

Leveraging Convergence of Healthcare Delivery, Business Dynamics, and Technology Advancements to Advance Collection and Utilization of Meaningful COPD Patient Data.

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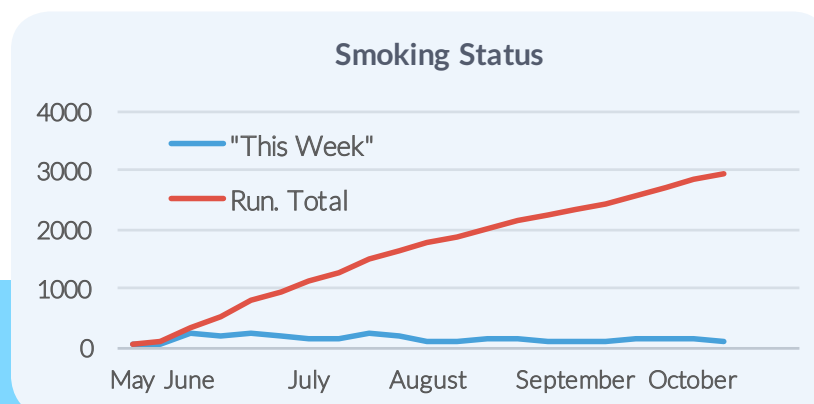
Using a tablet-based system that is integrated with the Electronic Medical Record (EMR), the Couchiching Family Health Team (FHT) recently conducted a pilot program to screen undiagnosed patients at risk for COPD. Patients were presented with a tablet at check-in allowing them to edit demographic information stored in their patient chart, complete an email consent form, and provide details on their smoking status.

Based on the patient's response to the smoking status inquiry, the tablet's rule-based system used a consistent algorithm to automatically determine if additional forms and screening tools should be presented to the patient. This included inquiring about the patient's desire to quit smoking, providing information about smoking cessation programs, presenting the Canadian Lung Health Test screening tool and completing the MRC dyspnea scale.

All data was self-reported by the patient in the waiting room or exam room, requiring an average of four minutes per patient. The results were automatically added directly to the patient chart in the EMR in real time, ensuring standardized, up-to-date patient charting without any increase in staff time or resources. Smoking status risk factor is auto updated in the EMR

By accessing the data generated by the patient responses in the EMR, clinic staff was able to clearly identify a patient's needs, coordinate care, direct resources (ie. program referral, spirometry, and billing) and communicate across health system partners with customized clinical notes.

Using this method, approximately 40% of the total patient population completed smoking screening in just 4-and-a-half months. This is a dramatic improvement over the previous, paper-based COPD screening process in which only 200 patients were screened at baseline.



Results at a Glance

~**3000** patients screened over **4.5** months

432 current smokers identified

33% increase in referral to smoking cessation program

CLHT administered to **1300** patients versus **45** in previous year

Almost **500** patients were identified as at risk for COPD with a positive CLHT requiring spirometry to confirm diagnosis

445% year over year increase in smoking cessation counselling billing (**169 vs 31**)

Email consent offered to **2556** patients

Average of over **3** demographic updates per patient

Average time of **4** minutes with tablet

*Patient population ~7500

For more information, please contact Dr. Greg Armstrong at j.g.armstrong@cfht.ca

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Patient Feedback

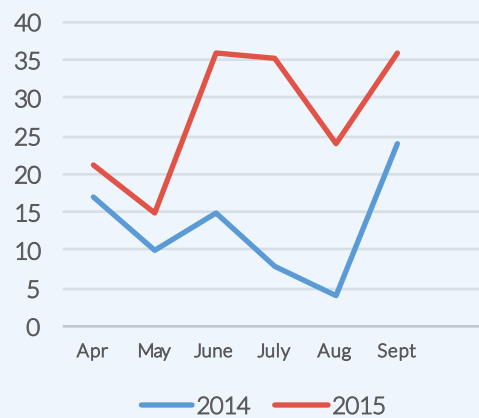
Patient feedback has been overwhelmingly positive. Younger patients are impressed by the use of technology and the non-invasive screening approach; older patients have stated they find the screening to be proactive, and cite ease of use as a benefit. A number of patients stated they never would have brought up smoking cessation with their physician but this initiative allowed them to obtain information in a private, non-judgmental and non-threatening manner.

Increased support for other programs

As a result of the significant findings, CFHT is expanding the tablet program to further identify and support individuals with other chronic diseases such as creating a more robust diabetes program, and utilizing tablet-based screenings for depression and suicidal ideation. The tablets have been shown to create a “safer environment” for individuals when faced with personal, or sensitive topics, which is in line with Dupont et al. (2009) findings.

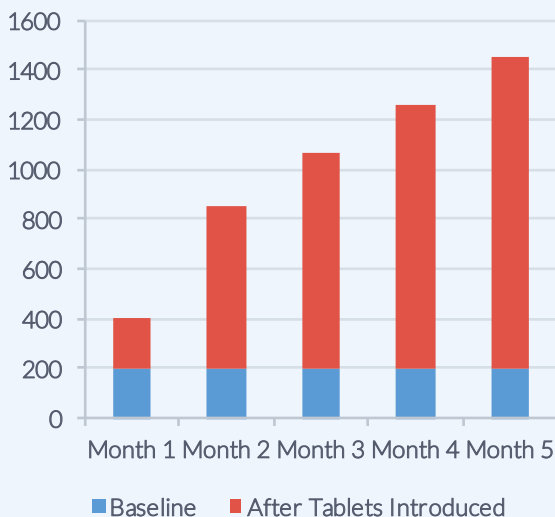
Dupont, A., Wheeler, J., Herndon, J. E., Coan, A., Zafar, S. Y., Hood, L., ... & Abernethy, A. P. (2009). Use of tablet personal computers for sensitive patient-reported information. *J Support Oncol*, 7(3), 91-7.

Smoking Cessation Referrals



Results were identified early on. The chart above showcases the significant increase in monthly referrals to the smoking cessation program at the FHT. The increased referrals were all from the physician office utilizing the tablet-based initiative.

Canada Lung Health Test



Canada Lung Health Test

The chart left showcases the increase in CLHT completed since inception of this initiative. At baseline, there were only 200 completed; however, within the first month alone, an additional 200 patients completed the test. Once an individual has a positive CLHT, the tablet prompts a MRC Dyspnea test. Physicians will then refer a patient for spirometry testing if identified as required.