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**Implementation of web based mobile application to report hand hygiene compliance among health care workers**

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**Abstract:**

The conduction of direct observations of hand hygiene among health care workers, located across multiple locations and the subsequent manual reporting, is a time consuming & costly affair. The newly designed web based mobile application was created to solve these disadvantages, and to help improve the hand hygiene programme within healthcare facilities.

**Introduction:**

Infection preventionist must focus on the measures required in a healthcare setting which are needed to help prevent the spread of infection and disease in the health care facilities. One of the most effective methods in disease prevention as well as to guarantee staff and patient safety is hand hygiene. Most of the health care facility auditing and reporting of the moments of hand hygiene were being completed manually. Not only was this a time-consuming task, but also it showcased the lack of compliance by PHCC staff. These two factors helped to build the foundation to have a web based hand hygiene mobile application. The mobile app allowed for the hand hygiene auditors to record 5 moments of hand hygiene (as per the WHO) in real time via their IPADS. The data that is collected by the App, shall managed by the infection control team who are then able to track and download automated audit reports in different formats (excel, pdf, graphical representations etc.). In continuation, this data was then shared with national level or governance, aiding nationwide hand hygiene compliance.

**Methods:**

The Digital platform provides the foundations for the building of standardized hand hygiene compliance by allowing auditors to timely report from different facilities, units, location etc. The original scope was to implement electronic Hand Hygiene monitoring in all health care facility to measure compliance and tackle any substandard behaviour, following the completion of a proof-of-concept pilot using sensors in different point of care. Owing to recent advances in sensing technologies, electronic hand hygiene monitoring systems have been integrated into the daily routines of health care workers to measure their hand hygiene compliance and quality. A disadvantage of this system however, is that an electronic hand hygiene monitoring system faces issues of accuracy, data integration, privacy and confidentiality, usability, associated costs, and infrastructure improvements. Through market research, it was discovered that there are many health care facilities all over the world being diverted for digitalization in auditing. The IPAC team shall conducted a series of discussions and investigations to better understand the advantages and disadvantages of the mobile application. In conjunction, discussions were made alongside with the service provider about the request. Upon an agreement, bidder shall piloted service in the health care facility based up on the size & staff coverage. After this pilot study, requirement proposals shall be made and communicated with higher authority for budget approval. Due to the restrictions of the electronic hand hygiene monitoring system and through extensive research as well as the pilot, the actual outcome of this project resulted in having a service level agreement with Handy Metrics Cooperation, installing The Speedy Audit app in Primary health care cooperation.

**Results:**

From January 2020 – January 2022 over a period of 2 years, 38920 opportunities recorded by hand hygiene auditors across 28 health centers in different locations in state of Qatar.

**Discussion:**

In this study, we demonstrate the successful implementation of a newly contracted web-based mobile application tool to assess HH adherence with instant analysis & reporting from different health centers to ministry of public health in addition to that

- Hand hygiene KPI will be ready with no time
- PHCC Hand hygiene compliance data will be presented Ministry of public health on time
- Feedback of compliance report will be presented in the dashboard as feedback for the health Center staff & develop action plan on non-compliance

In conclusion, speedy audit ( web based mobile application ) has replaced the traditional way of hand hygiene compliance reporting using paper & paper audit tool and now and then fit to call HH SMART compliance monitoring programme.

**Biography**

Radhika Krishnan Radhakrishnan has completed her master in business administration– Hospital management, RN, Certified in Infection control. She is the Infection control coordinator in Primary health care Corporation under the umbrella of ministry of public health. She initiated many projects in PHCC to standardise and to have secure system in infection control it included digitalisation of hand hygiene mentioning system as mentioned in abstract, digitalisation of CSSD documents and quality assurance test in 31 HCs.

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