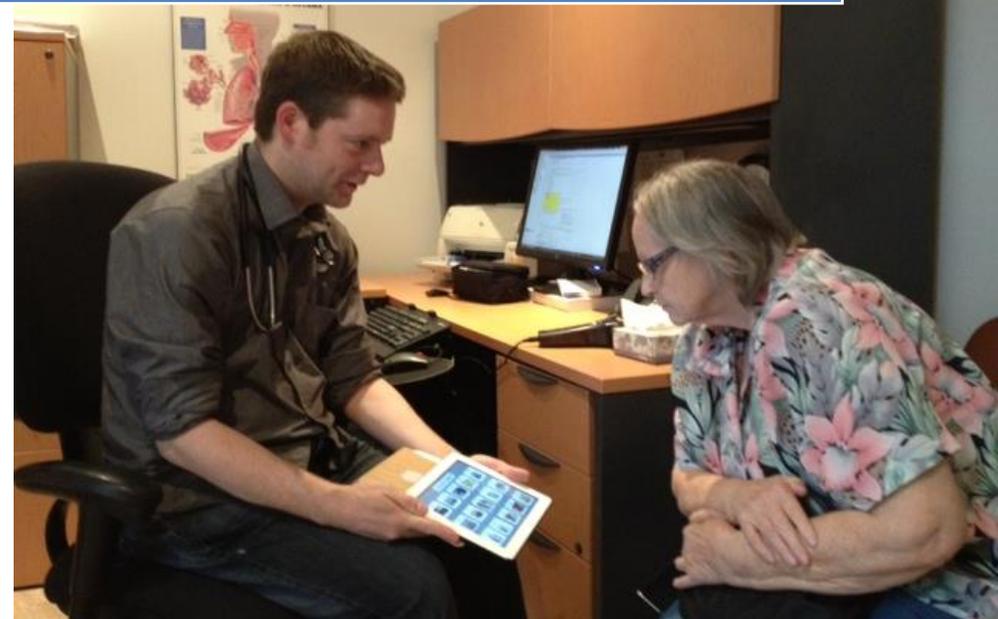


# Primary Care Lung Health Quality Improvement (QI) Guide



# Primary Care Lung Health Quality Improvement (QI) Guide

## How to Use this Document

This document was developed according to a growing need for support and resources for primary care lung health programs in the field of Quality Improvement (QI). In Ontario, QI has been at the forefront of a health care system reform across all sectors. Quality Improvement Plans (QIPs) have been implemented in the acute care sector and are currently being integrated into primary care. To support lung health programs within these primary care sites and the completion of QIPs, the Primary Care Asthma Program (PCAP) and the Lung Health Foundation made a decision to create a guide to facilitate the integration of QI as well as to spark ideas for lung health-related QI activities and areas of focus.

This document begins with a background on the PCAP model and the importance of QI in primary care. The Institute for Healthcare Improvement (IHI)<sup>1</sup> Triple Aim as a goal of system improvement as well as details surrounding the Model for Improvement<sup>2</sup> methodology - Aim, Measures, and Change are also included to facilitate the change management processes of primary care teams. The following table (Table 1) lists examples of aim statements, measures and change ideas that can be adapted at PCAP sites to implement a QI activity for lung health. These examples are given as guidance only. Specific benchmarks (including provincial targets) are not included in this document as QI involves multiple tests of change to reach a benchmark/goal. It is recommended that each site select benchmarks that are scalable and feasible and aligned to regional and provincial targets. Although this guide was created to be implemented at PCAP sites, the information and the examples of QI activities can be adopted for any lung health program in primary care.

## Please note:

**Permission & Proper acknowledgement is required in any modification of the PCAP Tools as per PCAP process.**

# Primary Care Lung Health Quality Improvement (QI) Guide

## Primary Care Lung Health QI Guide

### Introduction:

The Primary Care Asthma Program (PCAP) is an evidence-based, standardized lung health program intended to provide primary care providers with decision aids and tools to support best practice regarding asthma and COPD assessment, diagnosis and management. The program is supported by the Ontario Lung Association and funded by the Ministry of Health and Long-Term Care under Ontario's Asthma Program. PCAP began as a pilot research project in 8 primary care sites from January 2003-March 2005, to evaluate whether a standardized primary care asthma program, based on the latest CTS Asthma guidelines<sup>3</sup>, will improve asthma management and asthma-related health outcomes. There was a positive improvement in asthma control and a decrease in hospital utilization for asthma in the sites that had the PCAP pilot program model in place<sup>4</sup>. After the pilot, PCAP expanded to 12 site coordinators and sites (including their satellite sites) where the program has been fully-implemented and the use of the model continues to expand to primary care sites implementing a lung health program.

To continue to measure the success of the program and to demonstrate that this program improves outcomes in asthma and chronic respiratory disease management, a focus needs to be placed on continuous quality improvement (CQI). The purpose of this QI Guide is to support PCAP sites in the application of the CQI process and to ensure continual adherence to best practice and alignment with Ontario's Chronic Disease Prevention and Management (CDPM) framework<sup>5</sup>, Health Quality Ontario's (HQO) quality dimensions for a high-performing health system<sup>6</sup> and Ontario's Action Plan for Health Care<sup>7</sup>. This QI Guide can also be used by any primary care site implementing a lung health program and interested in carrying out QI activities. PCAP CQI activities will be based on the Triple Aim framework (the three dimensions are Population Health, Experience of Care and Per Capita Cost)<sup>8</sup>, adapted from the Institute for Healthcare Improvement (IHI) to achieve quality care addressing the growing issue of chronic respiratory diseases in Ontario.

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This guide is based on the main principles of QI methodology which are briefly described below.

## **Quality Improvement Methodology:**

QI is defined as the combined and unceasing efforts of everyone – to make the changes that will lead to better patient outcomes (health), better system performance (care) and better professional development (learning) (Adapted from Batalden and Davidoff, 2007).

QI can often be confused with quality assurance (QA)/evaluation as they both involve measurement. The purpose of QA is to measure current system performance/outcomes and compare it to standards whereas QI involves bettering the system regardless of the system performance at that point in time. Other differences between QI and QA are represented in the Table 1 below.

**Table 1: Comparison of QI and QA/evaluation**

	<b>Measurement for Learning and Process Improvement - QI</b>	<b>Measurement for Accountability or Comparison – QA/Evaluation</b>
Purpose	To bring new knowledge into daily practice	Comparison, choice, reassurance, spur for change
Tests	Many sequential, observable tests	No tests
Biases	Stabilize the biases from test to test (accept consistent bias)	Measure and adjust to reduce bias
Data	Gather "just enough" data to learn and complete another cycle (small sequential samples)	Obtain 100% of available, relevant data
Determining if change is an improvement	Run charts or control charts	No change focus

Source: Provost, L. & Murray, S.. (2007). "The Data Guide: Learning from Data to Improve Health Care." Associates in Process Improvement and Corporate Transformation Concepts. Provided by the University of Toronto Quality Improvement Program, Department of Family and Community Medicine

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## **Triple Aim Framework\*:**

The Triple Aim includes 3 components (**Note:** To see a detailed description of the Triple Aim framework, please refer to the Appendix A at the end of this document)

**Table 2: Alignment between PCAP vision and the Triple Aim Framework**

PCAP vision	Triple Aim Approach (IHI) / Triple Aim Approach (Health Council of Canada and HQO)
“ To support the prevention and management of chronic disease “	Population Health/Better Health
“To deliver asthma care to Ontarians, in collaboration with other providers that is interdisciplinary, evidence-based, patient-centred, accountable and sustainable”	Experience of Care/Better Care
“To support health care system changes from one that is designed for episodic, acute illness, to one that will support the prevention and management of chronic disease.”	Per Capita Cost/Better Value

\*The triple aim approach has been adopted by several LHINs in Ontario and is recommended by the Health Council of Canada<sup>9</sup> as a future approach to achieving a high-performing health system in Canada. It has also been used as a foundation for Health Quality Ontario’s bestPATH initiative<sup>10</sup>.

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## Model for Improvement: Description<sup>2</sup>

The Model for Improvement (Figure 1) has been recommended to be used by PCAP sites as a guiding component of the quality improvement initiatives. The model for improvement helps the primary care teams focus on what they aim to accomplish, improve and change. There are three fundamental questions that guide the improvement journey. Please see the description for the 3 Phases: Aim, Measure and Change (QI initiative) in the Appendix A at the end of this document.

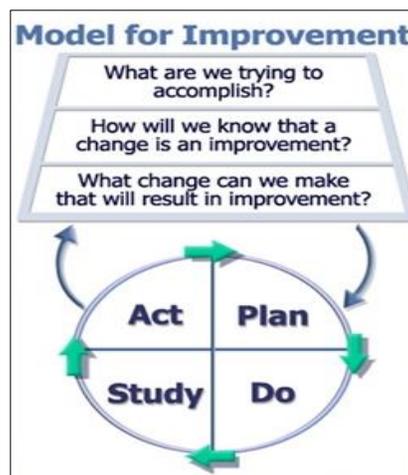


Figure 1: The Model for Improvement<sup>11</sup>

## PCAP CQI Aims, Measures and Change Ideas:

The aims and measures within each suggested QI initiative are developed according to the Primary Care Asthma and COPD Generic Program Standards (GPS)<sup>12</sup> (Please see Appendix C to view the GPS). Examples of the PCAP QI initiatives might include, but are not limited to the activities presented in Table 3. Each PCAP site is advised to formulate their own aim statements and specify the magnitude and time-frame for the QI activities to be implemented at their site.

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It is important that the PCAP site understands QI priorities at their primary care site and LHIN to ensure proper alignment and coherence. In the table outlining the suggested QI initiatives, an alignment is made between the broader aims and the nine quality dimensions for a high-performing health system by Health Quality Ontario (blue boxes within the aims in Table 3). For a detailed description of the nine quality dimensions, refer to the Appendix A at the end of the document. In the case where an aim has more than one relevant dimension, additional ones are listed after the main one. Sites do not have to conduct QI activities focusing on all of these dimensions during a given year (e.g., sites may choose to implement QI initiatives focusing on one or two dimensions for year one and then choose to focus on others during the following years). It is important that aim statements are determined before setting measures and change ideas. Aim statements should be focused and indicate “How much, by when” using the SMART (Specific, Measurable, Achievable, Realistic, Timely) approach. Examples of specific aim statements are given in Appendix B. The example aim statements in Appendix B are given as guidance only to show how aim statements could be formulated (actual aim statements should be developed by the sites for each QI initiative).

The following examples of broader aims in Table 3 identify potential targets for quality improvement. The subsequent measures are the outcomes that are achieved through the process of quality improvement based on the aim. After the aims have been identified and the measures established, sites need to identify specific actions to improve quality through change (develop change ideas). Change concepts are broader theories compared to change ideas and can illicit many change ideas. Success indicators should be developed

To assist sites with the incorporation of various lung health-related QI initiatives as part of the QIP for a respective fiscal year, an example of a QIP containing sample QI initiatives has been created to support application.

### **Benchmarking:**

The proposed targets for the CQI aims listed in the table below are reaching for a general benchmark, however, each site could establish a more scalable and feasible target that can be adjusted over time (e.g., as a first-step aiming for 30% and then once this is achieved, adjusting the target to 50% and so on).

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In order to identify QI opportunities, it is important to understand the current environment of the health-care system in your LHIN/region/primary care site. The checklist below could help during the process of establishing your QI priorities.

## **Defining your Primary Care Site and LHIN**

- Learn about the Asthma and COPD prevalence in your LHIN/region and related health care utilization
- Learn about the health care priorities of your LHIN (“Integrated Health Services Plan<sup>13</sup>”) and community/primary care site (Community needs assessment)
- Understand the activities your LHIN is doing and how, as the PCAP site coordinator, you can get involved and align PCAP towards the same goal for improving chronic disease management
- Be familiar with the QIPs at your primary care site (“Quality Improvement Plan for Health Care Organizations in Ontario<sup>14</sup>”) and integrate lung health-related QI initiative within those plans
- If possible, get involved with the chronic disease management/Health Links committees within your LHIN as appropriate.
- Become familiar with the role of your site in the local hospital and community Quality Based Procedure (QBP) activities

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**Table 3: Examples of PCAP/lung health-related QI Initiatives:**

Population Health/Better Health				
EQUITY				
Aims	Measures	Change concepts (examples)	Change ideas (examples)	Success indicators
<p>1. Improve quality of life for the patient living with chronic lung disease</p> <p><b>Patient-Centredness</b></p>	<p>Improvement in the quality of life score measured by the Asthma Quality of Life (QoL) Questionnaire (mini-AQLQ/PAQLQ)<sup>15</sup> for asthma and the COPD Assessment Test (CAT)<sup>16</sup> score for COPD.</p>	<p>Enable the person to take a central role in their health and in managing their chronic conditions and empower them to acquire and sustain healthy living</p>	<p>a) Implement an evidence-based patient QoL survey (e.g., mini-AQLQ, CAT score)</p> <p>b) Develop a patient-specific plan of care for asthma and/or COPD</p> <p>c) Train all Certified Respiratory Educators (CREs) in Motivational Interviewing (MI) skills</p>	<p>Patients with asthma and COPD have improvement in their quality of life and disease management skills (e.g., For COPD, CAT score decreased by 2 units from baseline in 6 months)</p>
<p>2. a) Increase the number of asthma and COPD patients receiving annual influenza vaccinations</p> <p>b) Increase the number of COPD patients receiving pneumococcal vaccinations every 5-10 years</p> <p><b>Focus on Population Health</b></p>	<p>Increased number of patients with asthma and COPD receiving influenza and pneumococcal vaccinations</p> <p>% of identified patients with asthma and COPD in the roster who have received flu vaccinations in the last year</p>	<p>Provide optimal management of chronic and preventative care</p>	<p>a) Develop an alert system for influenza and a pneumococcal vaccinations</p> <p>b) Train CREs/regulated health-care professionals to administer vaccinations</p>	<p>Patients have access to and receive vaccinations as per best practice guidelines</p>

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Population Health/Better Health				
EQUITY				
Aims	Measures	Change concepts (examples)	Change ideas (examples)	Success indicators
<p>3. Improve screening for patients at risk for COPD</p> <p><b>Focus on Population Health/Effectiveness</b></p>	<p>Increased percentage of smokers and ex-smokers who are screened using evidence-based resources and tools</p>	<p>Provide optimal monitoring and management of chronic and preventative care</p>	<p>Implement the Canadian Lung Health Test, the Lung Health Check and/or spirometry as per the guidelines</p>	<p>Percent of patients at risk for COPD who are screened</p>
<p>4. Use objective measurements (e.g., spirometry) for asthma and COPD diagnosis (GPS #6)</p> <p><b>Focus on Population Health/Effectiveness</b></p>	<p>All patients greater than 6 years of age will receive spirometry testing to help confirm a diagnosis of asthma and/or COPD.</p>	<p>Provide optimal monitoring and management of chronic and preventative care</p>	<p>Implement spirometry testing according to the PCAP spirometry manual (<a href="http://hcp.lunghealth.ca/clinical-tools">hcp.lunghealth.ca/clinical-tools</a>)</p>	<p>Patients are objectively diagnosed for asthma and/or COPD</p>

# Primary Care Lung Health Quality Improvement (QI) Guide

Population Health/Better Health				
EQUITY				
Aims	Measures	Change concepts (examples)	Change ideas (examples)	Success indicators
<p>5. Improve smoking cessation rates and/or counselling/interventions among asthma and COPD patients who are smokers</p> <p><b>Focus on Population Health/Effectiveness</b></p>	<p>a) All asthma and COPD patients who are smokers will receive support and/or advice on smoking cessation (GPS #12)</p> <p>b) Increased percentage of asthma or COPD patients who are smoke-free at their most recent visit.</p>	<p>Adopt a smoking cessation culture at the primary care site</p>	<p>a) Adopt an evidence-based model for smoking cessation (e.g., Ottawa model, STOP program)</p> <p>b) Develop a system to identify smokers at your primary care site and offer Minimal Contact Intervention (MCI) and/or resources available within the community</p>	<p>Patients receive smoking cessation support at every point of care within the primary care site and are smoke-free at their most recent visit</p>
<p>6. Improve access to community resources to help patients live well with chronic lung disease</p> <p><b>Integration/Patient-Centredness</b></p>	<p>Increased number of PCAP clients accessing community resources on healthy living (e.g., dietician, mental health worker, exercise programs, etc.)</p>	<p>Integrate community-based resources into the primary care practice or team (for both healthy living and chronic disease management)</p>	<p>Creation of a community-based resource template that could be populated by each PCAP site to list their own community-based resources</p>	<p>PCAP patients are accessing community resources on healthy living</p>
<p>7. Increase the number of referrals to the PCAP educator/CRE</p> <p><b>Access/Integration/Patient-Centredness</b></p>	<p>All patients with Asthma and COPD in the primary care practice will be referred to a Certified Respiratory Educator (CRE)</p>	<p>Improve coordination of care within the primary care site</p>	<p>a) Establish a process to identify asthma and COPD patients in the primary care practice and connect them to the PCAP educator/CRE</p> <p>b) Promotion of PCAP and the role of the CRE through team meetings</p>	<p>All asthma and COPD patients in the practice will be referred to the PCAP educator/CRE</p>

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Experience of Care/Better Care				
EQUITY				
Aims	Measures	Change Concepts (examples)	Change ideas (examples)	Success Indicators
<p>1. Improve access to timely respiratory care</p> <p><b>Access</b></p>	<p>Timely access to respiratory care when needed</p>	<p>Improve access to after-hours respiratory care</p>	<p>Establish an evening respiratory clinic once/week</p>	<p>Patients have access to extended-hours respiratory care and are accessing these services when needed</p>
<p>2. Improve patient engagement in their asthma and COPD care and support patient self-management through written action plans (GPS #4)</p> <p><b>Patient-Centredness/ Effectiveness</b></p>	<p>a) Improved patient experience of care</p> <p>b) All patients with asthma and COPD have received a written action plan</p> <p>c) Patients with asthma and COPD are confident in activating the written action plan to manage their disease</p>	<p>Empower self-management skills through a respectful and understanding environment</p>	<p>a) Implement a dedicated “question period” time for the patient</p> <p>b) Implement a case scenario with the patient to ensure the patient knows how to properly use their action plan</p> <p>c) Implement a conviction and confidence ruler as part of self-management education</p>	<p>a) Patients with asthma and COPD will be an integral part in their care by providing input in establishing their health goals and being involved in their respiratory disease management</p> <p>b) Patients will understand how to activate their action plans and self-management skills</p>
<p>3. Improve integration and coordination with community resources for chronic disease management (e.g., CCAC, community support groups, home care agencies, etc.)</p> <p><b>Integration/Patient-Centredness/Effectiveness</b></p>	<p>The care plans for all patients needing community and home care services will be communicated between the PCAP educator/CRE and the service providers</p>	<p>Provide optimal monitoring and management of chronic preventative care</p>	<p>Develop and implement a communication system with local community and home care service providers to arrange primary care follow-up</p>	<p>Patients are accessing services within the community when needed and follow-up is being done at the primary care site</p>

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Experience of Care/Better Care				
EQUITY				
Aims	Measures	Change Concepts (examples)	Change ideas (examples)	Success Indicators
<p>4. Improve the utilization of clinical decision support tools (e.g., asthma and COPD Care Maps) by primary care providers (GPS #1)</p> <p><b>Effectiveness/Appropriate Resources</b></p>	<p>All primary care providers involved with asthma and COPD care will make use of the patient's decision support tools</p>	<p>Provide optimal monitoring and management of chronic preventative care</p>	<p>a) The CRE implements the CTS guideline-based Care Maps for management of asthma and COPD</p> <p>b) Conduct a chart audit to assess the usability and effectiveness of asthma and COPD Care Maps</p>	<p>Decision support tools are used to support best practice for asthma and COPD management</p>
<p>5. Improve coordination and integration of health services with various providers working as part of the interdisciplinary team</p> <p><b>Integration/Access</b></p>	<p>Increase the number of internal referrals to other interdisciplinary providers within the primary care site as appropriate (e.g., Registered Respiratory Therapists, dieticians, physiotherapists, chiropractors, diabetes educators, pharmacists, etc.)</p>	<p>Improve coordination of care within the primary care site</p>	<p>Create a referral process within the primary care site allowing the PCAP educators/CREs to refer to other interdisciplinary providers within the team</p>	<p>Patients with asthma and COPD will have access to the interdisciplinary providers within the primary care team when needed</p>
<p>6. Improve follow-up care with PCAP educators/CRE post-hospital/ER discharge for people who experienced asthma/COPD exacerbations</p> <p><b>Integration</b></p>	<p>a) Decrease the number of readmissions (within 30 days of discharge from hospital) for patients with asthma and COPD</p> <p>b) Decrease the number of ER readmissions (within 30 days) for patients with asthma and COPD</p>	<p>Provide optimal monitoring and management of chronic and preventative care</p>	<p>a) Implement a communication system within the primary care site and the hospital to have timely access to ER/hospital discharge summaries</p> <p>b) Implement an automatic referral system to the PCAP educator/CRE post discharge</p>	<p>Communication system is in place to improve follow up care for asthma and COPD patients after hospital discharge</p>

# Primary Care Lung Health Quality Improvement (QI) Guide

Per Capita Cost/Better Value				
EQUITY				
Aims	Measures	Change Concepts (examples)	Change ideas (examples)	Success Indicators
<p>1. Decrease the number of hospitalizations/emergency department/urgent clinic* visits for asthma and COPD</p> <p>*urgent clinic: walk-in clinic, unscheduled physician visits or after-hours urgent care clinics</p> <p><b>Access/Integration/Effectiveness</b></p>	<p>a) Reduction in the number of emergency department visits by people with Asthma and COPD.</p> <p>b) Reduction in the number of hospitalizations for people with Asthma and COPD</p> <p>c) Reduction in the number of urgent clinic visits by people with Asthma and COPD.</p>	<p>Use information management systems to assist in the development of a proactively-planned care approach</p>	<p>Establish an identification system flagging high risk asthma and COPD patients (e.g., people with multiple co-morbidities such as mental illness, addictions, other chronic conditions)</p>	<p>Reductions in urgent health care utilization for patients with asthma and COPD</p> <p>An identification system is in place to provide information on high-risk asthma and COPD patients</p>
<p>2. Improve the number of “no shows” for the PCAP program</p> <p><b>Efficiency/Appropriate Resources</b></p>	<p>A reduction in the number of no shows for PCAP appointments</p>	<p>Improve the efficiency of human resources</p>	<p>a) Establish an identification system within the primary care site to remind patients about upcoming appointments with the PCAP educator/CRE</p> <p>b) Create a survey for patients to identify barriers to access to the program</p>	<p>Patients are coming to all scheduled PCAP appointments</p>

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The change ideas selected for testing at each site need to be aligned with the aim that is set and the corresponding measure. An example QIP is illustrated in Table 4 with aims, measures and change ideas related to lung health. Once the change ideas have been discussed and identified at the site level, the QI activities need to be outlined including process improvement (activities to change existing practices and processes), skills development (activities related to training and knowledge translation) and incentives/motivation (encouraging activities to acknowledge successes and champions) to implement the change. To test, potentially implement and evaluate each QI change, the utilization of the Model for Improvement Plan-Do-Study-Act (PDSA) cycle is recommended (Please refer to Appendix A for details of the PDSA cycle).

There are various examples of QI activities listed in Table 3 to spark ideas for your site. In order to align lung-health related QI activities with your site-wide QIP, the chosen activities could be incorporated within the template provided by HQO<sup>17</sup> (please refer to the example QIP in Table 4 below).

**Table 4: Example of QI initiatives incorporated in a QIP**

Primary Care Quality Improvement Plan Template									
[Fiscal Year]									
Aim		Measure				Change			
Quality Dimension	Objective	Measure/Indicator	Current Performance	Target for (fiscal year)	Target Justification	Planned improvement initiatives (Change Ideas)	Methods and process measures	Goals for change ideas	Comments
<b>Access</b>	Improved access to timely respiratory care when needed	<b>Increased access:</b> Patients have timely access to a Certified Respiratory Educator (CRE) when needed	current performance defined by the site	Begin data collection through existing tools (e.g., patient experience survey)	to be defined by the site	a) Start data collection: Implementing a patient experience survey  b) Improve access to after-hours respiratory care by establishing an	Implement patient experience survey. Distribute survey to identify the need for increased access	Establish an evening respiratory clinic once/week	

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Primary Care Quality Improvement Plan Template									
[Fiscal Year]									
Aim		Measure				Change			
Quality Dimension	Objective	Measure/Indicator	Current Performance	Target for (fiscal year)	Target Justification	Planned improvement initiatives (Change Ideas)	Methods and process measures	Goals for change ideas	Comments
						evening respiratory clinic			
<b>Integrated</b>	Timely coordination of primary care follow-up appointments post-discharge through communication with hospital(s) and other appropriate providers (e.g., CCAC, community support groups, telehomecare, etc.)	Primary Care Lung Health Program - Asthma or COPD patient post discharge follow-up: Decreased number of readmission rates for patients with asthma and COPD within 30 days of discharge after an exacerbation	hospital admission rates for asthma and COPD obtained through EMR, Ministry of Health and Long-Term Care (MOHLTC) or Association of Ontario Health Centres (AOHC) metrics for region	Increased follow up (30%) of asthma and COPD patients discharged from ER and after hospital admission from baseline value	to be defined by the site (e.g., increased follow-up visits by 30% of the baseline)	a) Develop and implement referral process to follow-up with a CRE for all Asthma and COPD patients being discharged from hospital and ER  b) Implement a communication system between the primary care site and the hospital to have timely access to ER/Hospital discharge record/summary	•Meet with hospital ER manager, Ward Clerk and Nurse, CCAC services to develop a process for referral to the CRE  •Establish an intake process for hospital referrals and educate and train site and Clinic staff on its implementation  •Develop and implement a communication system between	•Develop referral/intake processes by _____  •Primary Care site to receive discharge record on all asthma and COPD patients discharged from hospital and ER  •Develop a communication system by _____	

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Primary Care Quality Improvement Plan Template									
[Fiscal Year]									
Aim		Measure				Change			
Quality Dimension	Objective	Measure/Indicator	Current Performance	Target for (fiscal year)	Target Justification	Planned improvement initiatives (Change Ideas)	Methods and process measures	Goals for change ideas	Comments
							the primary care site and the hospital		
<b>Patient-Centred</b>	Receiving and utilizing feedback regarding patient/client experience with the primary care lung health program	<b>Patient/client engagement:</b> How often are you involved to the extent that you want to be in decisions related to your care? Patients with asthma and COPD have a written action plan and are confident in using it to manage their disease	current performance defined by the site	Establish a site baseline or annual target based on available site-specific data from previous year	to be defined by the site	a) Implement patient experience survey including questions related to the lung health program to obtain baseline or monitor the current performance b) Develop and implement a case scenario (based on the Teach-back Method) with the patient to ensure they know how to properly use their action plan c) Implement a conviction and confidence ruler as part of self-management	•Obtain and analyze results from patient survey data •Develop and implement case scenario questions with asthma and COPD patients to evaluate their knowledge on self-management skills •Train the CRE in Motivational Interviewing (MI)	•Complete patient experience survey •All patients diagnosed with asthma and/or COPD will have a written action plan	

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Primary Care Quality Improvement Plan Template									
[Fiscal Year]									
Aim		Measure				Change			
Quality Dimension	Objective	Measure/Indicator	Current Performance	Target for (fiscal year)	Target Justification	Planned improvement initiatives (Change Ideas)	Methods and process measures	Goals for change ideas	Comments
						education			
		<b>Opportunity to ask questions:</b> When you see your CRE, how often do they encourage you to ask questions?	current performance defined by the site			Implement patient experience survey including questions related to the lung health program to obtain baseline data or monitor the current performance	Obtain and analyze results from patient survey data	•Complete patient experience survey •Patients with asthma and COPD will be an integral part in their care by providing input in establishing their health goals and being involved in their respiratory disease management	
		<b>Having enough time:</b> When you see your CRE, how often do they spend enough time with you?	current performance defined by the site			Implement patient experience survey including questions related to the lung health program to obtain baseline data or monitor the current performance	Obtain and analyze results from patient survey data	Complete patient experience survey	

# Primary Care Lung Health Quality Improvement (QI) Guide

## **Conclusion:**

This Primary Care Lung Health QI Guide is intended to be used as a guiding tool to facilitate CQI processes for all PCAP sites as well as any primary care site with a lung health program. The aims, measures and change ideas presented in the document are general recommendations that need to be adjusted according to site-specific clinical circumstances and processes. The benchmarks for these examples of aims and measures listed in this document have not been specified and have been kept general. This was done because QI involves multiple tests of change to eventually reach a benchmark/goal. Each benchmark specified should be scalable and feasible for individual sites. In addition, the proposed CQI change concepts and ideas should be integrated with site-specific QI plans as well as a broader LHIN QI agenda.

## **Approvals:**

Approved by PCAP Coordinators: November 2014

Final Approval by PCAP Executive: November 2014

## **Acknowledgements:**

- PCAP: Coordinators, Executive and Advisory
- Lung Health Foundation
- Trish O'Brien, Quality Improvement Program, University of Toronto Family and Community Medicine (Reviewer)
- Sandie Seamann, Health Quality Ontario (Reviewer)
- Shawna Cunningham, Health Quality Ontario (Reviewer)
- Sue Jones, Health Quality Ontario bestPATH QI Coach, PCAP Advisory member

## **Resources:**

Lung Foundation website: [lunghealth.ca](http://lunghealth.ca)

Health Quality Ontario Quality Compass: <http://qualitycompass.hqontario.ca/>

The Institute for Healthcare Improvement (IHI): <http://www.ihf.org/Pages/default.aspx>

The University of Toronto Department of Family and Community Medicine Quality Improvement: <http://www.dfcu.utoronto.ca/programs/quality.htm>

IDEAS Ontario - QI courses for Health Care Professionals: <http://www.ideasontario.ca/>

OASIS Asthma Surveillance database: current asthma statistics in Ontario: <http://www.sickkids.ca/Research/OASIS/>

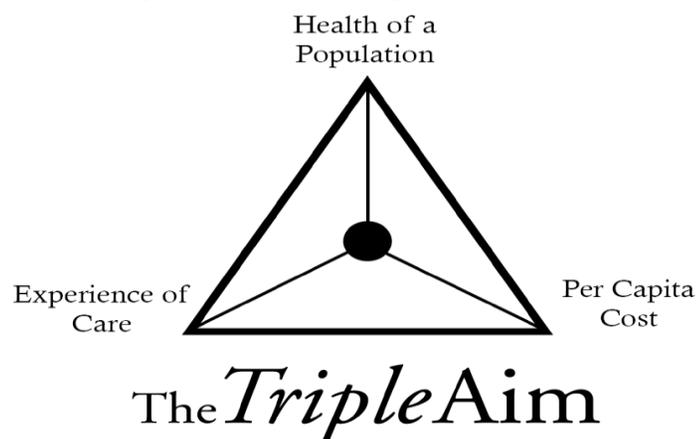
# Primary Care Lung Health Quality Improvement (QI) Guide

## Appendix A:

### Triple Aim Framework<sup>8</sup>:

The Triple aim framework was originally developed by the Institute for Healthcare Improvement (IHI)<sup>1</sup>.

1. **Population Health:** Improving health of the defined population
2. **Experience of Care:** Enhancing the patient care experience (including quality, access, reliability)
3. **Per Capita Cost:** Reducing or at least controlling the per capita cost of health care



**Note:** The framework, initially developed by IHI<sup>1</sup> and adopted by the Health Council of Canada, has an additional overarching element which is defined as “Equity.” Equity for primary health-care is achieved when “all individuals are able to access a primary health-care provider or team when they require care, regardless of who they are or where they live in Canada.”<sup>6</sup> In addition, Equity is defined as a one of Health Quality Ontario’s quality attributes for a high-performing health system and is placed as a cross cutting domain in the Primary Care Performance Measurement Framework (June 2013) developed by Health Quality Ontario<sup>18</sup>. Equity will be used in this QI Guide as an overarching element for all of the aims defined.

The proposed activities listed in this QI Guide are also aligned with Health Quality Ontario’s Quality Framework and Nine Quality Attributes of a High-performing Health System<sup>3</sup> (Please see Table 1 in Appendix):

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**Table 1: HQO Nine Quality Dimensions to a High-Performing Health-Care System<sup>6</sup>:**

<b>1. Accessible</b>	People should be able to get timely and appropriate care for best possible health outcomes
<b>2. Effective</b>	People should receive care that is based on best practice in scientific evidence
<b>3. Safe</b>	People should receive care that is void of mistakes and accidents
<b>4. Patient-Centred</b>	Healthcare providers should offer services that meet the needs and preferences of the individual
<b>5. Equitable</b>	All people should get the same quality of care
<b>6. Efficient</b>	Continual evaluation by the health system should be done to reduce waste
<b>7. Appropriately Resourced</b>	The health system should have the appropriate number of staff, information, equipment, supplies and facilities to meet the needs of the population
<b>8. Integrated</b>	All parts of the health system should be organized and coordinated to collaborate with one another to provide the best care
<b>9. Focused on Population Health</b>	The health system should work to prevent illness and improve health for all people in Ontario

**Table 2: The Model for Improvement<sup>2</sup>:**

<b>Model for Improvement</b>	
<b>Phase 1: Aim</b>	What are we trying to accomplish? What are the PCAP QI goals?
<b>Phase 2: Measure</b>	How will we know that a change is an improvement? How will the success of the PCAP QI activity be measured?
<b>Phase 3: Change</b>	What change can we make that will result in improvement of the delivery of the PCAP model and result in better asthma and COPD management in primary care?

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## Phases of Improvement<sup>2</sup>:

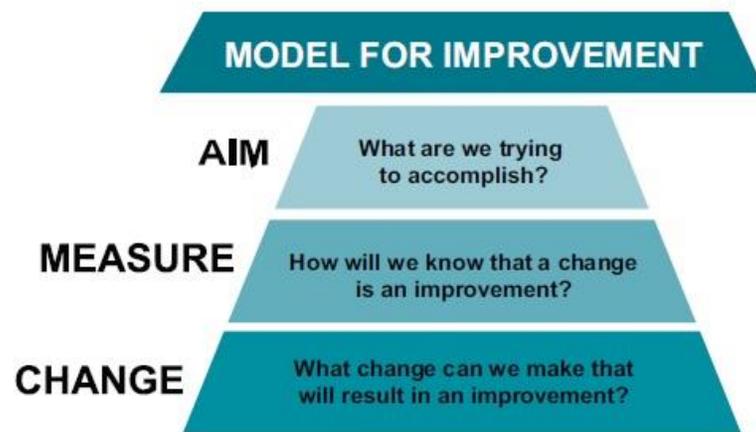


Figure 1: The Model for Improvement (HQP)<sup>2</sup>

### Phase 1: Aim

The aim should be clear, time-specific, stretchable and valuable to patient (SMART approach)

**Clarity:** a clear, specific aim should share how much the QI initiative will change something (i.e. aiming to decrease wait times by 50%).

**Time-Specific:** The aim should outline when the goal will be achieved

**Stretchable:** The aim should stretch/reach far enough to justify your investment (i.e. an incremental change such as 20% of patients having a written action plan to aiming for 25% of your asthma patients having an asthma action plan may not be significant enough to justify the investment made).

**Real Value:** The aim should be geared towards the expectation and needs of the patient.

### Phase 2: Measure

There are 4 types of measures that can be used to support and ensure the aims are achieved

1. **Outcome Measure:** What are the end results of the PCAP QI work? Examples include reduction in exacerbation for patients diagnosed with asthma
2. **Process Measures:** What steps have been created to support change in existing PCAP processes? Examples include an increase of the percentage of PCAP site primary care providers who are familiar with the latest CTS guidelines for asthma management that contributes to best practice for the PCAP education program being delivered

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3. **Balancing Measures:** When a PCAP QI change is implemented, does it also adversely affect other parts of the primary care site? For example, does the QI change improve staff satisfaction but decrease client satisfaction?
4. **Plan-Do-Study-Act (PDSA) measures:** Through trials and tests at each stage of the improvement process (PDSA cycle), measures are collected to understand the effect of each change. For example, if a PCAP site would like to create a notification system in their EMR system reminding the receptionists to call the patients for their appointments to reduce “no show” rates, success (amount of no show rates) is measured at each stage of implementation to see how successful the alert system is.

## Phase 3: Change

After the aims have been identified and the measures established, PCAP sites need to identify specific actions to improve quality through change (Develop a change concept). According to IHI, a change concept is “a general notion or approach to change that has been found to be useful in developing specific ideas for changes that lead to improvement.” Change concepts are broader theories compared to change ideas and can have many change ideas under them. For example, to improve access to asthma care and education (change concept), a change idea could be to have the respiratory educator work 12pm-8pm vs. 8am-4pm for those patients who cannot get an appointment due to work hours or establish a late evening asthma clinic once/week.

There may be times where a change idea does not exist from evidence and so the PCAP QI activity can start off with a change concept. These concepts will help generate ideas for testing to create change and could be related to reducing waste, standardization and/or improving work flow. For example, if a PCAP site wants to improve work flow, a resulting change idea could be to integrate the asthma and COPD care map into the EMR system to improve efficiency in practice.

## The Plan-Do-Study-Act Cycle (Tool to implement “CHANGE”)<sup>2</sup>

PDSA cycles are a part of the QI journey which consists of the following phases: Getting Started, Defining the Problem, Understanding Your System, Designing and Testing Solutions, Implementing and Sustaining Changes and Spreading Change. Figure 2 below shows the phases of the QI journey as depicted by HQO<sup>2</sup> indicating where the PDSA cycles should be run along the journey.

The following steps describe a standard PDSA cycle.

### **Step 1: Plan (Who, What, Where, When and Why)**

- State the purpose of the PDSA cycle: are you developing a change idea, testing a change or implementing a change?
- What is your change idea/concept?

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- What indicator(s) of success will you measure?
- How will data on these indicators be measured?
- Who are the subjects of the testing?
- How many subjects will be tested and over what time period?
- What are the predictions/hypotheses of what will happen with the test?

## Step 2: Do

- Conduct the test
- Document the results, measurement, challenges, and unintended consequences

## Step 3: Study

- Analyze the data and study the results
- Compare the data to your prediction
- Summarize and reflect what was learned

## Step 4: Act

- Refine the change idea/concept based on lessons learned from the test
- Prepare a plan for the next test. Dependent on results, the idea should be adopted, adapted or abandoned

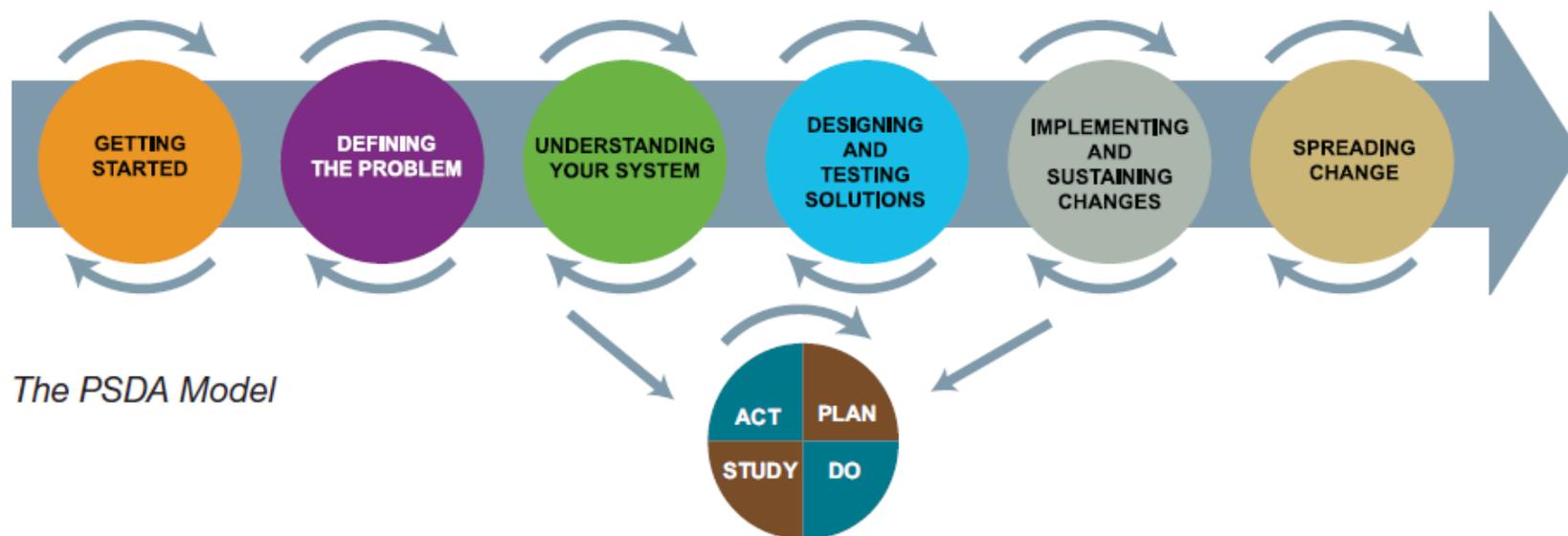


Figure 2: The Phases of the QI Journey (HQO)<sup>2</sup>

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## Appendix B:

### Example of Aim Statements (How much, by when):

1. Improve the AQLQ score by 0.5<sup>19</sup> on the 7-point scale within one year for X population.
2. We aim to improve the flu vaccination rates by 50% from the previous year
3. We aim to have 50% of smokers/ex-smokers in the clinic roster screened using the Canadian lung health test within one year
4. We aim to improve the percentage of patients  $\geq 6$  years of age who have “asthma” indicated on their EMR/medical chart to have spirometry testing done for diagnosis by 60% within one year of implementation of this change idea
5. We aim to improve the number of smokers who receive minimal contact intervention and given cessation resources by 30% of baseline within one year
6. We aim to improve the provision of community resources to our patients with chronic lung disease as needed by 30% within one year
7. According to current performance, we aim to increase the referral rate by 20% (of all patients identified with asthma in the roster) to the CRE in one year
8. We aim to provide access to the newly established after-hours clinic to patients requiring “after-hours” appointments with a CRE in one year.
9. We aim to improve the percentage of patients seen in the respiratory clinic with a written action plan by 40% in one year
10. We aim to develop a community care plan system with appropriate stakeholders within six months
11. We aim to have primary care rostered patients with asthma and COPD being assessed at each visit to the lung health clinic using the evidence-based care map for asthma and/or COPD within one year
12. We aim to develop and test an internal referral process to interdisciplinary providers within the site in three months
13. We aim to develop and test a communication process between the hospital and primary care within one year
14. We aim to develop and test an identification system flagging high-risk asthma and COPD patients in the EMR system within six months
15. We aim to develop and test an appointment reminder system for the CRE within the site within six months

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## Appendix C:

# Primary Care Asthma and COPD Program

## Generic Program Standards

The following Asthma guideline-based and COPD guideline-based program standards are recommended in primary care sites implementing a Primary Care Asthma (12,13) and/or a COPD Program.

### **Program Standards:**

1. **Asthma:** Paediatric and adults suspected of having asthma should be assessed, diagnosed, and managed using the Asthma Care Map (ACM) for Primary Care which is based on the recommendations in the Canadian Thoracic Society (CTS) Asthma Management Continuum Respiratory Guidelines (1). The ACM will be updated to reflect changes in the CTS guidelines.

**COPD:** Adults who are suspected to have COPD should be assessed and diagnosed. Once diagnosed, clients with COPD should be managed using the COPD Care Map (CCM) for Primary Care which is based on the Canadian Thoracic Society (CTS) recommendations for the diagnosis and management of COPD (8). The CCM will be updated to reflect changes in the CTS guidelines.

2. There will be a plan for training and communication of the Health Care Professional (HCP) involved in PCAP to ensure that the site staff has a level of understanding of the generic program standards consistent with their roles and responsibilities.
3. The HCP will provide PCAP within their scope of practice as regulated in Ontario by the Regulated Health Professions Act.
4. All clients will be provided with a written action plan for Asthma or COPD as appropriate

### **Spirometry/Diagnosis**

5. Spirometry\*, pre- and post-bronchodilator, in accordance with American Thoracic Society/European Respiratory Society standards (4), will be used as the primary objective measure for the diagnosis, monitoring and management of Asthma and/or COPD.
6. **Asthma:** If spirometry is not used for diagnosis and monitoring, a notation as to the reason why the use of an alternative method of diagnosis/monitoring should be made in the client's chart (e.g. "client cannot perform spirometry"). In the absence of

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objective testing (such as for children < 6 years of age, whom it is not possible to routinely assess lung function) a careful history and physical examination are used to differentiate Asthma from other causes of episodic respiratory symptoms (1,2,3).

Alternative testing consistent with CTS guidelines will be initiated at the discretion of the client's primary care provider and where resources are available.

Measurements of airway hyperresponsiveness to Methacholine challenge, Peak Expiratory Flow (PEF) for clients > 6 years of age, or exercise challenge testing may be useful in diagnostic dilemmas, such as individuals with persistent asthma symptoms despite normal spirometry, and to evaluate work-related asthma (1).

**COPD:** Diligent screening for the detection of early signs of COPD is recommended to identify the early diagnosis. Who should be screened? Please refer to the Canadian Lung Health Test (8).

According to CTS guidelines, spirometry must be used to confirm the diagnosis of COPD. Post-bronchodilator, airflow obstruction must be noted - FEV1/FVC ratio < Lower Limit of Normal (LLN)\*\* (or < 0.70 if LLN is not available) (8).

7. The assessment for asthma or COPD should include the explicit ruling out of other possible diagnoses responsible for asthma or COPD-like symptoms (1,8)

## **Asthma and COPD Management/PCAP Tools and other resources**

8. All asthma and COPD clients, together with their family/caregivers, will be active partners in the management of their disease and in the creation of an individual action plan. (1,8)
9. Asthma and COPD education materials provided to the client to take home will be evidence-based, consistent with the CTS guidelines, and will strive to be age, culturally appropriate and provided in a language and format understood by the client as available.
10. The PCAP site will use a variety of site and community resources to reinforce the program standards.
11. A successful asthma or COPD education program consists of a partnership between the client and the HCP regarding the goals of treatment and ongoing follow-up to achieve and maintain optimal control of the client's lung health. Follow-up should be determined by the HCP on an individual basis. The content of the education session should refer to the CTS guidelines reflected in the care maps and algorithms.
12. Both Asthma and COPD clients will receive smoking cessation counseling when appropriate. It is recommended that the HCP involved with PCAP be trained in smoking cessation counseling.

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13. The PCAP resources will aid in clinical decision-making and guide the patient towards self-management of their disease. Client assessment may occur over an average of 1-4 visits. However, some clients who have severe disease or other issues that impact on achieving control of their asthma and/or COPD may require additional visits.

The PCAP resource catalogue includes:

**Asthma:** Asthma Care Map (ACM) for Primary Care, Asthma Action Plan, and the Asthma Diagnosis and Treatment Algorithm

**COPD:** COPD Care Map (CCM) for Primary Care, COPD Action Plan, and the COPD Diagnosis and Treatment Algorithm

Note: a variety of resources will be available in addition to the stated above. Refer to [hcp.lunghealth.ca](http://hcp.lunghealth.ca)

14. The HCP should explore barriers to adherence at each visit. These may include cost of drugs, timing of administration, beliefs of non-effectiveness, concerns regarding side effects, and forgetfulness. The HCP should ensure that clients comprehend the name, purpose, duration of treatment, dosing schedule and possible adverse effects of each asthma or COPD medication prescribed (1,8)

If a client is unable to purchase asthma or COPD medications and devices as prescribed by site staff due to financial burden, the staff of the site will try to assist the client to access these medications and devices through available programs (e.g. Trillium Drug Program, compassionate access programs).

\*Spirometric values = the performance of flow-volume curves

\*\* Lower Limit of Normal: A statistically derived level below which a value is considered to be abnormal (10). For most biological measurements, the standard assumption is that for data with a normal distribution, values within 2 SDs of the mean value represent 95% of the population and are considered to be normal. The LLN is defined as the 5<sup>th</sup> percentile (the value that marks the lower 5% of the normal population) (11).

## **Please note:**

**Permission & Proper acknowledgement is required in any modification of the PCAP Tools as per PCAP process.**

## **Approvals:**

Approved by Design Task Force: July 11 2002

Last Amended by the Primary Care Asthma Program Advisory: June 2013

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2. Kovesi T. Achieving Control of Asthma in Preschoolers. *CMAJ* 2010; 182(4): E172-183
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<sup>1</sup> The Institute for Healthcare Improvement (IHI): <http://www.ihl.org/Pages/default.aspx>

<sup>2</sup> Health Quality Ontario (April 2013) Quality Improvement Science.

<http://www.hqontario.ca/Portals/0/Documents/qi/qi-science-primer-en.pdf>

<sup>3</sup> MD Lougheed, C Lemiere, FM Ducharme, et al; Canadian Thoracic Society Asthma Clinical Assembly. Canadian Thoracic Society 2012 guideline update: Diagnosis and management of asthma in preschoolers, children and adults. *Can Respir J* 2012;19(2):127-164.

<sup>4</sup> T. To, L. Cicutto, N. Degani, S. McLimont, J. Beyene, Can a Community Evidence-based Asthma Care Program Improve Clinical Outcomes? A Longitudinal Study. *Med Care* 2008;46: 1257-1266

<sup>5</sup> Ontario's Chronic Disease Prevention and Management (CDPM) framework:

[http://www.health.gov.on.ca/en/pro/programs/cdpm/pdf/framework\\_full.pdf](http://www.health.gov.on.ca/en/pro/programs/cdpm/pdf/framework_full.pdf)

<sup>6</sup> Health Quality Ontario's quality dimensions for a high-performing health system:

<http://www.hqontario.ca/portals/0/Documents/pr/qmonitor-full-report-2012-en.pdf>

<sup>7</sup> Ontario's Action Plan for Health Care:

[http://www.health.gov.on.ca/en/ms/ecfa/healthy\\_change/docs/rep\\_healthychange.pdf](http://www.health.gov.on.ca/en/ms/ecfa/healthy_change/docs/rep_healthychange.pdf)

<sup>8</sup> Stiefel M, Nolan K. *A Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost*. IHI Innovation Series white paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2012. <http://www.ihl.org/Pages/default.aspx>

<sup>9</sup> Better Health, Better Care, Better Value for All: Refocusing Health Care Reform in Canada. Health Council of Canada. September 2013.

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<sup>10</sup> Evidence Informed Improvement Package: Improving Chronic Disease Management. Health Quality Ontario: bestPATH a support for Health Links. 2013. [www.hqontario.ca](http://www.hqontario.ca)

<sup>11</sup> The Model for Improvement – Associates in Process Improvement (API): <http://www.apweb.org/>

<sup>12</sup> Primary Care Asthma and COPD Generic Program Standards June 2013. [hcp.lunghealth.ca/clinical-tools](http://hcp.lunghealth.ca/clinical-tools)

<sup>13</sup> Integrated Health Services Plan for LHINs (IHSP). <http://www.lhins.on.ca/legislation.aspx>

<sup>14</sup> Quality Improvement Plan for Health Care Organizations in Ontario:

[http://health.gov.on.ca/en/pro/programs/ecfa/legislation/quality\\_improve.aspx](http://health.gov.on.ca/en/pro/programs/ecfa/legislation/quality_improve.aspx)

<sup>15</sup> AQLQ: <http://www.asthmalife.com/>

<sup>16</sup> The COPD Assessment Test (CAT): <http://www.catestonline.org/index.htm>

<sup>17</sup> HQO Quality Improvement Plan (QIP) Navigator: <https://qipnavigator.hqontario.ca/>

<sup>18</sup> Health Quality Ontario June 2013: Ontario Primary Care Performance Measurement Initiative Information Sheet. <http://www.hqontario.ca/Portals/0/Documents/pr/pc-pcpm-information-sheet-en.pdf>

<sup>19</sup> Asthma Quality of Life Questionnaire: <http://www.qoltech.co.uk/aqlq.html>