nurse should demonstrate professionalism at all times.

However, many times breaches of patient confidentiality can occur, either deliberately or unintentionally. For instance, describing a patient case in such detail that their identity could potentially be exposed, or posting videos or pictures of patients, and referring to the patient in a humiliating manner (ANA, 2011). This can lead to a breach of patient confidentiality and privacy and could potentially ruin the nurse's career.

Another concern is the distraction the use of smart phones may present to nurses. Such disruptions have the potential to be catastrophic. Appropriate use of technology when caring for patients at work should be considered. For instance, checking one's Facebook status is not appropriate.

It is well known that students have been expelled from nursing schools for posting their photos online with a placenta. Nurses have also been fired for discussing patient cases on Facebook.

In a report about the Brynes vs. Johnson County Community College litigation, a nursing student posted a photo of herself with a placenta on her personal Facebook page. The photo went viral within hours of posting. The student was expelled a day later and was told that she could re-apply to enter the program the following year.

The issue was that in the photo you could see the student's ID badge and the school's patch on her uniform. By right-clicking on the photo the embedded date of the photo is retrievable. Since few babies were delivered in that hospital on that day, it was easy to "track" and connect the placenta to the patient. "The Privacy Rule protects all individually identifiable health information held or transmitted by a covered entity or its business associate, in any form or media, whether electronic, paper or oral" (Hader, 2010).

References:
http://www.parentfurther.com/technology-media/social-networking/benefits
http://www.nmc-uk.org/Nurses-and-midwives/Regulation-in-practice/Regulation-in Practice-Topics/Social-networking-sites/

Telenursing :"A Broader Scope of Remote Healthcare Services"

Researched by: Aamna Hamid, Nursing Informatics Coordinator

What is Telenursing?

Telehealth nursing is defined as "the use of telehealth/telemedicine technology to deliver nursing care and conduct nursing practice over distance.

How does telehealth deliver medical services?

The three main ways telehealth delivers medical services according to the center for connected health policy are:

- **Video conferencing** - used for real-time patient-provider consultations, provider-to-provider discussions, and language translation services.
- **Remote patient monitoring** when the electronic devices transmit patient health information to health care providers. l Store & forward technologies, that electronically transmit pre-recorded videos and digital images, such as X-rays, video clips and photos, between primary care providers and medical specialists.

Why use telehealth Nursing?

Telenursing is used in order to:
- Decrease hospital admissions & emergency department visits
- Manage chronic illness
- Impact nursing shortage by improving nurse utilization
- Reduce healthcare costs
- Provide access to care.

Where is Telenursing Applied?

Telenursing has a potentially wide application and is a growing field. It is most used for the following:

- **Telephone triage**
- **Remote monitoring** (nurses use systems that allow monitoring of patient data and physiologic parameters, such as blood pressure, heart sounds, blood glucose, oxygen levels, respiratory peak flow, and weight measurements via a phone or Internet connection.
- **Interactive video systems** patients contact on-call nurses and arrange a live video consultation to address problems. 3

References:
1. Health Resources and Services Administration. What is telehealth? [Accessed July 20, 2014]. http://www .hrsa.gov/telehealth.
2. Center for Connected Health Policy. What is telehealth?. [Accessed July 25, 2014] http://cchpca.org/what–is–telehealth.
3. The American Telemedicine Association (2011) Telehealth nursing fact sheet. retrieved from http://www. americantelemed.org/docs/default-document-library/fact_sheet_final.pdf?sfvrsn=2

HMC Email at your Fingertips

By Jose Parel Barbudo, Informatics Nurse

Information is power and we are currently thriving in the era of information, communication and technology. So, why do you need to synchronize your corporate email to your mobile device?

Access to information is very important. Corporate news, updates, memos and other significant information are being circulated through email. Synchronizing your email, tasks calendar and contacts from your HMC Outlook account to your mobile device, will help you manage your time and email contacts. For example, meeting invitations will appear in your mobile phone, reminding you that you have an upcoming meeting in the next few minutes.

Another good example is if you are on your way out of the office, and you realize that you need to send an email that you saved on your desktop, you can use your mobile phone to access the email and send it whilst on the move.

Interested? Here is a way to set up your HMC email on your iPhone and other iOS devices.

1. Go to Settings, enter your HMC username and password. Entering a description is optional and you can name it, if you wish, something like "HMC Email". It will take a few minutes to verify the authentication.

2. On the 5th screen, Enter "owa. hmc.org.qa" as the Server, and "hmc.org.qa" as the Domain.

3. On Sync Options, be sure to turn on:

a. Mail (Recommended)
b. Contacts (Optional)
c. Calendar (Recommended)
d. Reminders (Optional)
e. Notes (Recommended)

4. Save. You should receive your email when you connect to the Internet.
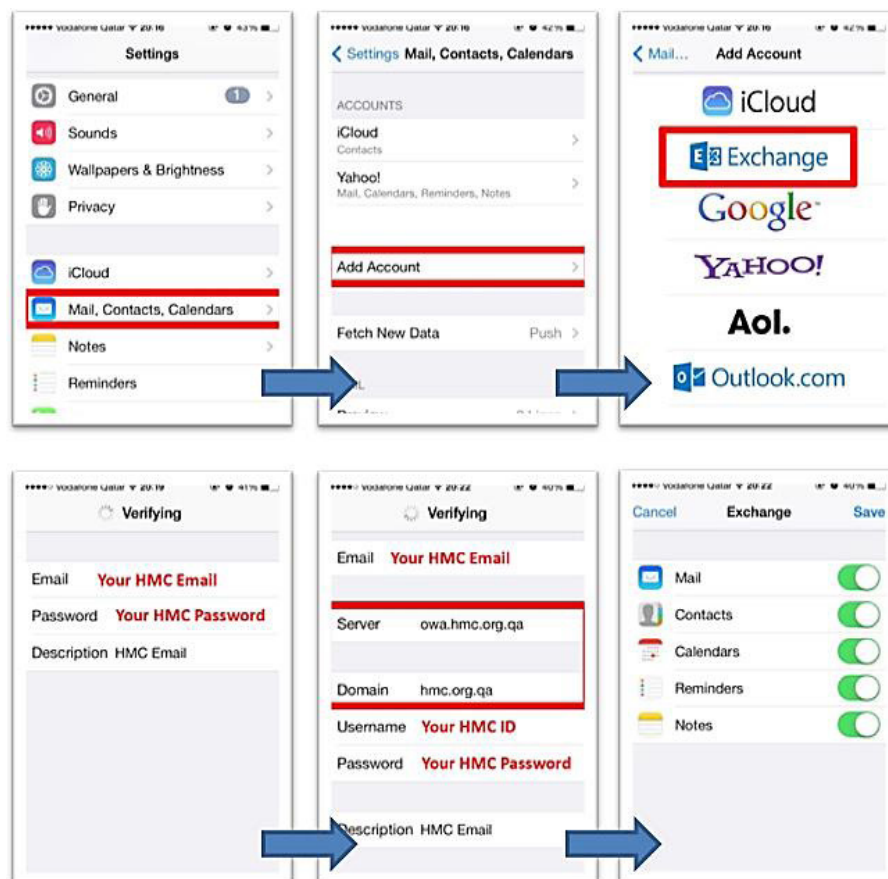
Follow the steps above to activate your HMC email in all your iOS devices

Call for Contribution in Nursing Informatics Bulletin (NIB)

The Nursing Informatics Bulletin (NIB) will publish articles written by nurses to support 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. Articles 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 a brief biography should be submitted with the article.
6. Write short sentences and provide one idea per paragraph.
7. Articles should be submitted in Word format and emailed to: nursinginformatics@hamad.qa stating 'NIB Contribution' in the subject field.
8. Approval for articles to be included in the bulletin will be given by the Executive Director of the Nursing Informatics Department
9. Deadline for submissions is the end of June 2015. Successful contributors will be notified in October 2015.

Nursing Informatics Department Website
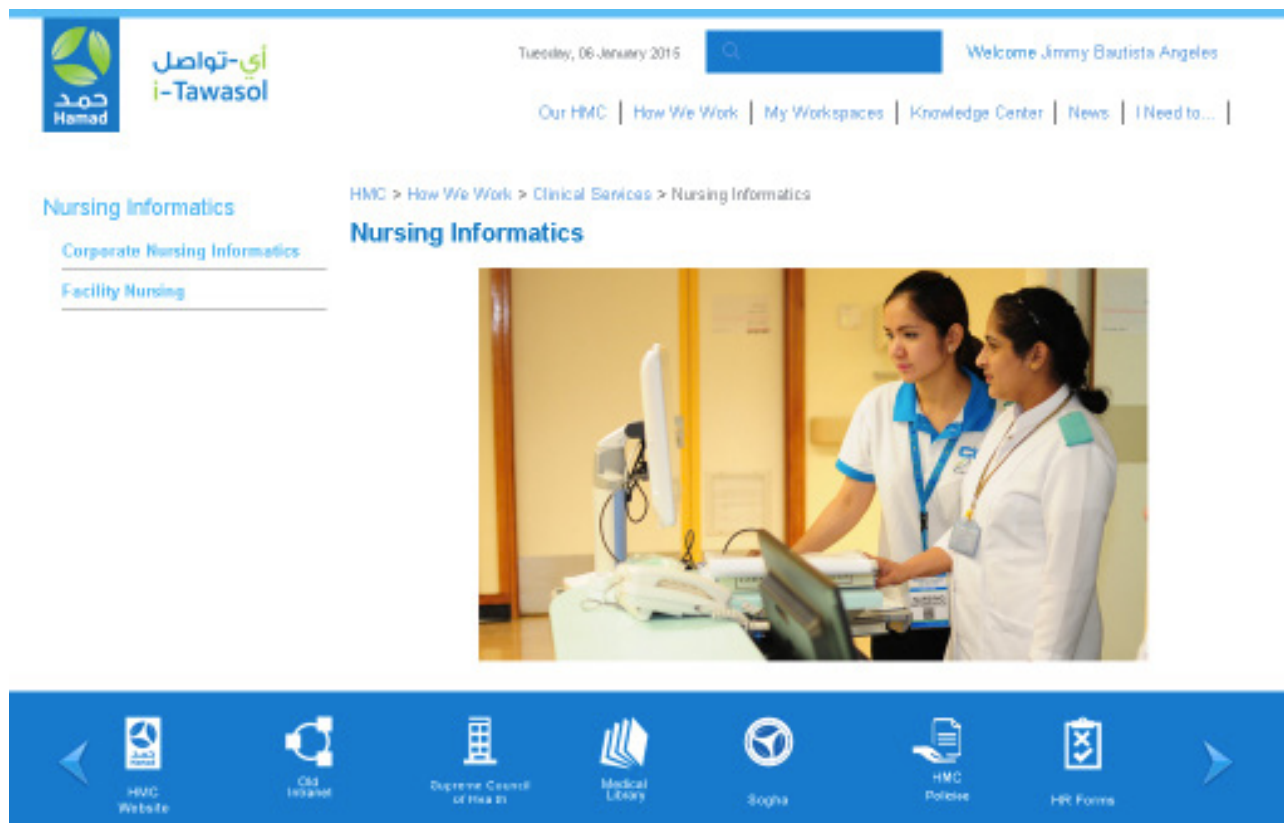
Visit the new HMC Intranet, i-Tawasol or go to **http://tinyurl.com/HMC-NID** for more information about Nursing Informatics Department.

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