

Nursing Informatics Projects' Annual Plan

Prepared by: Nursing Informatics Strategy and Policies Committee
Date Created: September 2014
Document Number: 1
Document Name: Nursing Informatics Projects' Annual Plan
Document Presented to: Chair of Joint Chair Committee
Presented on: 1 December 2014
Date Modified: 19 November 2014

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NI Strategy and Policies (NISP) Committee Report

Purpose of the Plan

Nursing Informatics Projects' Plan provides a detailed breakdown of activities required to successfully execute and control the projects, facilitates communication among project stakeholders, and documents the approved schedule baselines.

The plan will provide an overview of the department background, including the Vision, Mission, Values and Goals.

The project plan is expected to change over time as more information about the projects becomes available.

The Project Plan defines the following:

- Purpose of the plan
- Project Background
- Department Vision, Mission and Goals
- Tasks
 1. Tasks descriptions
 2. Timeframe
 3. Responsible resources to accomplish the task
 4. Output expected from the tasks
 5. Benefits of the tasks
 6. Budget
 7. Risk Management

3. Promote the educational process by covering 20% of the nursing staff in HMC each year through conducting educational sessions in nursing informatics, IT related courses, latest technologies and techniques applied in the field that foster dissemination of advances in the field of nursing informatics.
4. By 2017 the department should acquire a recognized Nursing Informatics certificate programs through having an organizational liaisons with other nursing informatics organizations.
5. The department will conduct 2-3 researches in nursing informatics related topics to assist practicing nurses, administrators, executives and policy makers examining latest trends in technology.
6. Acquire international recognition by the end of 2020.

Projects

The Nursing Informatics Department for the year of 2014-2015, has the upcoming and on-going projects as listed below:

1. CIS Support
2. Operational Project
3. Educational Project
4. Research Project

CIS Support

1.1 Project Overview

Clinical Information System is the massive, integrated system which supports the comprehensive information requirements of hospitals, including patient, clinical, ancillary and financial management. HMC is gearing toward the implementation of Electronic Health Record (EHR) across all its facilities. The role of Nursing Informatics department is to provide extensive support to all CIS activities which include CCV and CIS go-live support, implementation support of enterprise staffing solution Clairvia, and support for implementation of evidence base clinical decision support system solution Zynx. Nursing Informatics department's support for the CIS activities begins with appropriate selection of SME from different hospitals, until successful implementation of the entire CIS solution in the facility and post go-live support by serving as a knowledgeable practice expert and resource of the CIS solutions.

1.2 Project Goal

CIS project support activities aims on delivering utmost support and cooperation for the successful implementation of all CIS related activities across HMC. The NI department will prepare the nursing department for adoption and adaption to the technological changes.

1.3 Project Scope

Nursing Informatics department plays a vital role in design and build of the CIS solutions. The department is also involved in staff training, change management and support activities during the go-live of CIS Cerner Millennium and third party solutions of Zynx and Clairvia.

1.4 Items beyond scope

The CIS support activities of NI department does not implicate on software and hardware installation, or on any technical issues related.

1.5 Stakeholders

- Executive Director of NI Department
- NI Project lead of CIS third party solutions
- NI Project Manager
- Nursing Informatics Coordinators
- Informatics Nurses
- Nursing staff across HMC
- Patients
- HICT and CIS Department

1.6 Cross Functions

| Function | Department Involved | Responsibility /comments |
|--------------------------------|-----------------------|--|
| Providing Strategic directions | HICT – CIS department | <ul style="list-style-type: none"> • <u>Cerner Millennium</u>: Coordination with Service Providers for data collection, designing, testing and implementing of all CIS solutions • <u>Zynx</u>: Coordination with Cerner strategy teams to facilitate effective guidance in the project implementation. • <u>Clairvia</u>: Facilitation of effective guidance in the project implementation. • Responsible for funding and budgeting all CIS activities and awareness campaigns. • Responsible to provide technical support for all CIS projects. |

| Function | Department Involved | Responsibility /comments |
|--------------------------------------|---------------------|---|
| Staff participation and contribution | Nursing Department | <ul style="list-style-type: none"> Nominated Subject Matter Experts (SMEs) from each facility is responsible to provide the input during data collection, designing, testing and implementing of CIS solutions. SMEs are responsible of reviewing the information and facilitate the incorporation of the current work flow to the respective CIS solutions. The super users are responsible for providing active support to end users during facility go live. The nursing leaders will be involved in the committees for decision making related to nursing practice and work flow. |

1.7 Project Manager

- The Executive Director of Nursing Informatics Department is the project manager for all CIS related activities supported by the NI Department. The Manager is responsible to identify and approve the department's roles in all CIS activities.

1.8 Roles and Responsibilities

- The NI Project Manager is the team leader of NI Operational workforce and is responsible for coordination and communication of the CIS activities with NI operational team.
- The NI Project lead for CIS third party solutions - Clairvia and Zynx, are responsible to attend the workgroup meetings and communicate the updates to the Nursing Informatics Department. They are also responsible to provide reports to the Executive Director of Nursing Informatics as and when required.

- The Nursing Informatics Coordinator is responsible for all communication with the nursing administration of the assigned facility. The NI Coordinator is also responsible for supervising and coordinating all CIS go-live activities pertaining to nursing department, which includes recommending super users and SMEs, position mapping of the nurses, recommendations to the nursing administration for deciding end users' devices and medical devices, staff training and supporting the nurses during pre, intra and post go-live.
- The Informatics Nurses are responsible for coordinating the training activities, anticipating related user needs, escalating the issue and concerns of nurses, being an information resource to the nursing department and providing regular updates to NI Coordinator aided with reports and documents.

1.9 Communication and Reporting

| Genre | Mode | Frequency | Information | Responsible |
|--------------------------------------|----------------------|--|---|--|
| Internal Communication | | | | |
| NI Coordinator meeting | Meetings | Weekly | Project status and updates | <ul style="list-style-type: none"> NI Project Manager NI Coordinators |
| Updates on CIS third party solutions | E-mails and Meetings | As required | Project updates of Clairvia and Zynx solution | <ul style="list-style-type: none"> NI Project lead for CIS Third party solutions |
| Project activity/ task report | Reports | Upon completion of any project task/activity | Activity breakdown and outcomes | <ul style="list-style-type: none"> NI Coordinators |

| Genre | Mode | Frequency | Information | Responsible |
|-----------------------------------|-------------------------------------|-------------|---|--|
| External Communications | | | | |
| Nursing Administration | E-mails, meetings and onsite visits | As required | <ul style="list-style-type: none"> Assist the nursing leaders to identify their system requirements and project their needs related to CIS. Recommendations for the selection of SME and super users. Coordination for the implementation of the CIS activities. | <ul style="list-style-type: none"> Nursing Informatics Coordinator Informatics Nurses assigned to the facilities |
| | Memos | As required | <ul style="list-style-type: none"> Releasing of resources for CIS activities | <ul style="list-style-type: none"> Executive Director of Nursing Informatics Department |
| Subject Matter Expert/Super users | e-mails, meetings | As required | <ul style="list-style-type: none"> Providing guidance, direction and suggestions | <ul style="list-style-type: none"> Nursing Informatics Coordinator and Informatics Nurse assigned to the facility |
| HICT-CIS department | e-mails, and meetings | As required | <ul style="list-style-type: none"> Technical support Conducting and coordinating training activities. | <ul style="list-style-type: none"> Nursing Informatics Operational team |
| | Memos | As required | <ul style="list-style-type: none"> Coordinating training activities. | <ul style="list-style-type: none"> Executive Director of NI |
| CIS Third party solutions | meetings, e-mails | As required | <ul style="list-style-type: none"> Discussion of project status and constraints | <ul style="list-style-type: none"> NI Project leads Executive Director of NI |

1.10 Target

The target population for the Nursing Informatics CIS project activities comprises all nursing staff across HMC.

1.11 Risk Management/ Assessment

- Inadequate training: The NI department has designed a strategic approach to overcome the risk by developing a series of assessment and training activities;
 - The nurses are assessed using windows 7 skills assessment,
 - Basic Computer Orientation Course “Windows 7 Refresher Course” is delivered to the staff who need improvement in their computer skills,
 - Nursing Informatics course are given to the end users and super users ,
 - Guidance and support is provided during the practice lab sessions.
- Staff resistance to use of information technology- To overcome this, the NI operational team participates in CIS awareness sessions, orients and educates nursing staff in the use of existing technology and adopts creative tools to facilitate training of the staff.

1.12 Constraints

- Long process of data collection and validation of CIS solutions
- Change in roll-out schedule of various hospitals
- Technical issues, infrastructure etc.
- Unacquaintance to HMC workflow by CIS service providers

1.13 Progress Measurement tools

The progress of Nursing Informatics CIS support activities are measured by feedbacks and reviews pre and post go-live and with the attainment of the project deliverables.

1.14 Activities

- 1.14.1 CIS Cerner Millennium implementation support
- 1.14.2 Support for Clairvia implementation
- 1.14.3 Implementation of Zynx

1.14.1 CIS Cerner Millennium Implementation Support

1.13.1.1 Description

The Cerner Millennium support aims at assisting and preparing nursing staff for engaging in Clinical Information System by providing focused, timely and relevant support in the effective use of current and emerging technologies. Nursing Informatics Department coordinates with HICT-CIS department and supports the planning, design, development, implementation, maintenance and evaluation of Clinical Information System.

1.13.1.2 Time line

The CIS Cerner Millennium is implemented in Al Khor Hospital in April 2014. Since then, the CIS implementation support is a continuous activity of the Nursing Informatics Department. The last facility planned to go-live is scheduled by Jan 2016.

1.13.1.3 Benefits

- The Nursing Informatics staff will be exposed to participate in corporate wide process improvement and implementation which will enhance the knowledge of NI department and experience.
- Nursing Informatics will be able to contribute in designing technology solutions and select and implement solutions that will help nurses as well as have the potential to improve patient care.
- The nurses will be well-trained and empowered to practice the highest standard of quality care by presenting data where needed and acquiring data when generated with networked electronic data processing.
- The nursing department will have improved and immediate access to a unified patient EHR.
- The nurses will be acquainted and confident in using the system

1.13.1.4 Assumption

By 2016 all hospitals across HMC will have a unified electronic health record and NI Department will handle entirely the support activities post CIS implementation.

1.13.1.5 Activity updates

- The CIS Implementation across HMC is divided in phases-the first phase was the implementation of Cerner Clinical Viewer. CCV was implemented to create a unified means of accessing patient laboratory result across HMC and PHCC in March 2014.
- The second phase of implementing Cerner Millennium is started in April 2014 at Al Khor Hospital followed by Women's Hospital in October 2014.
- The next hospitals to go-live are NCCCR and Heart Hospital by Feb 2015.

1.13.2 Implementation of Zynx health project

1.13.2.1 Description

Zynx health project comprises of an evidence-based clinical decision support system solution. It can be accessed at the point of patient care through electronic health record systems within Cerner Millennium. The clinical improvement solutions provide the clinical knowledge that empowers clinicians and nurses to take the best patient care decisions and measurably improve outcomes.

1.13.2.2 Timeline

- Zynx support activity is a continuous activity of Nursing Informatics Department. Zynx health project is intended to go-live by early 2015.

1.13.2.3 Benefits

- Improve the quality of patient care and streamline the process.
- Support the organization's culture of evidence-based and patient-centered care.
- Measurably improve financial results and increase time for the patient care.
- Evidence based clinical decision tool will be implemented in HMC which will promote effective patient health care outcome.

1.13.2.4 Assumption

- 100% of the nurses having access to Cerner Millennium will use the Zynx order set for nursing care plan.

1.13.2.5 Activity Updates

- Build and review of the Zynx care plan has been done and are ready for approval.
- 50 nursing care plans have been incorporated within the Cerner Millennium order set catalog.

1.13.3 Support in implementation of Clairvia Staffing solution

1.13.3.1 Description

Clairvia is an enterprise staffing solution from Cerner Corporation which incorporates clinical data and real time location services to improve staff efficiency, assets utilization and patient throughput. It provides a precise measurement of nursing intensity which includes patient volume, activity, acuity and turn over. It also provides representation of a patient expected stay overtime, including level of care and expected date and time of discharge and uses a predicted measurement of nursing care hours. The Nursing Informatics Department is the spearhead of guiding this project across Hamad Medical Corporation.

1.13.3.2 Timeline

The Clairvia support activity is a continuous activity of the Nursing Informatics Department.

1.13.3.3 Benefits

- Nursing Informatics Department will contribute effectively in patient specific staffing and eventually participate in direct patient care.
- Improve clinical performance by ensuring that each patient receives the required resources to achieve their expected health outcomes.
- The nurses will be accurately aligned to patient demand, and the staffing levels will be based on desired patient outcomes, across Hamad Medical Corporation.

1.13.3.4 Assumption

The Clairvia staffing solution will be implemented in all hospitals across HMC by 2016.

1.13.3.5 Activity Updates

- Clairvia Acuity Solution Kick-off event for Senior Management happened in September 2014
- The first hospital planned to implement Clairvia staffing solution is be Al-Khor Hospital in March 2015.

Operational Project

2.1 Project Overview

The operational project activities comprise of tasks and responsibilities performed by the Nursing Informatics staff assigned in various facilities across HMC. The Nursing Informatics department implements its operational activities to the corporate wide facilities in a standardized strategy.

2.2 Project Goals

- To implement Nursing Informatics program.
- To engage and execute Nursing Informatics operational activities in all facilities.
- Disseminate Nursing Informatics concept and its relevance across HMC.
- Promote and facilitate access to resources and references.
- To increase awareness, and to develop skills as well as preparing the nurses across HMC for the healthcare transformation.

2.3 Project Scope

The project scope of Nursing Informatics operational activities include;

- All Nursing Informatics activities carried out in various hospitals.
- All forms of electronic communication resources for nursing
- Any internal or external Nursing Informatics related event organized by the department.

2.4 Items beyond scope

All the operational activities are targeted and limited to the nursing department and the NI department only. The operational activities are not extended to any other healthcare professionals.

2.5 Stakeholders

- Executive Director of the NI department
- NI Project Manager
- Nursing Informatics Coordinator
- Informatics Nurses

- Nursing staff across HMC
- Patients
- Support staff

2.6 Cross Functions

| Function | Department Involved | Responsibility /comments |
|-------------------|------------------------|---|
| Technical Support | HICT | <ul style="list-style-type: none"> • Supply of computer and accessories to the Nursing Informatics Skills lab. • Technical support for all operational activities |
| Resources | Media and Marketing | <ul style="list-style-type: none"> • Design, layout ,uploading and maintenance of HMC Intranet Nursing websites and Nursing Informatics website |
| Printing | Material Management | <ul style="list-style-type: none"> • Printing and publishing of material for NI events |
| Staff Engagement | Nursing administration | <ul style="list-style-type: none"> • Participation , involvement and providing feedbacks for all NI activities |

2.7 Project Manager

The Executive Director of the Nursing Informatics acts as the project manager of all operational activities of the department and is responsible for providing approval of all the activities and tasks of the project.

2.8 Role and responsibilities

- The NI Project Manager is the liaison between the NI Executive Director and the NI Operational team. The NI Project Manager acts as the team leader of NI Operational team and is responsible to supervise, coordinate and communicate the entire operational activities in the NI department.
- The NI Coordinators are responsible to coordinate all NI operational activities in the assigned facilities. They are responsible to communicate with the Nursing administration of the assigned hospitals, Media and Marketing, Materials department, HICT and other concerned departments, for smooth execution of the NI operational activities.

- Informatics Nurses works under the supervision of NI coordinators assigned to the facility, and are the first line of contact with the nursing department for all NI operational activities. They are responsible to guide, support and help the nurses to adapt to the latest trends in Nursing Informatics.

2.9 Communication and Reporting

| Genre | Mode | Frequency | Information | Responsible |
|--|-------------------------------------|--|---|-----------------------------------|
| Internal Communication | | | | |
| NI Operational team | meeting | • weekly | Project status and updates, problems, risks, change requirements | • NI Project Manager |
| Project activity report to the NI Executive Director | Progress Report | • As required • Upon completion of tasks/activities | Activity report on implementation of NI activity in the assigned facility | • Nursing Informatics Coordinator |
| External Communications | | | | |
| Nursing administration | e-mails, onsite visits and meetings | As required | Communication and coordination of NI operational activities in the hospital | • NI Operational team |
| Media and Marketing Department | Web Service requests Meetings | As required | Developing and updating nursing websites, NI bulletin, NI website | • NI Operational team |
| HICT | E-mails Application requests, | As required | Updating of the outlook properties of the end users, User access creation, technical support etc. | • NI Operational team |

2.10 Target

The target populations of NI operational activities include the Nursing Informatics staff and Nursing Department staff across Hamad Medical Corporation.

2.11 Progress Measurement Tool

The progress of the NI operational activities will be determined by the attainment of project objectives and deliverables. The Nursing Informatics operational team will use various tools as following:

- Hands on assessment, log books monitoring and the impact on staff performance due to NI skills lab.
- Achievement of deliverable objectives and successful hosting of events like NI Workshops and NI Day
- The relevant and revised data in the webpage and NI Bulletin and the rate of accessing them.
- Web based survey will be used to assess the nursing staff response to bulletin.
- Surveys, feedbacks and on-site interviews to assess the impact of NI activities

2.12 Risk Assessment and Management

- Limited finances and availability of local speakers for NI events: The limitation in budget and speakers can hamper the organizing of NI events. NI department will request budget committee or raise a business case for financing the events and include International speakers to boost the learning experience of the participants.
- Technical issues: The Nursing Informatics coordinates with HICT Department and escalates the technical issues to them. The HICT department is responsible to solve any technical issues of the Nursing Informatics skills lab.
- Migration of website to a new platform-This can cause potential loss of current data in the Nursing websites. To overcome this, the NI department is coordinating with Media department and will validate all the reloaded data over the period of 6 months.

2.13 Constraints

- Nursing administration resistance towards implementation the NI operational activities
- Conflict with schedule of other CIS project activities to arrange the NI events
- Unavailable space for new installation or setting up new Nursing Informatics skills lab or extension of existing computer skills lab

2.14 Activities

2.14.1 Communicating NI concept and vision through:

- 2.14.1.1 NI Day
- 2.14.1.2 NI Workshop

2.14.2 Improve nurses' IT skills and exposure to technological advancements through:

- 2.14.2.1 Skill lab
- 2.14.2.2 Window skill assessment.

2.14.3 Update nursing staff with information about the facilities and NI activities

- 2.14.3.1 Nursing and Nursing Informatics Websites
- 2.14.3.2 Nursing Informatics Bulletin.

2.14.1 Communicating NI concept and vision

2.14.1.1 Nursing Informatics Day

2.14.1.1.1 Description

Nursing Informatics Day is an external event organized by the NI department, planned to be conducted annually and its attendance is beneficiary. It will target the GCC region in its initial version and in the future will have an international focus.

2.14.1.1.2 Timeline

The Nursing Informatics day will be hosted and conducted once every year.

2.14.1.1.3 Benefits

- Nursing Informatics Department will gain national recognition.
- Promote and stimulate the worldwide exchange of ideas among informaticians.
- Network and link with professionals nationally and internationally.
- Learn and share new experience with the latest trends in NI.
- Enhance the team experience and knowledge.
- Create awareness of NI activities in HMC
- Update and expose the NI department to the tools, technologies, and processes in NI and investigate how this can be applied in the department to improve the information products, workflow, and processes.

2.14.1.1.4 Assumptions

The Nursing Informatics Department will host the event annually and achieve the objectives set for the program provided there is a fully approved budget.

2.14.1.1.5 Activity Updates

- The first Nursing Informatics Day will be organized on 19 May 2015.

2.14.1.2 Nursing Informatics Workshop

2.14.1.2.1 Description

The Nursing Informatics workshop is an internal event planned to be organized in the department annually for promotion and exchange of knowledge and ideas.

2.14.1.2.2 Timeline

The Nursing Informatics workshop will be hosted and conducted once annually.

2.14.1.2.3 Benefits:

- Provide a clear direction of the future of Nursing Informatics department
- Enable discussions of influences and direction of the future of NI practices.
- Envision the future of nursing informatics department.
- Evaluate the performance of Nursing Informatics committees.
- Ensure the staff are effectively contributing in the department activities
- Utilize the staff feedback to develop and deliver NI services and activities
- Encourage Nursing Informatics team to share their experiences and achievements.
- Provide latest updates of IT and Nursing Informatics trends

2.14.1.2.4 Assumption

100% of the staff in the Nursing Informatics will attend the NI workshop which will be hosted once every year. The deliverables will be consistent with the program objectives.

2.14.1.2.5 Activity Updates

- The first NI workshop was conducted on 8 Feb 2014.
- The next workshop is planned to be conducted on 14 December 2014

2.14.2 Update nursing staff with information about the facilities and NI activities

2.14.2.1 Nursing and Nursing Informatics websites

2.14.2.1.1 Description

Nursing and NI websites ensure the advancement of all nursing news and activities of a hospital across HMC. It also provides details of nursing structure from top management to unit level. Nursing Informatics department acts as the owner of these websites in HMC intranet and ensure that the information's are relevant, updated and engaging.

2.14.2.1.2 Timeline

The launching and monitoring of the nursing website is a continuous activity of the NI Department. The updating of the webpage is done as and when required.

2.14.2.1.3 Benefits

- Provide information of all nursing activities of the hospital.
- Nursing community in HMC is well informed and updated with hospital activities.
- Create awareness of Nursing Informatics activities in HMC

2.14.2.1.4 Assumptions

By 2015, nursing websites will be made live on the HMC Intranet for all hospitals, which will have comprehensive information about all the nursing and the Nursing Informatics activities of the specific hospital.

2.14.2.1.5 Activity Updates

- Migration of all HMC website to new platform in December 2014
- Future plans of creation of interactive web pages

2.14.2.2 Nursing Informatics Bulletin

2.14.2.2.1 Description

Nursing Informatics Bulletin will be published by Nursing Informatics Department to ensure the NI Department activities, accreditation, researches, and educational materials are communicated appropriately, as well as to provide information to the nursing staff of HMC.

2.14.2.2.2 Timeline

The preparation of NI bulletin is initiated and the first edition will be published in 2015

2.14.2.2.3 Benefits:

- Provide effective communication to keep the nursing staff updated with information and activities of NI department
- Engage HMC staff to make NI projects and activities participatory and practicable.

2.14.2.2.4 Assumptions

Nursing Informatics Bulletin will have four publications annually, which will help in recognition of NI departmental activities and efforts.

2.14.2.2.5 Activity Updates

- Publication of NI bulletin in November 2014
- Transforming to e-NI bulletin by 2015

2.14.3 Improve nurses IT skills and exposure to technological advancements

2.14.3.1 Nursing Informatics skills lab

2.14.3.1.1 Description

Nursing Internet Café currently known as “Nursing Informatics Skills Lab” is a training area set by NI Department, in the hospital, to provide computer skills training to the nursing staff. The nurses are facilitated to have hands on practice and to develop computer knowledge. The Nursing Internet Cafe or the computer skills lab is also used by the nurses in the hospital to access internet, and to get exposed to online learning resource.

2.14.3.1.2 Timeline

This is a continuous activity of Nursing Informatics Department. The NI Department has implemented this activity in phases, mitigating the resistance from the hospital administration.

2.14.3.1.3 Benefits

- Helps the nursing staff to develop their computer skills
- Nursing Informatics team can efficiently deliver required training sessions and competencies in groups.
- Develop and maintain a well-equipped computer skills lab for every hospital across Hamad Medical Corporation.
- Promote exposure to internet and online resources

2.14.3.1.4 Assumptions

By 2015 every hospital in Hamad Medical Corporation will have an equipped NI skills lab.

2.14.3.1.5 Activity Updates

- A total of one hundred one (101) new computers are currently being distributed and installed in different hospitals.
- The policy OP 4005, on Nursing Informatics Skills Lab has been revised and updated in 2014.

2.14.3.2 Windows Skills' Assessment

2.14.3.2.1 Description

Windows Skills assessment is an assessment tool used by the Nursing Informatics Department to quantify the knowledge of the nurses in terms of 16 basic steps of Windows 7 operations and computer functions. The nurses are required to complete the self-assessment on I-pads under the supervision of Nursing Informatics operational team. The results are tabulated as per a score matrix, which are analyzed by the NI team and the training requirements are determined.

2.14.3.2.2 Time line

This is a continuous activity of the Nursing Informatics Department. The NI operational team carries the Windows 7 Skills assessment as a preparation to the CIS Cerner Millennium go-live.

2.14.3.2.3 Benefits

- Assess the staff knowledge on basic computer commands.
- Identify the training needs of the nursing staffs.
- Familiarized nursing staff with the usage of computer in regular basis.
- Prepare nursing staff for the upcoming CIS go-live.

2.14.3.2.4 Assumption

By 2016, all nurses across HMC will be assessed for Windows 7 skills, prior to the CIS go-live in their facility.

2.14.3.2.5 Activity updates:

The nurses in Al Khor, Women's, NCCCR and Heart Hospitals are assessed on "Windows 7 skills" assessment.

Educational Project

3.1 Project Overview

The Educational project in Nursing Informatics is adopting latest technological trends to improve quality care and patient safety. These require nurses to possess increased knowledge and competencies to use the technology in nursing care practice. The Nursing Informatics department pioneers the responsibility to provide advance education and training to the nurses in healthcare informatics.

3.2 Project Goals

Provide professional knowledge and skills that enhance the practice of Nursing Informatics and nursing staff across HMC.

3.3 Project Scope

Focus on enhancing the NI knowledge and improve the computer skills of the nurses across HMC. The Nursing Informatics Department targets to accommodate and deliver the educational activities to the nurses' specific to the ICT, health care Informatics and CIS application support.

3.4 Items beyond scope

The NI department does not deal with their learning needs pertaining to clinical or nursing activities.

3.5 Stakeholders

- 2 Executive Director of the NI Department
- 3 NI Project Manager
- 4 Director of NI Education and training
- 5 NI Education and training committee
- 6 NI Specialist
- 7 Nursing Informatics Operational team

3.6 Cross Function

| Function | Department Involved | Responsibility /comments |
|---|--|---|
| Technical Support | HICT department | <ul style="list-style-type: none"> Supply of hardware and peripherals for the training labs. Provides access, technical assistance and support. |
| Providing CNE credits | Nursing Education and Research Department | <ul style="list-style-type: none"> To approve the CNE credit points for the educational session conducted by the NI Department. |
| Ensuring staff engagement | Nursing administration | <ul style="list-style-type: none"> To ensure the staff contribution in the Educational activities of NI. |
| Approval and printing of Educational material | <ul style="list-style-type: none"> Media, Marketing and Public Relations Department Materials Management | <ul style="list-style-type: none"> The NI team coordinates with the concerned department for the design approval and printing of educational leaflets and materials. |

3.7 Project Manager

The Executive Director of Nursing Informatics Department is the project manager for all the education and training activities carried by the Nursing Informatics Department and is responsible for approval of the activities and tasks.

3.8 Roles and responsibilities

- The NI Director of Education and training is responsible for planning, directing, assessing and evaluating the progress of the project.
- The NI Specialist (NI Educator, IT training Specialist and Clinical Informatics Analyst) are responsible for training needs' analysis of the nurses, developing training material and competencies and conducting training activities.
- The NI Project Manager acts as a liaison between the NI Executive Director and NI Educational team. The NI Project Manager is responsible of coordinating tasks' assignments and follow-up of the progress of the project as planned

- The Nursing Informatics Operational team is responsible for advising NI Specialist on training requirements of the nurses and for the communication with nursing administration of the assigned hospital. The NI Operational team provides support to the educational activities related to their operational tasks.
- The NI Education and training committee is responsible to ensure that the programs presented are educationally sound, complying with the NI requirements and satisfying the nursing training needs.

3.9 Communication and Reporting

| Genre | Mode | Frequency | Information | Responsible |
|--------------------------------|---|-----------------|---|---|
| Internal Communication | | | | |
| NI Education project updates | <ul style="list-style-type: none"> Reports Meeting Progress Report | Monthly reports | <ul style="list-style-type: none"> Status of the on-going educational activities. Achievement report of the committee activities Evaluating the extent to which NI educational programs have met their stated objectives | <ul style="list-style-type: none"> Chair of NI Education and Training Committee |
| External Communications | | | | |
| CNE Credits | CNE application form and Educational material | As required | Seeking approval of the CNE points | <ul style="list-style-type: none"> NI Education Committee Nursing Education and Research Department |

| Genre | Mode | Frequency | Information | Responsible |
|---|-------------------------|-------------|--|---|
| Staff participation in education activities | • E-mails • Meetings | As required | <ul style="list-style-type: none"> • Communication of the nurses' learning needs • Activities organized by the NI department to meet the educational requirements. • Arrange the venue and announce staff | <ul style="list-style-type: none"> • NI Operational team • Nursing Administration |
| | • Memos | As required | <ul style="list-style-type: none"> • Activities organized by the NI department to meet the educational requirements. | <ul style="list-style-type: none"> • Executive Director of NI |

3.10 Target

The target population for the Education project includes the Nursing Informatics Department staff as well as the nursing staff across the HMC.

3.11 Progress Measuring tool

- Staff feedback on the effectiveness of NI Educational activity
- Number of training sessions conducted in each facility
- Staff attendance in educational session

3.12 Risk Management /Assessment

- Resistance from the Hospital Administration
- Lacking resources that are specialized in NI Education
- No training labs dedicated for the NI Educational projects

3.13 Constraints

- Conflicts in schedule
- Sophisticated and long process of corporate approval for the NI competency
- Obsolete competencies

3.14 Activities

- Nursing Informatics Seminars/ workshops/presentations
- Nursing Informatics orientation for new staff during GNO
- Nursing Informatics competencies
- Developing Nursing Informatics Educational leaflets
- Basic Computer Orientation Course
- ICDL Preparatory Course

3.14.1 Nursing Informatics Seminars/Workshops/presentations

3.14.1.1 Description

For spreading the awareness and knowledge about the Nursing Informatics specialty and its impact in advancing healthcare practices, NI Department is organizing a range of continuing educational and training events as the seminars, workshop courses and presentations for the nursing staff across HMC.

3.14.1.2 Timeline

The Nursing Informatics Department will present 6 educational programs per facility in 2015.

3.14.1.3 Benefits

- Introduce and develop awareness about Nursing informatics role in empowering nurses to advance health care practice
- Expand the knowledge in informatics and IT related areas relevant and suitable to nursing practice.
- Equip nurses with the necessary computer skills
- Helps in the successful implementation of the Clinical Information System

3.14.1.4 Assumptions

The nursing staff across HMC will be familiarized with the Nursing Informatics concept, acquire computer skills and become knowledgeable in all CIS applications.

3.14.1.5 Activity Updates

- 3 Research Seminars have conducted in HMC facilities in 2014.
- NI Introductory course commenced in 2014 and will proceed to cover all facilities in 2015

3.14.2 Nursing informatics orientation for new staff during GNO program

3.14.2.1 Description

This activity is mainly for orienting the newly recruited nurses in HMC of Nursing Informatics Department's projects and activities.

3.14.2.2 Timeline

The event is scheduled by the Nursing Education and Research department, minimum once every month.

3.14.2.3 Benefits

- Provides an overview of Nursing Informatics Departmental vision, mission and goals to the new staff.
- Increase staff awareness on the role of Nursing Informatics in HMC.
- Develop awareness of Clinical Information System and its impact in nursing activities.

3.14.2.4 Assumptions

100% of the newly hired nursing staff attending GNO will be aware about the NI Department concepts and activities.

3.14.2.5 Activity Updates

- The activity started in 2012
- Nursing Education and Research Department is responsible to ensure the participants and their attendance.

3.14.3 Nursing Informatics competencies

3.14.3.1 Description

Nursing informatics competencies are developed to assess the computer skills of the staff and to evaluate their knowledge in using CIS application. There are two types of competencies; the competencies for the nursing staff across HMC, and the competencies for the Nursing Informatics Department staff itself.

NI Competencies for the nurses:

Across HMC, the Nursing Informatics Department is currently using two types of skill sets to validate the computer knowledge of nurses. The nurses within two years of joining to Hamad Medical Corporation are assessed using the general Computer competency. Intermediate computer competency is the second level of revalidation, for the staff that completed two years and competent in General Computer Competency.

NI Competencies for NI staff:

For improving and enhancing the knowledge and skills of NI staff, the Nursing Informatics Department is developing competencies for validating staff knowledge in information management and data literacy.

3.14.3.2 Timeline

- The validation of computer competency for HMC nursing staff is an activity applied to the new nurses upon joining and then the process of revalidation after two years.
- The competencies for NI department will be developed and applied by 2015.

3.14.3.3 Benefits

- Enhance the nurses' knowledge and skills in computer and Clinical Information System applications.
- The integrated knowledge will be used to support the delivery of patient care across HMC.
- Ensure NI staff possess the necessary knowledge and skills.

3.14.3.4 Assumptions

- 100% of the nursing staff across HMC will be validated for the competencies and will be competent for computer competencies.
- 100% of NI staff will be competent in information management and data literacy competencies.

3.14.3.5 Activity Updates

- The Information management and data literacy competencies for Nursing Informatics Department are on progress.
- Computer competencies of the nurses will be reviewed as per technological changes-internally or externally.

3.14.4 Developing Educational Leaflets and brochures

3.14.4.1 Description

Development of educational leaflets is an activity carried out by the Nursing Informatics department for disseminating new information and providing educational guide on healthcare technology to nursing staff across HMC.

3.14.4.2 Timeline

- The development of the educational materials for 2015 is planned to target the technological applications in healthcare settings and the implementation of the third party projects.
- Three educational materials will be developed in 2015.

3.14.4.3 Benefits

- Provide a convenient information source to the nursing staff.
- Promotes and increases the awareness of NI and ICT among nursing staff.
- Promote and facilitate access to resources and references.

3.14.4.4 Assumptions

At least two educational leaflets will be developed annually.

3.14.4.5 Activity Updates

- 8 educational leaflets have been developed.
- 3 Educational leaflets are under development.
- 16 workflow related hand outs were developed during Women's hospital go-live in Oct 2014 and 6 during Al Khor hospital go-live in April 2014.

3.14.5 Basic Computer Orientation Course

3.14.5.1 Description

As an action plan for the nurses who are either non competent in the computer competencies or lack the basic windows skills, the Nursing Informatics department, conducts Basic Computer Orientation Course.

3.14.5.2 Timeline

By the end of 2015, the Basic Computer Orientation course will be conducted for all incompetent nurses in HMC.

3.14.5.3 Benefits

- Provides hands on training experience to the nurses and prepares them for CIS training.
- It gives confidence to the nurses in using new technology.
- Promotes the adoption to new technology

3.14.5.4 Assumptions

100% of the nursing staff, who will attend the Basic Computer Orientation course, will be competent in using Windows and MS Office.

3.14.5.5 Activity Updates

- The Basic Computer Orientation course has been conducted in Al Khor, Women's, NCCCR and Heart hospitals.
- The sessions are currently been conducted for the incompetent nurses in Hamad General Hospital.

3.14.6 ICDL Preparatory Course

3.14.6.1 Description

International Computer Driving License is an international digital literacy certification. The Nursing Informatics Department plans to start the preparatory course for ICDL, which will enable HMC nurses to attend the examination and acquire the certification.

3.14.6.2 Timeline

By 2015, the Nursing Informatics Department will start conducting the ICDL preparatory courses for HMC nursing staff.

3.14.6.3 Benefits

- Empower the department's vision of advancing the clinical information and technological systems for the improvement of healthcare systems and patient care delivery in HMC.
- Improve the level of IT knowledge and computer users' skills of the nursing staff which will lead to better patient care delivery.
- Increase the credibility of Nursing Informatics Department in the Corporation.

3.14.6.4 Assumption

The Nursing Informatics Department will pioneer to be the center for ICDL preparatory course in HMC.

3.14.6.5 Activity Updates

The project activity is currently in planning phase and will start as soon as the resources are available.

Research Project

4.1 Project Overview

Research is a means to provide management at all levels with good, accurate and timely information that will lead to better decision. Conduction of research will enrich the knowledge of Nursing Informatics staff and will help to address the raising issues in Nursing Informatics and other related fields, which can enhance the patient care delivery across HMC. It also aims to improve the quality of NI services through the implementation of Evidence Based practice model.

4.2 Project Goals

The main goal of the project is to establish a scientific base for NI services. It aims to develop and evaluate new trends in Nursing Informatics and enhance the quality of nursing care.

4.3 Project Scope

To conduct range of researches, with a technological focus that empower the knowledge of Nursing Informatics and improve the quality of patient care in HMC.

4.4 Items beyond scope

The research scope of Nursing Informatics Department does not include researches pertaining to the clinical or direct nursing care practices.

4.5 Stakeholders

- Executive Director of the NI Department
- NI Director for Research and Change Management
- NI Specialists
- NI Research and Evidence Based Practice Committee
- Nursing staff across HMC
- Patients

4.6 Cross Functions

| Function | Department Involved | Responsibility /comments |
|---------------------|------------------------------|--|
| Technical Support | HICT department | <ul style="list-style-type: none"> Supply of hardware and peripherals for the training labs. Provides access, software installation, technical assistance and support. |
| Staff participation | Hospital administration | <ul style="list-style-type: none"> Approval for the participation of staff for data collection Conducting research in the facility |
| Literature review | Hamad Health science Library | <ul style="list-style-type: none"> Provides online resources for the review of literature |
| Research approval | Medical Research Centre | <ul style="list-style-type: none"> Approval of proposals Providing courses that certify researches Providing budget Mentoring and advising the researchers |

4.7 Project Manager

The Executive Director of Nursing Informatics Department is the project manager for all the research activities carried by the Nursing Informatics Department and is responsible for approval, assignment and delegation of the activities and tasks within the NI department.

4.8 Roles and responsibilities of project members

- Nursing Informatics Director for Research is responsible for supervision and for providing guidelines for researches conducted in the department
- Nursing Informatics Research Specialist is responsible to act as a resource person and /or conducting the research and data publication.
- The Research and Evidence Based Practice Committee is responsible to seek research partnership with other institutes, and to develop the evidence based practice model for the Nursing Informatics Department. The committee ensures the contribution of NI staff in the research conducted in the department.

4.9 Communication and Reporting

| Genre | Mode | Frequency | Information | Responsible |
|---------------------------------------|---------------------------------------|-------------|---|---|
| Internal Communication | | | | |
| NI Research Committee project updates | Meetings Reports | Bi-monthly | <ul style="list-style-type: none"> Project's status and updates on the researches progress | NI Research and Evidence Based Practice Committee |
| External Communications | | | | |
| Medical Research Centre | E-mails, Memos, Application Proposals | As required | <ul style="list-style-type: none"> Seeking approval of the Research Providing courses to certify researches Providing budget | Executive Director of NI Department |
| Hospital Administration | E-mails Memos | As required | <ul style="list-style-type: none"> Seeking approval for conducting Research and data collection | NI Management |
| Nursing Administration | E-mails, Course Description | As planned | <ul style="list-style-type: none"> Providing educational sessions | NI Research and Evidence based practice Committee |

4.10 Target

The target population for the Nursing Informatics Research project activities includes the NI department and nursing staff across Hamad Medical Corporation.

4.11 Risk Assessment and Management

- Lack of staff specialized in Nursing Informatics Research: The risk will be overcome by establishing research partnership with national and international institutions.

4.12 Constraints

- Delayed responses from the participants during data collection
- Collaborating with Hospital administration for participation Research

4.13 Progress Measurement Tool

- Number of NI researches conducted annually.
- Number of Researches participated in National or International conference
- Number of researches published annually
- Number of research partnership with International institutions.

4.14 Activities

4.14.1 Conducting and publishing Research

4.14.2 Developing evidence-based practice model for the Nursing Informatics Department

4.14.3 Establish research partnerships with International research institute

4.14.4 Conducting and publishing Research

4.14.4.1 Description

Conducting and publishing researches will offer a unique and abundant opportunity to facilitate NI development by providing information that will eventually lead to improvements in the services provided. Drawing on theories, knowledge and methods from a range of disciplines will make the department move beyond the basic services.

4.14.4.2 Timeline

Nursing Informatics department will conduct and publish 1-2 researches annually.

4.14.4.3 Benefits:

- The NI Department will have scientific popularity and recognition
- Provide hands on experience with Nursing Informatics research.
- Enhance the expertise in the Nursing Informatics Department.
- Support better services by facilitating interdisciplinary care.

4.14.4.4 Project Assumptions

The Nursing Informatics Department will at least conduct and publish one research in 2015.

4.14.4.5 Activity Updates

- Presently three researches are on-going in the department and will be subjected to MRC approval.
- One research was conducted and published in 2014

4.14.5 Development of Nursing Informatics Evidence Based Practice model

4.14.5.1 Description

The evidence based practice model will provide a clear framework that directs Nursing Informatics researches implementation. It acts as an evidence for quality improvement in NI Research, Education and practice.

4.14.5.2 Timeline:

The Nursing Informatics Evidence Based Practice model will be developed by 2015.

4.14.5.3 Benefits

- Provide framework to implement the state of the art Nursing Informatics research outcomes.
- Frame of reference for policy to practice Nursing Informatics research.

4.14.5.4 Assumptions:

An operational evidence based practice model will be developed in the Nursing Informatics Department which will serve as a paradigm for Nursing Informatics researches.

4.14.5.5 Activity Updates:

Nursing Informatics Department is currently complying with HMC research practices model that governs NI research activities.

4.14.6 Create and maintain research partnership with international organizations

4.14.6.1 Description:

The research partnership is intended to actively involve the international research institutions in the researches conducted by the department. The NI Department will work closely with different institutions in order to exchange knowledge and benefit from their experiences.

4.14.6.2 Timeline:

The proposal for the research partnership will be implemented by 2017. The communication for it will be initiated in 2015.

4.14.6.3 Benefits:

- Increase specialization and multicultural experiences in NI
- Increase diverse Nursing Informatics research and acquire additional resources that are not provided in the current institution
- Increase in the scientific popularity, visibility and recognition to the Nursing Informatics Department.

4.14.6.4 Assumptions:

- Both partners will work on publishing researches which will increase the target set in the department for research conduction and publication

4.14.6.5 Activity Updates:

The activity is not initiated yet and hence has no updates till.

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Date:

11 December 2014



Approved By:

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Date:

15/12/2014

