

Clinical Information Systems E-Library: Transforming Education through Technology a Nursing Informatics Department Initiative.

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Introduction:

Utilization of technology in training is viewed as a principal pillar for the improvement of knowledge and practice. Embedding innovation inside nursing instruction is basic to give quality and safe patient care consideration. In accordance with this, the Nursing Informatics Department (NID) stepped up with regards to build up a Clinical Information Systems (CIS) E-library, an online repository of CIS instructive materials using diverse methodologies that are available to all nurses in Hamad Medical Corporation (HMC). 86% of users concur that it upgraded their clinical documentation abilities as confirmed by enhanced patient safety and documentation compliance. The general end user fulfillment is 92%. It was accessed 199,137 times since it was launched in November 2015.

Amid the Cerner Middle East Regional User Group Conference (RUG) 2016, it was recognized as the principal CIS E-Library over the Middle East and was globally perceived by the American Nurses Association (ANA).

Goals:

- To organize & standardize training resources for all nursing CIS solutions by creating learning materials that are tailored specifically to nursing workflow, aligned with HMC policies and nursing practices.
- Maintaining staff skills competency using the CIS application after each facility roll out.
- Provide CIS support system for nurses through the provision of reliable & easily accessible online educational materials.
- Enhance staff training through an informal setting using online platform.
- Improve nurses' understanding of the new system at their own time & pace, thus minimizing interruption to their regular working hours.

Project Implementation:

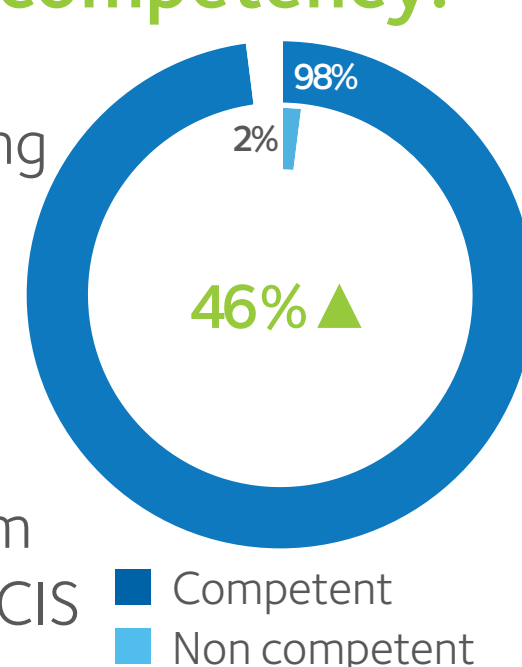
January - March 2015	April - October 2015	November 2015	December 2015 - Present
Planning <ul style="list-style-type: none">• Needs and gaps of the previous training methodologies were assessed & identified through the issues raised by end-users & nursing informatics reports.• A plan was developed based on the feedbacks of the nurses.• Round table discussions were conducted with end users on how to improve, train & standardize educational materials used to increase documentation compliance.• Teams were organized for developing, reviewing & creating innovative educational materials that can be used to improve CIS implementation across HMC facilities.• Collaborated with Health Information Communication & Technology (HICT) & Media, Marketing and Public Relation department (MMPR) to determine the best accessibility means for the E-Library to all nurses.	Designing & Developing <ul style="list-style-type: none">• NI members with different clinical background & skills were assigned to develop the video tutorials, interactive e-learning & video animations.• Assigned team was self-taught on how to develop professional video tutorials, interactive e-learning & video animations.• Materials were developed & designed in alignment with HMC clinical practices & policies. Developed materials were reviewed by NI Cerner certified trainers who are experts on their clinical background & workflow.• The educational materials were organized & arranged in an online repository accessible to all nurses.• Communication with HICT & Media, Marketing and Public Relation department for providing a section within i-Tawasol & HICT gate.• All materials were subjected to copyright.	Delivery & Launch <ul style="list-style-type: none">• The NI CIS E-Library was launched & announced through Web Master Communication.• It was introduced to the end users during Cerner training and GNO class as an online resource & reference to improve their skills.• It includes the following sections:<ul style="list-style-type: none">• Introduction.• CIS Awareness.• Video tutorials (134 videos).• Brochures (43 brochures).• Interactive E-learning.• CIS Workflow Animation Videos.• CIS Go-live calendar.• Training Materials.• Web Based Training link.• Frequently Asked Questions.• Provider Support.• News and Updates.• NI online support.• Contact us.• Feedback.	Evaluation & Enhancements <ul style="list-style-type: none">• The effectiveness of the CIS E-Library is evaluated by the end-users through surveys.• The result of the survey was used to enhance the content of the E-library.• The update is done on a regular basis.• NI CIS E-Library satisfaction & effectiveness surveys were developed & disseminated to collect staff perceptions on learning materials.• Documentations of nurses were audited to assess CIS E-Library clinical effectiveness & linked it with the completion of tasks on the EHR.• To monitor end users' utilization of the E-library, a monthly web analytics report was collected & analyzed.• Content & materials were regularly updated & communicated to all users.• The Nursing Informatics Guide button was added to the Cerner Millennium in May 2016 solutions to improve accessibility.

Demonstration of Improvement

1. High-level CIS competency.

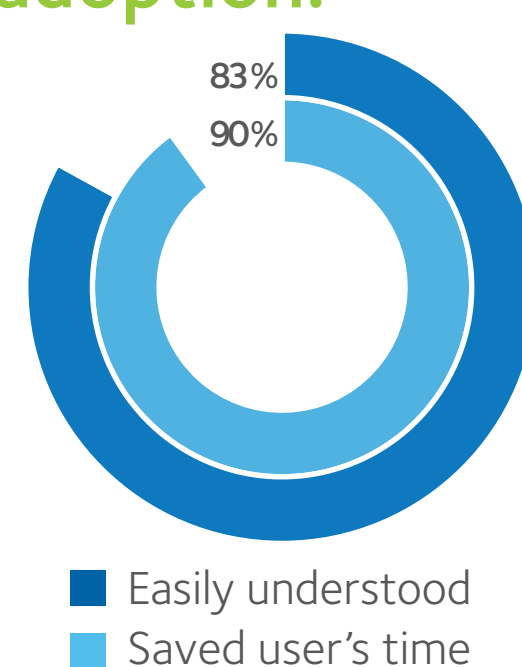
Achieving higher competency level during training.

For HGH 98% passed the CIS competency with 46% increase from other facilities before CIS E-Library.



2. Improved CIS adoption.

A survey conducted shows 83% of nurses agreeing it's easily understood, while 90% stated ease of accessibility saved their time.



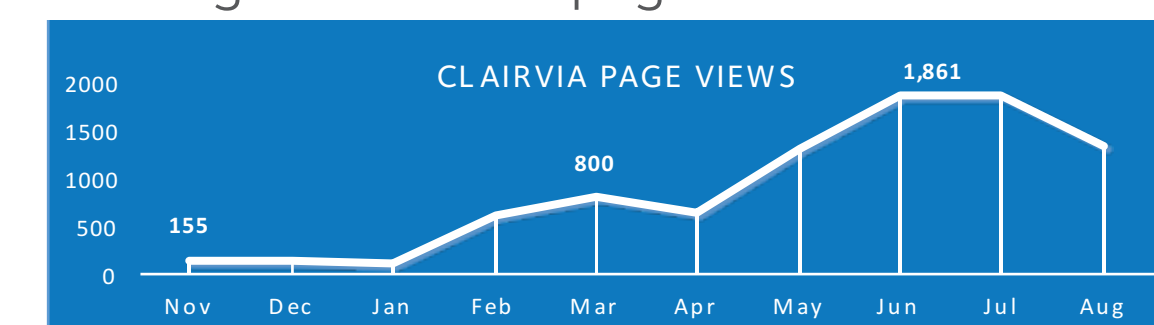
3. Reduced printed materials.

Because of CIS library availability no user manuals were printed, that saved printing costs of 50-60 pages for each user. This more than 157,000 pages total.



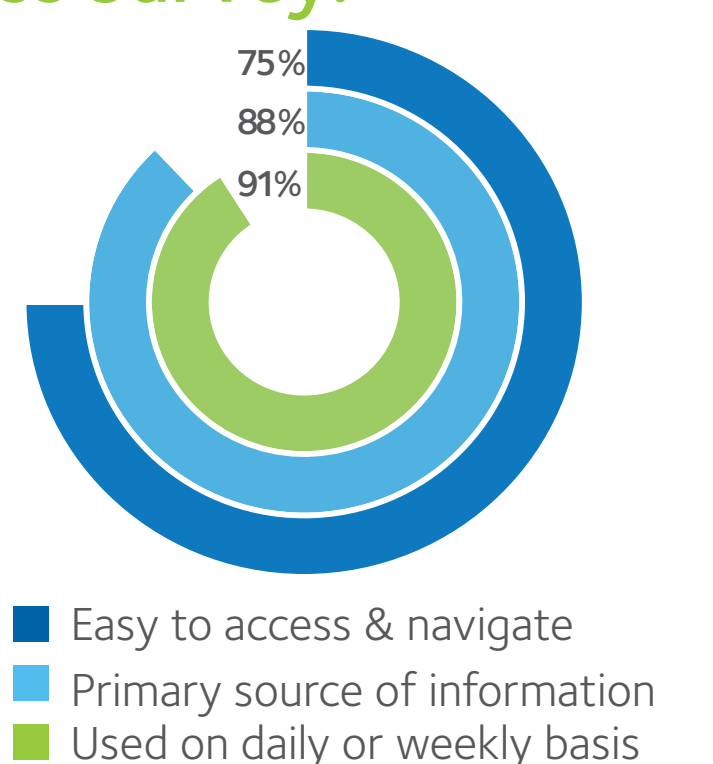
4. Compliance Survey.

- The Clairvia section in the CIS E-library has positively impacted the compliance rate for Clairvia staff management solution.
- There is a significant increase of visits viewing the Clairvia page.



5. Effectiveness Survey.

- 91% of users use it on daily and weekly basis.
- Primary source of information for 88% of users.
- 75% of users found it easy to access & navigate.



6. Web analytics views report.

The report shows constant increase in views per month since its launch.



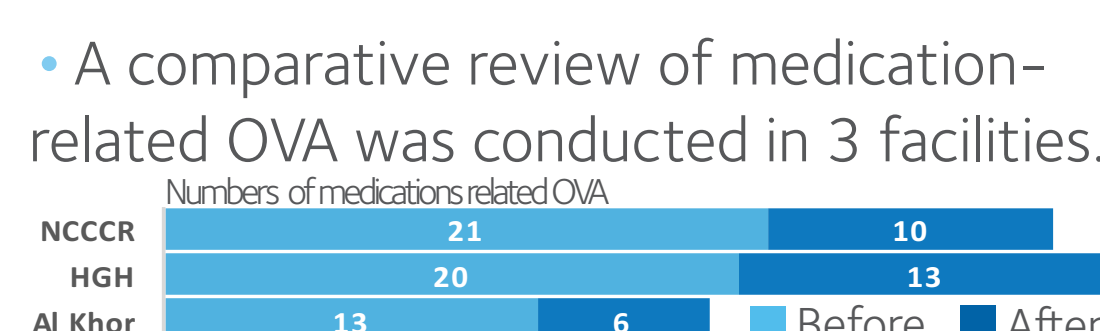
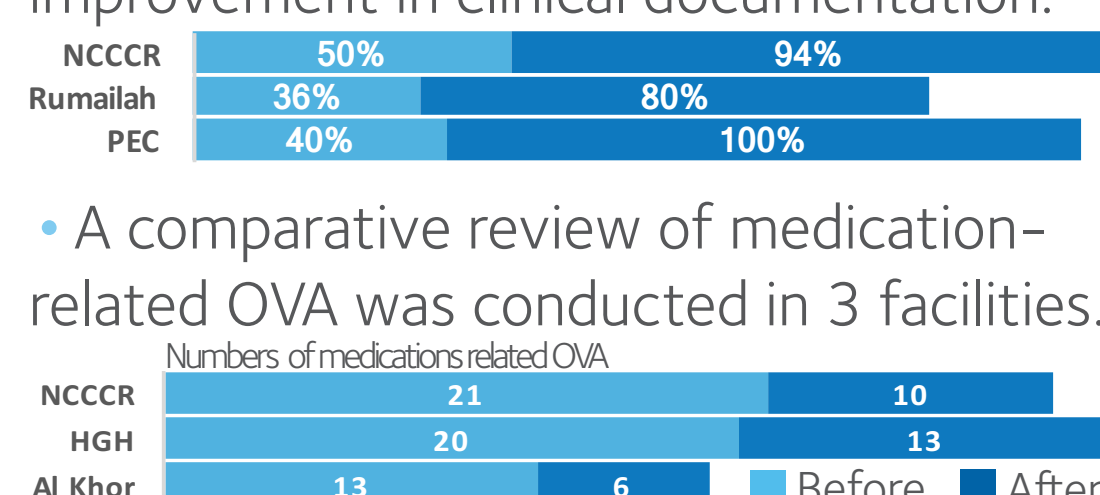
7. Enhanced Accessibility.

- Nursing Informatics Guide button was incorporated in CIS solutions to improve accessibility & utilization of materials.

- This unique feature enables nurses to access the reference materials through nursing CIS applications.

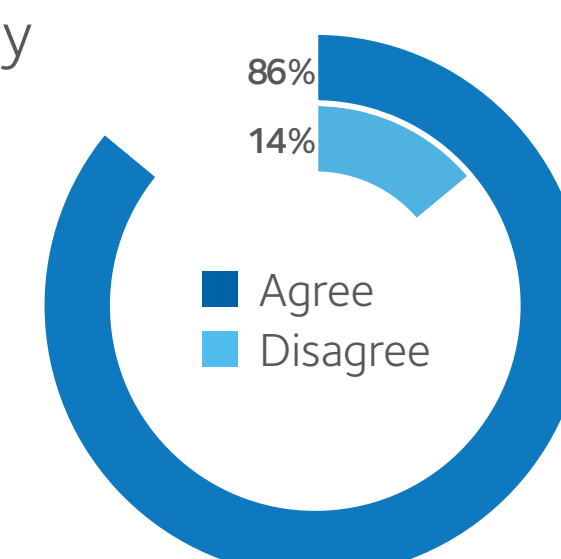
8. Improved Documentation.

- Documentation compliance survey conducted in 3 facilities shows 60% improvement in clinical documentation.



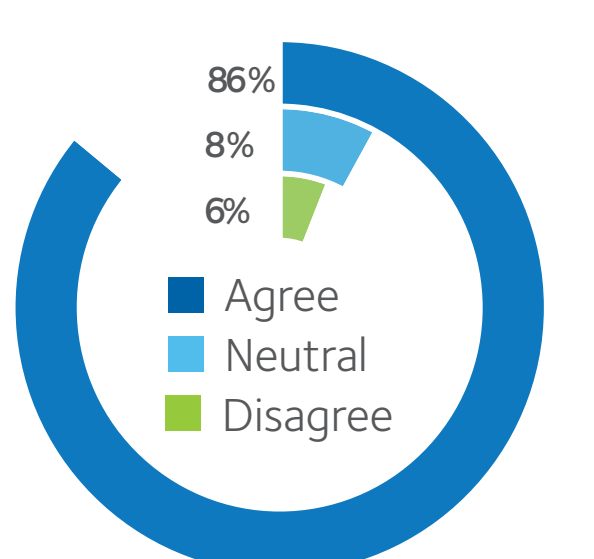
9. The utilization of online materials.

Based on the survey results: 86% of respondents agree that CIS e-library assisted them in completing and improving their documentations.



10. Improved communication.

Update on the CIS E-library & enhancements were communicated to all end users. 86% of responders stated their feedbacks were communicated properly.



Conclusion

In line with our mission of professional excellence, CIS E-Library progresses and applies innovation and learning to change the preparation given to nurses in order to enhance their consideration towards the patient's care.