Using Telehealth Solutions to Implement the Living Well with COPD (LWWCOPD) Program: A Success Story

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Who We Are

Aetonix: a leading Canadian technology firm, is changing lives daily with its virtual care platform, aTouchAway, which provides telehealth and remote patient monitoring to optimize connected health. Over 250 hospitals and tens of thousands of patients use Aetonix globally.

RESPIPLUS: a non-profit organization leading and managing the LWWCOPD program, will harness the power of aTouchAway to allow its large-scale delivery at the MUHC. LWWCOPD is, supported by +40 scientific publications and +20 years of national and international research.

Background

The role of technology in healthcare is evolving, including its use in COPD management. In many Canadian settings, health care professional (HCP) educators, nurses and respiratory therapists (RT), have an overwhelmingly high patient load which can affect patient care and quality of life. The Living Well with COPD (LWWCOPD) patient education program has been established as highly successful for the comprehensive management of COPD. As a preliminary step, we combined the LWWCOPD program with aTouchAway from Aetonix, a patient management platform, which promises to provide high-quality care in an efficient and innovative way.

Methods

The ORBIT model was used to adapt LWWCOPD into aTouchAway: Phase 1a-"Define" and Phase 1b-"Refine". The objectives were to define the basic elements of the platform, refine for efficiency, and identify acceptability by the intended clientele (HCP Educators and COPD patients). The design team included three LWWCOPD experts, one COPD nurse, and the Aetonix team. During informal focus groups with three RT and three COPD nurses, we obtained feedback for improvement. Using cognitive debriefing methodology and standard forms to obtain Patient feedback. Feedback from both groups was incorporated in the design of the resulting Platform using an iterative design.

Conclusion

This technology will simplify HCP tasks, increase efficiency, thus reducing healthcare utilization, and improve patient quality of care and support, through continuous automated follow-ups and personalized education. We are preparing Phase 2a-"Proof of concept" and Phase 2b-"Pilot Testing" with patients to obtain real life data and measure clinically significant outcomes.

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An All-Canadian Leap Forward in Respiratory Care Relief Of People With Copd And Those Who Care For Them

Results

Our solution will provide first class, personalized patient management to COPD patients at the MUHC. It is expected to have immediate results by improving quality of follow-up, allowing respite to overextended staff while enabling them to better care for their patients, which in turn will reduce hospital service uses (e.g. reduce readmissions, exacerbations and ER visits related to COPD) and costs to the system.

The use of this technological solution will greatly reduce the burden on the system by empowering patients to self-manage effectively, improving efficiency of follow up and outcomes such as unplanned clinical visits, ER visits and hospitalization.

Patients will benefit from the intuitive and highly adaptive platform to manage their disease safely and effectively alongside the health professionals and family members that support them. This approach will reduce isolation, risk, and poor outcomes for some of the most vulnerable populations who must absolutely be kept outside of the clinic for the foreseeable future.

Cost Reductions

- Reduce number of ER visits by patient.
- Reduce number of Hospitalizations by patient.
- Reduction of number of clinic visits.
- For post-discharge patients – reduce COPD Readmissions within 30 and 90 days post-discharge.

More efficient follow-up of patients with the dedicated resources and proper prioritisation of patients

- HCP can focus their efforts on patients who need it the most.

Satisfaction with the use of technology and improved care

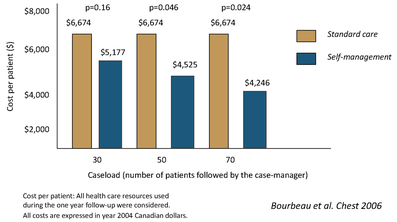
- Patient satisfaction with education provided via platform and response. to needs and improvements
- HCP satisfaction and burden reduction.

Who Can Benefit

Type of Clientele	Proposed solution
Frequent Flyers: Patients with multiple needs and comorbid conditions (3 or more ER visits and/or admissions in the past year).	Dedicated tablet (simplified version of the app and 3G plan). Monitor devices (oximeter). They will require a comprehensive education plan, and close respiratory follow-up.
High-risk patients: Patients with 1-2 ER visits and/or hospital admissions in the past year.	Bring your own device solution or dedicated tablet if needed. They will require a comprehensive education plan, and close respiratory follow-up.
Stable COPD Patients: Have 1-3 exacerbations a year, not requiring ER visits and/or hospitalization.	Bring your own device solution, with a personalized maintenance pathway as well as an automated respiratory follow-up.

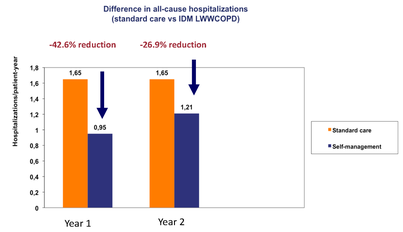
"Using the aTouchAway COPD Care Pathway, we have been able to support our patients at home with required respiratory and oxygen therapy, managing them safely and avoiding unnecessary hospital or clinic visits. ATouchAway proves to be effective in augmenting patient care while expanding team capacity and saving travel time for our organization"

-**Miriam Turnbull,** VP & GM at ProResp



Cost per patient: All health care resources used during the one year follow-up were considered. All costs are expressed in year 2004 Canadian dollars.

Bourbeau et al. Chest 2006



Additional Information

The LWWCOPD Pathway s a comprehensive management system. It includes 5 Pathways of care which educators can apply to a given patient (multiple pathways are allowed). Personalization is limitless: pathways can be adjusted to become more thorough or simplified, and their timing can be defined as needed (e.g. how many weeks of follow-up, how often the follow-up should be, how many sessions, etc.).

Patient needs evaluation	The needs evaluation makes use of the recommendations of the most recent guidelines, as well as standardized questionnaires. There is an in-depth evaluation available (2 sessions) as well as a simplified version (15 min) to allow for quick addition of patients.
Self-Management education	The patient can receive the important elements of the LWWCOPD program (4 education sessions). Alternatively, the nurse can choose only personalized content needed for the patient (1-2 education sessions).
Maintenance phase	This pathway is used to support patients in their long-term care. It includes reminders on their education plan, as well as the establishment of follow up sessions with their nurse when needed.
Respiratory Status follow-up	A pathway that is used to monitor patient symptoms, generate alarms as needed whenever an aggravation is detected, and prevent ER and unscheduled medical visits via the use of an Action Plan.
Post-Discharge follow-up	This pathway is used to closely monitor patients after being discharged, and prevent re-admissions. As soon as the patient is stable, they can be followed by other regular pathways.

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