

CMaP Mobile Device Pilot

An Assessment of Mobile Device Readiness and Capability for Los Angeles County Public Health Nurses in the Field

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Introduction

The Bureau of the Medical Director/Disease Control Nursing Administration's Informatics Unit (NIU) provides nursing informatics leadership throughout the Los Angeles County Department of Public Health (DPH) to improve the quality of practice through optimized information management.

Community Health Services (CHS) district public health nurses (DPHNs) use the Case Management and Processing (CMaP) system which is an electronic care management system, to capture program-specific disease epidemiologic information and support surveillance and outbreak management.

DPHNs routinely access the CMaP system through their desktop computers, located in their respective district offices to enter information gathered from their field work and other data sources.

Objectives

- Deploy mobile devices for use by DPHNs to enter data into CMaP in the field setting;
- Assess the DPHNs' readiness for mobile field devices;
- Test workflows for providing technical support to nursing staff in the field during pilot implementation;
- Enhance information sharing between CMaP users involved in patient case management to improve patient outcomes.

Plan


The CMaP Mobile Device Pilot Program was developed to consider the provision of an additional method that allows DPHNs to enter data into the CMaP system during home visits with patients in the field.

This plan required the NIU to partner with Public Health Information Systems (PHIS), Internal Services Department (ISD), and (CHS).




Implementation

Step 1



Obtained laptops, wireless cards, and VPN access

Step 2

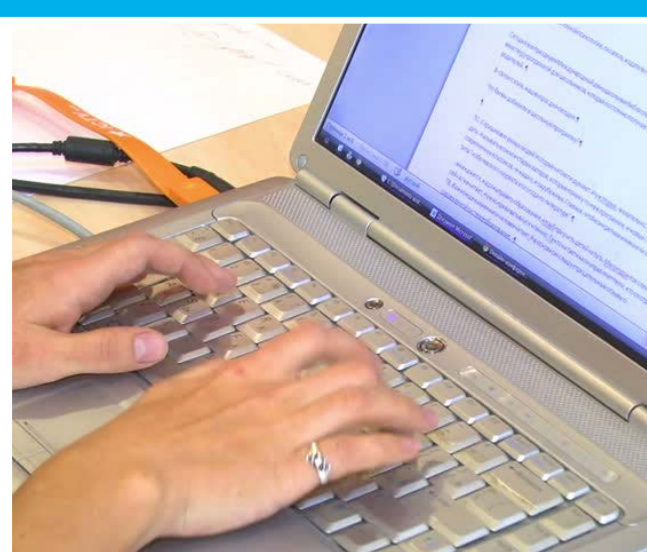


DPHN staff were trained on the use of the devices and encrypted log-in sequence

Each participant was assigned a laptop and provided with one-on-one training on using the laptop to connect to their desktop in order to access and use CMaP through the virtual private network (VPN) while in the field. DPHNs were given Laptop 1 for 4 consecutive weeks and were then given Laptop 2 for another 4 consecutive weeks of field/district public health nursing case management during the months of January through September, 2015.


After 8 weeks of using the devices, the DPHNs were sent a link to complete an "End of Use" Survey consisting of 34 open/closed-ended and rating scale questions.

Step 3



DPHNs entered data as planned in Real-Time

Step 4

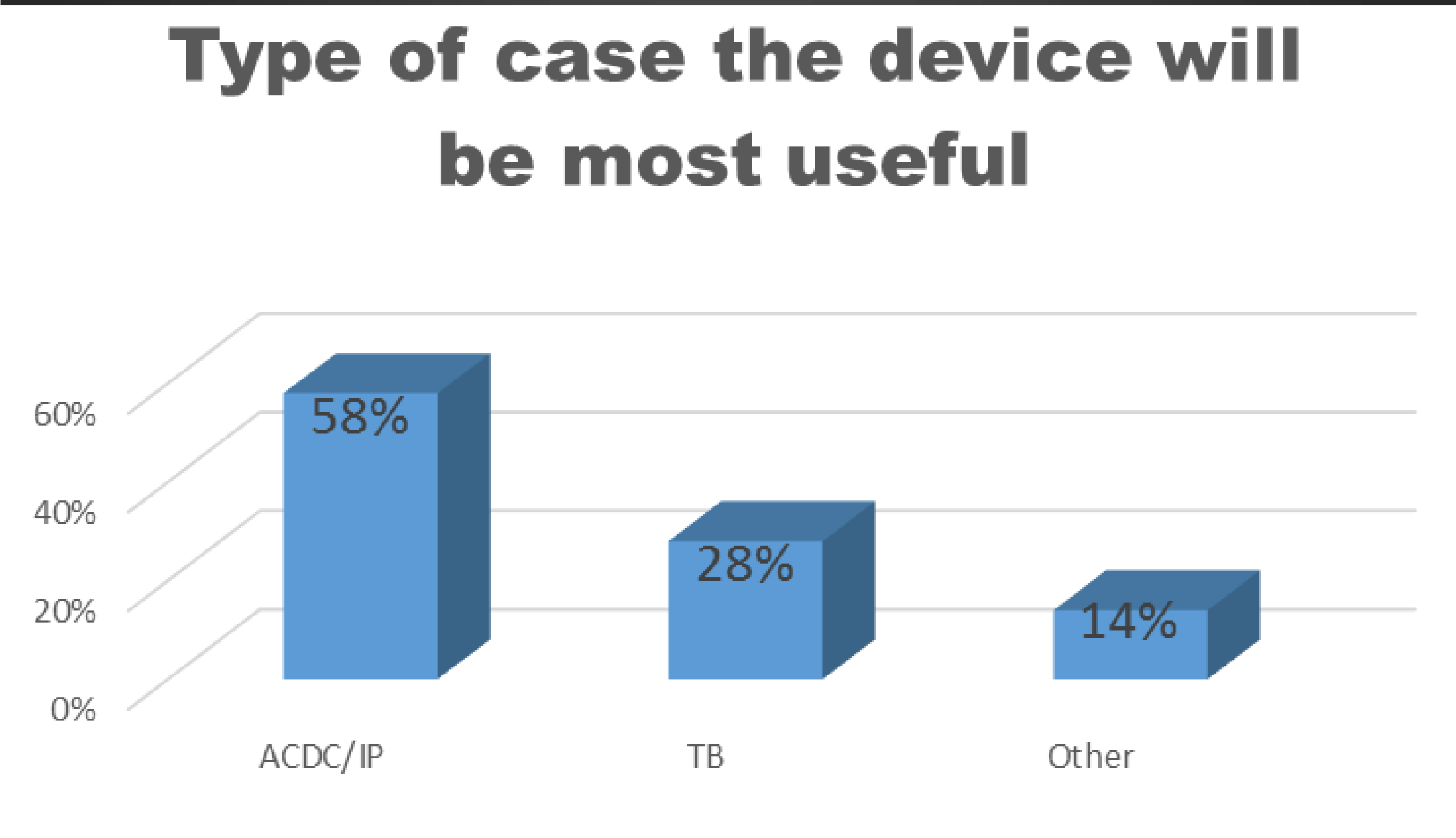
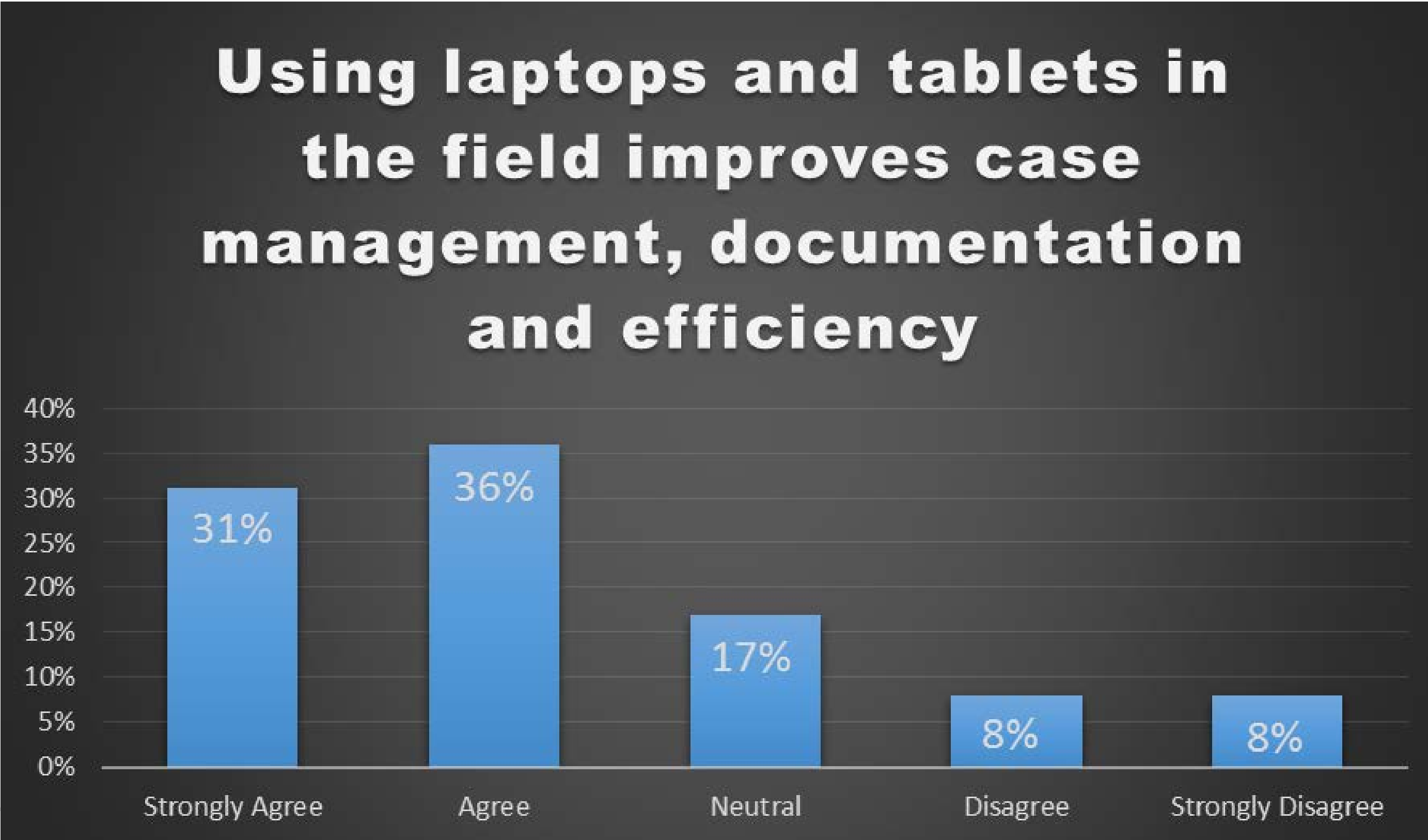


Upon completion of the pilot the End of Use survey was completed and analyzed

Results

- More than 80% of participants reported that being able to access CMaP in the field using the device is the important/most important feature
- 78% reported searching for information in CMaP that is urgently needed in the field
- 78% reported patients were neutral when asked about the use of the device
- 42% reported the ability to enter data quickly
- 30% of participants reported that the use of mobile devices may improve the DPHN's ability to access and manage cases
- 22% reported the use of online resources

Results



Barriers

- Participants reported:
- 36% Loss of wireless connection
 - 17% Computer screen timed out
 - 14% Unable to access the VPN
 - 22% Other (safety concerns, patients not at home, lengthy log-in process, laptop was slow, and other assignments)

Conclusion

DPHN staff is willing and ready to use a mobile device in the field. Using the laptops and the login process were reported as cumbersome and lengthy, DPHNs also stated that the benefits of the mobile device outweighed its challenges and barriers. DPHNs were able to access CMaP from the field and enter data into the system in real time. By doing so, patient information became immediately available to the CHS team for necessary reviews and case management with the ultimate goal of improving patient outcomes.