

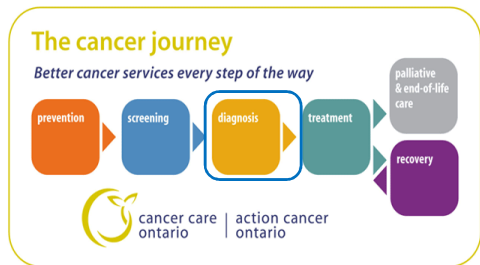


**Lung Rapid Assessment and Management Program -
Process Improvement Project (LungRAMP – PIP)**
Decreasing wait times for a cancer diagnosis

Background: LungRAMP

- The UHN Lung Rapid Assessment and Management Program (LungRAMP) is an **outpatient diagnostic and treatment program**, launched in 2010 to **assess and manage patients with presumed lung cancer** in the shortest possible timeframe.

- DAP Goals**
- Decrease wait times
 - Improve the quality of care
 - Improve availability of resources for both patients and referring physicians
 - Improve the patient experience
 - Improve patient outcomes
 - Reduce system waste



LungRAMP PIP Project Overview

REASON FOR ACTION:

- Ensure LungRAMP is consistently meeting CCO and UHN wait time targets from DAP referral to cancer diagnosis
- Identify opportunities for improving the quality of care provided to LungRAMP patients through the patient journey (from diagnosis to their transfer to treatment)
- Reduce CT guided lung biopsy wait times because of the affect on diagnostic timelines of LungRAMP patients



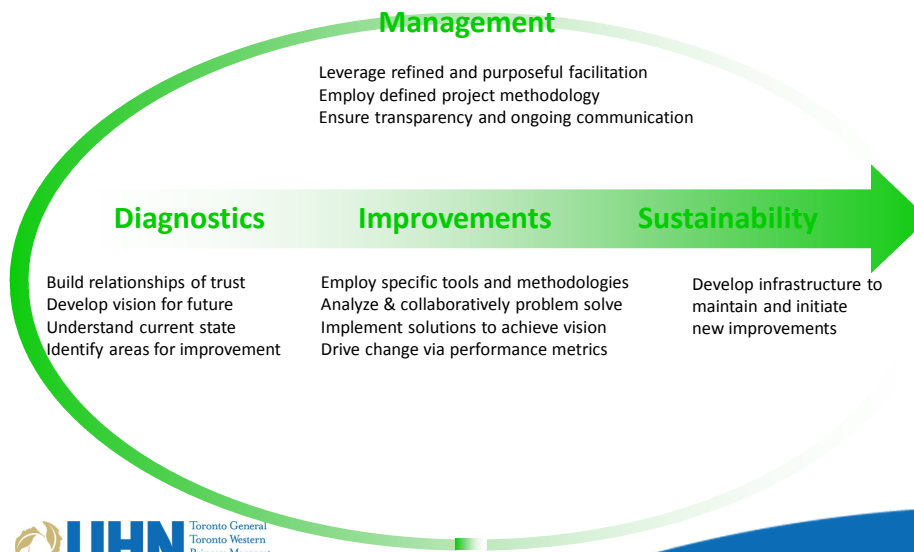
CCO Wait Time Target = 28 days (60th percentile)
 UHN Stretch Wait Time Target = 21 days (90th percentile)



Baseline Wait Time = 53 days (90th Percentile) 36 days (60th Percentile)

Source: LungRAMP Database Jan 2013 – Apr 2014;
 Diagnosis date taken as date tissue sample was taken

The Lean Journey



Project Approach

LungRAMP Value Stream Mapping (VSM) *May/June 2013*

- Conduct initial assessment via interviews and process observations
- Collaboratively analyze LungRAMP patient journey current state by process mapping
- Identify and prioritize opportunities for improvement

Deliverable: Identify high impact current state opportunities

Solution Development *August – October 2013*

- CT guided lung biopsy day of exam Rapid Improvement Event
- CT guided lung biopsy booking working group
- LungRAMP improvement working group
- Develop solutions to address identified areas of opportunity

Deliverable: Create sustainable solutions

Implementation/ Sustainability *Ongoing*

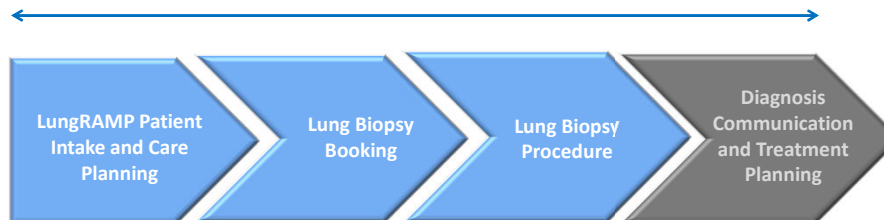
- Monitor impact and feasibility of new processes
- Iterative solution development
- Working group meetings with leadership to monitor progress of solution implementation, key performance indicators and take action as required

Deliverable: Continuous quality improvement

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Solution Overview

Baseline: 53 day wait time
Target: 21 day wait time



Baseline: 19 day wait time
Target: 10 day wait time

Baseline: 8 day BTAT
Target: 2 day BTAT

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Solution Overview

LungRAMP Patient Intake and Care Planning Processes



Delay in patient assignment and care planning

Alignment of roles with tasks to facilitate timely care planning

Issues	Implemented Solutions
Nurse Navigator (NN) overloaded with appointment scheduling	<ul style="list-style-type: none"> ✓ Appointment booking conducted by secretaries and communicated to NN via regular huddles
No consistent point of contact for LungRAMP patients	<ul style="list-style-type: none"> ✓ Initial patient call from secretaries establishes consistent single point of contact ✓ NN conducts follow-up call within 3 days to assess patient's complexity and explain care pathway
Delays and inconsistencies in care planning for patients	<ul style="list-style-type: none"> ✓ Secretaries manage care planning for standard patients ✓ NN supports surgeon with care planning for complex patients
Unclear which patients are LungRAMP throughout the patient journey	<ul style="list-style-type: none"> ✓ Secretaries flagging patients in EPR to ensure all departments are aware a patient is in LungRAMP

Solution Highlight

Nurse Navigator Workflow



Change Management Tools

- 3 day VSM with front line staff from medical imaging, thoracic surgery, radiation/medical oncology, and pathology
- Multiple sessions of process mapping with LungRAMP staff
- Weekly huddles with Nurse Navigator and LungRAMP Coordinator
- Multiple Q&A sessions with Secretaries to launch new processes

Outcomes

- ✓ Right person doing the right role; clerical tasks owned by Secretaries
- ✓ Clear workflow established for Nurse Navigator in patient care planning
- ✓ Partnerships between Nurse Navigator and Secretaries created to plan patient journey
- ✓ Collaboration between thoracic surgery department and medical imaging to achieve cross-departmental goals

Solution Overview

Lung Biopsy Booking Processes



8 Day BTAT

5 Day BTAT

Issues	Implemented Solutions
Lack of transparency into booking processes and patient status within the booking journey	✓ Master tracking sheet for appointment scheduler to monitor all steps of procedure booking
Incomplete biopsy requests create delays in booking and wasted time for clerical staff to find required information	✓ Referral requirements and acceptance process to inform referring physicians when and what information is missing
Paper process for radiologists to review and approve biopsy requests creates delays in booking process	✓ Online biopsy consult review and approval process
Inefficiencies in booking workflow; unnecessary printing, "phone tag"	✓ Appointment scheduler using two monitors to eliminate need for printing
	✓ Appointment scheduler directly calling patients to inform them of their appointment
	✓ Complete standard of work for biopsy booking process
Last minute cancellations because patient unclear of procedure expectations and arrives unprepared	✓ Cross train all Toronto General Hospital Booking Office staff to book biopsy patients
	✓ Patients informed by medical imaging of the appointment requirements
	✓ Reminder call to patients the day before their appointment
	✓ Short call list of patients willing to accept last minute appointments

Source: **Baseline:** RIS: July 2012 to June 2013; **Current:** RIS Sept 2nd 2013 – May 26th 2014; Booking Turnaround Time is defined as the 90th percentile time between requisition received and appointment made

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Solution Highlight

Biopsy Booking Workflow

Change Management Tools

- Weekly working group meetings with front line clerical staff, Supervisors and Managers
- Observations of process flow
- Analysis of booking processes; implementation of a tracking sheet to capture all steps in the booking process and find bottlenecks
- Process mapping events to develop new processes and workflow



Outcomes

- ✓ Redesigned clerical workflow
- ✓ Plan for paperless booking for internal biopsy orders
- ✓ Improved communication and tightened connections between medical imaging and referring physicians

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Solution Overview

Lung Biopsy Day of Exam Process



On Time Scan Starts
53%

On Time Scan Starts
80%

Issues	Implemented Solutions
Lost slots due to patients arriving unprepared and no shows	<ul style="list-style-type: none"> ✓ Patients informed by medical imaging of the appointment requirements ✓ Reminder call to patients the day before their appointment ✓ Calling patients that no show to understand reason why
Delay in Medical Imaging Day Unit (MIDU) to consent and prepare the patient for their procedure	<ul style="list-style-type: none"> ✓ Improved signage to direct patients to MIDU and waiting room ✓ Nurse prioritization of lung biopsy patient upon arrival in MIDU ✓ Radiologists/fellow check with MIDU upon arrival at hospital ✓ Radiologists/fellow agreement to provide consent within 5 mins of call from MIDU
CT Technologist going to MIDU to pick up patients delays scan start and room turnaround time	<ul style="list-style-type: none"> ✓ Radiologist/fellow transport patient from MIDU to scan room after consenting patient ✓ Radiologist/fellow conducting narcotics count to allow CT tech to clean scan room
Delays in review of post-procedure x-ray and patient discharge	<ul style="list-style-type: none"> ✓ Process change to allow for any radiologist to review x-ray ✓ Training fellows to place additional x-ray orders in the hospital's order entry system ✓ When longer than expected biopsies prevent discharge another radiologist can discharge on behalf of the performing radiologist

Source: Baseline: RIS: July 2012 to June 2013; Current: RIS Sept 2nd 2013 – May 26th 2014; On Time Scan Starts is defined as the percentage of exams +/- 10m to scheduled appointment time; excludes any patient who arrives 30 minutes or less prior to the biopsy scheduled time

Solution Highlight

Lung Biopsy Day of Exam Process



Change Management

- Observations of process flow
- 2 day RIE with front line staff, Managers, Supervisors and radiologists
- Data analysis of DOE processes; implementation of a tracking sheet to ensure timely execution of process steps
- Weekly working group meetings with, Supervisors and Managers to tweak processes and discuss issues
- Weekly data review with Clinical Manager and instant issue escalation

Outcomes

- ✓ Increased communication between staff on the day of the exam
- ✓ Increased satisfaction amongst staff
- ✓ Increased transparency and accountability for hand-offs
- ✓ Standards of work created for all staff involved in the process

Biospy Sustainability Tools

The following sustainability tools were implemented to monitor improvements and sustain a culture of continuous improvement.

Has replied to this message on 11/16/2012 4:17 PM.
This message was sent with high importance.

From: **Rebecca, Jerry**
Subject: Reporting CT Cooled Lung Drains Process Times: Sept 27th - Oct 3rd

Key Process Steps	Patients with 8:30 table time	
	Ideal Time	Completion time 90 th percentile
Pre-procedure care		
Prep and assessment complete (n=5)	0:05	0:35
Consent complete (n=5)	0:25	0:28
Procedure start (patient feet in scan room) (n=5)	0:30	0:33
Procedure complete (patient feet out) (n=5)	0:45	0:30
Post-procedure care		
Patients with 2+ day discharged	11:50	11:28

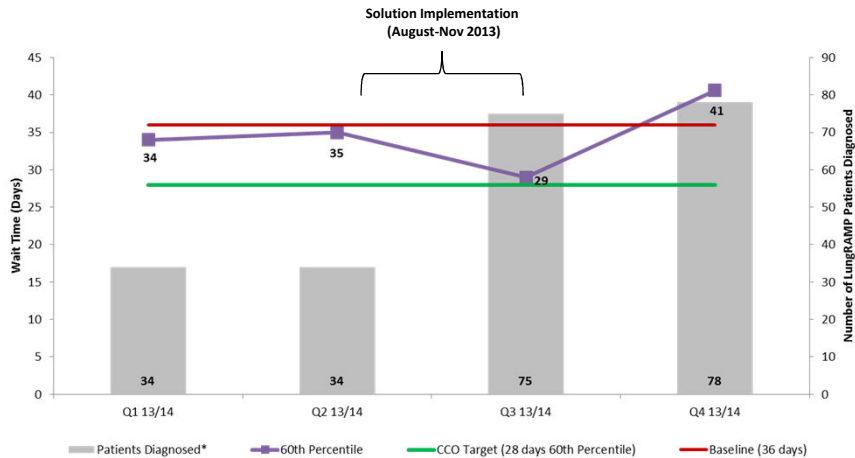
Tool	Timeframe	Achievements
Action Plan	<ul style="list-style-type: none"> Reviewed weekly 	<ul style="list-style-type: none"> ✓ Clinical staff driving improvements
Performance and Data Monitoring	<ul style="list-style-type: none"> Weekly reporting of tracker data Weekly performance data monitored by leadership 	<ul style="list-style-type: none"> ✓ 12 rounds of weekly tracker reporting ✓ Manually collecting 20 time stamps ✓ Online dashboard built for long term performance management
Performance Huddles	<ul style="list-style-type: none"> Bi-weekly on Thursdays, 	<ul style="list-style-type: none"> ✓ Facilitate on-the-spot problem solving amongst staff
Strategy Wall	<ul style="list-style-type: none"> One per clinical area (tech, MIDU, clerical) 	<ul style="list-style-type: none"> ✓ CT, clerical and nursing area strategy wall implemented and used in bi-weekly huddles
Leadership and Process Audits	<ul style="list-style-type: none"> Monthly, first round completed Oct 2 	<ul style="list-style-type: none"> ✓ CT and nursing completed audits with positive feedback on the process
Report out Presentations	<ul style="list-style-type: none"> Oct 17 (30 days) Nov 28 (60 days) 	<ul style="list-style-type: none"> ✓ 30 and 60 day report out completed



LungRAMP Patient Wait Times

Overall Wait Time – CCO Targets

90th Percentile 67 days
60th Percentile 36 days



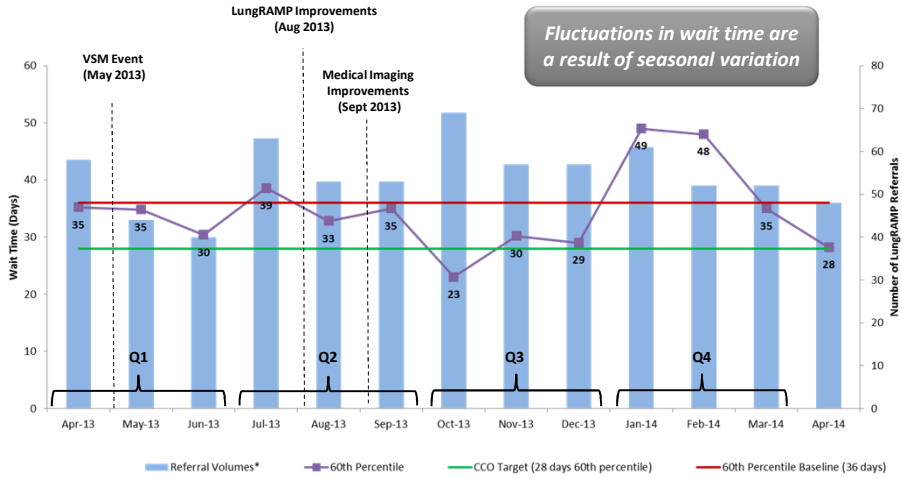
Source: LungRAMP Database April 2013 – April 2014
*CCO requests only patients who receive a positive or negative diagnosis for cancer in that quarter be included in wait time data, this excludes follow-up and exited patients that are managed in LungRAMP

LungRAMP Patient Wait Times

Overall Wait Time – CCO Targets

90th Percentile 67 days

60th Percentile 36 days



Source: LungRAMP Database April 2013 – April 2014

*Referral volumes is a count of all LungRAMP patients referred in the month, regardless of final diagnosis

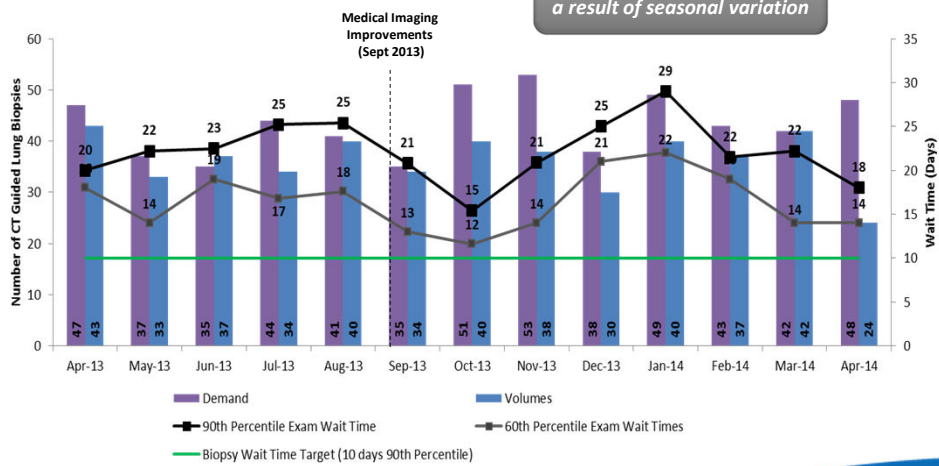
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CT Guided Lung Biopsy Wait Times

Strategic Overview

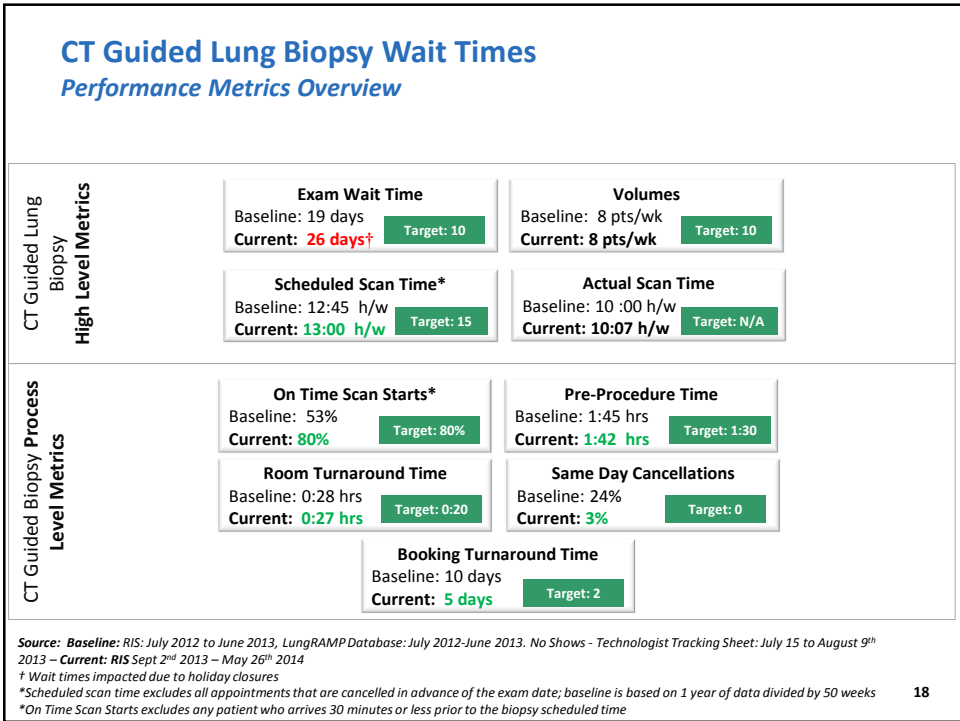
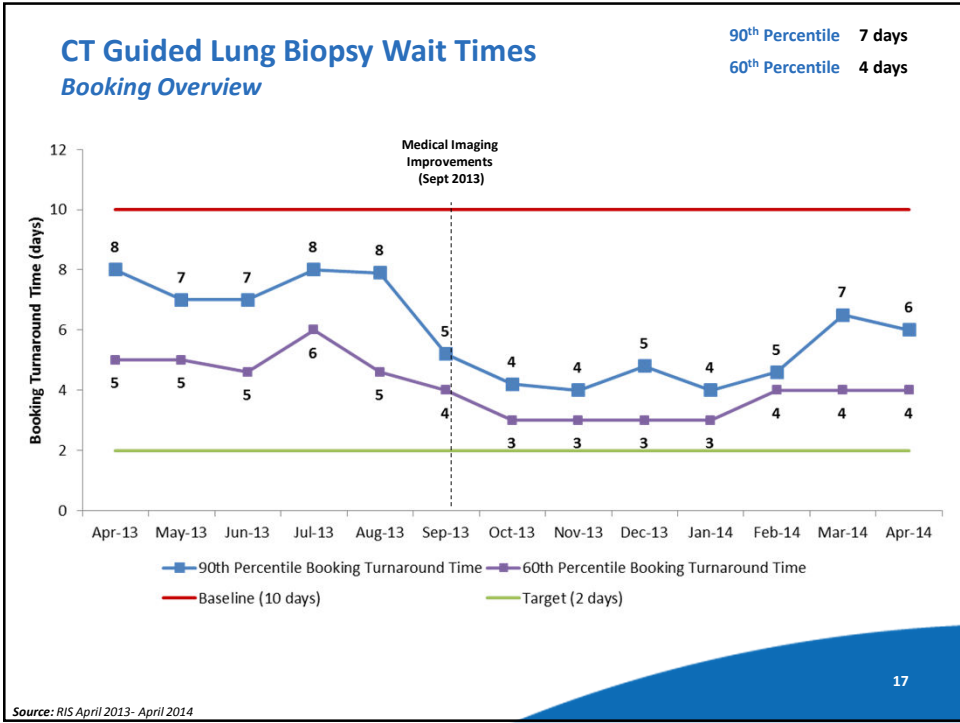
90th Percentile 23 days

60th Percentile 16 days



Source: RIS April 2013- April 2014

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Lessons Learned

- ❖ Improvements take time
- ❖ Must understand current state so you can improve the future
- ❖ Strong, active leadership is essential
- ❖ Dedicated project management resources are critical
- ❖ Cross-departmental initiative gave better understanding of opportunities for improvement

Conclusion

- ❖ Successfully decreased the wait time from referral to diagnosis and improved the quality of care provided to patients in their diagnostic journey.
- ❖ Significant gains were made through Lean Process Improvement in the Medical Imaging department - CT guided lung biopsy procedure.
- ❖ Cross departmental collaboration with Thoracic Surgery, Medical Imaging and Pathology enabled improvement across the entire patient journey.
- ❖ Demonstrated that process redesign and efficient use of existing resources can make high impact and sustainable improvements to patient care.

Contact Information

For more information please contact Alice Tsang, Business Analyst for the Joint Department of Medical Imaging at UHN at alice.tsang@uhn.ca



Thank you for your interest in the LungRAMP Process Improvement Project.

