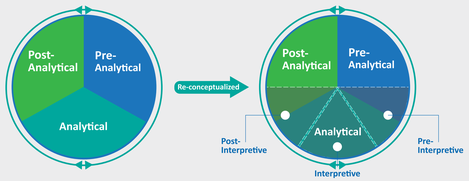
Quality Assurance for Pathology in Canada – Is There Room for Improvement?

Natasha Camuso, Gunita Mitera, C. Meg McLachlin, Rosemary Henderson, Diponkar Banerjee, Laurette Geldenhuys, Fergall Magee, Stephen Raab, Tarek Rahmeh, Esther Ravinsky, Bernard Têtu, Martin Trotter, Robert Wolber, John Srigley.
On Behalf of the Quality Initiative for Interpretive Pathology (QIIP) Thought Leaders Group, Canadian Partnership Against Cancer, Toronto, Ontario.

Background

- Quality initiatives and quality assurance (QA) are wide ranging concepts covering all matters that individually or collectively influence the quality of health services delivery.
- The pathology testing cycle includes three distinct phases: Pre-analytical, analytical and post-analytical. However, when considering this cycle from the analytical or interpretive phase, we have re-conceptualized this cycle as: Pre-interpretive, interpretive, and post-interpretive.
- In each phase of the interpretive cycle, the activities involved are considered from the perspective of "how will these activities impact how a pathologist is able to make an accurate, informed, consistent and timely pathology diagnosis." (Figure 1)

Figure 1. Interpretive Pathology Testing Cycle



- **Pre-interpretive** phase includes all processes from the time a decision is made regarding a referral for pathological consultation, up to and including the production and delivery of the slides or other interpretive material to the pathologist.
- **Interpretive** phase involves the review of slides and other related material by a pathologist. This includes all technical and cognitive processes required for a pathologist to finalize a pathology report containing relevant diagnostic, prognostic and predictive information.
- **Post-interpretive** phase includes processes involved in communication and delivery of a final pathology report to the referring physician and patient.

- In many jurisdictions, there is considerable standardization of the pre- and post-interpretive phases of the pathology cycle using well-developed laboratory accreditation programs and institutional standards. However, large pan-Canadian variations exist in the degree of integration of interpretive pathology QA into existing provincial programs. Robust QA programs incorporating all phases of the pathology testing cycle are integral to accurate pathology diagnosis and the quality of care a patient receives. Specific activities are required to ensure an accurate diagnosis (Figure 2).

Figure 2: Anatomical Pathology Workflow Map

- There is national interest to develop recommendations for interpretive pathology quality that can be adopted as guidelines or standards within existing provincial QA programs.
- In 2013, the Canadian Partnership Against Cancer created the Quality Initiative in Interpretive Pathology (QIIP) and brought together a group of pan-Canadian pathology Thought Leaders group to address this issue at a national level.

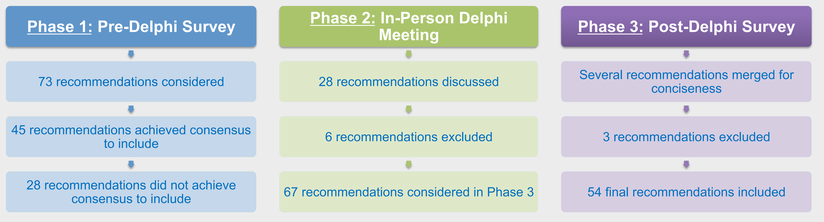
Objectives

- To develop a minimum set of pan-Canadian recommendations for interpretive pathology QA.

Methods

- An initial list of recommendations was developed through an environmental scan of existing recommendations and expert opinion from the QIIP Thought Leaders.
- A modified-Delphi process was used to achieve consensus on national recommendations that should be included. A pre-defined list of guiding principles was used to help guide the consensus process which included evidentiary support, national relevance, feasibility to implement in provinces, clarity, measurability.

Figure 3: Summary of the Modified-Delphi Results



The consensus process involved three phases, pre-Delphi electronic survey, in-person Delphi meeting and post-Delphi electronic survey. The results of the consensus process informed the final set of recommendations (Figure 3).

Pre-Delphi Survey

- Electronic voting for inclusion or exclusion of a recommendation
- For an exclusion vote, justification was captured as free text

In-person Delphi Meeting

- Discuss recommendations that did not achieve consensus
- At the end of the discussion for each recommendation a live vote was captured

Post-Delphi Survey

- Validated the Delphi results

Results

- The initial list included 73 recommendations and this was reduced to a final list of 54 recommendations. A summary of the results for each stage of the process are provided in Figure 3.
- The changes resulting from each phase of the Delphi process were classified as major or minor.
  - A major change was defined as a conceptual change to the recommendation.
  - Most changes to the recommendations represented minor changes which were usually changes to the wording to provide clarity to the meaning of the recommendation.
  - The types of changes for the recommendations are presented in Table 1.

Table 1: Summary of Reasons for Changes to the Recommendations

Reason for Revisions	Phase 1: Pre-Delphi			Phase 2: In-Person Delphi Meeting			Phase 3: Post-Delphi		
	Exclude	Minor	Major	Exclude	Minor	Major	Exclude	Minor	Major
Merged with another recommendation due to overlap in concept	--	--	--	2	--	--	3	11	--
Conceptual change	--	--	--	--	--	2	--	--	--
No value added at the national level	--	--	--	--	--	2	--	--	--
Feasibility/ relevance at national level	--	12	12	1	2	2	--	6	--
Clarity	--	25	9	--	8	3	--	36	--
Redundancy	--	6	4	3	--	3	--	1	--
Lack of evidentiary support	--	1	3	--	--	--	--	--	--
Total	0	44	28	6	10	12	3	33	0

Example of reason for change: The recommendation was too specific for adoption as a national recommendation

Example of reason for change: Redundancy with other recommendations or legislature e.g., governance

Example of reason for change: evidentiary support on conducting targeted vs random review is not clear

- The pan-Canadian recommendations are currently under development, however, they will be developed under the overarching headers listed in Table 2.

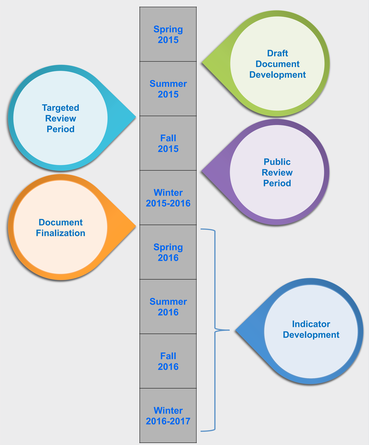
Table 2: Consensus Process Results - Pan-Canadian Recommendations for Interpretive Pathology Quality Assurance

Section Header	Number of Recommendations
Overarching Foundational Elements	27
Governance/Oversight	2
Linkage to Existing QA Programs	2
Human Resource Plan/Staffing/Workload Measurement	3
Appropriate Training, Licensure, Credentialing and Continuing Professional Development for Pathologists	3
Privacy, Confidentiality, Disclosure and Duty to Report	1
Informatics and Quality Documentation System	9
Other Foundational Elements	7
Pathology Testing Cycle – Interpretive Phase (Prospective)	11
Pre-Assessment	4
Assessment	3
Peer Review	1
Post-Assessment (Pathology Report)	3
Quality Assurance Policies and Procedures (QAPP) for Interpretive Pathology	12
External Quality Assurance	3
Approach to an "Expression of Concern" Regarding a Pathologist's Performance	1
TOTAL	54

Next Steps

- Figure 4 provides a timeline of the next steps to finalize the QIIP recommendations.

Figure 4: Next Steps for the Development and Implementation of the pan-Canadian Framework



Conclusion

- To enable robust, consistent and high-quality pathology QA in Canada, this is the first attempt at developing a minimum set of recommendations for interpretive pathology quality that could be implemented as guidelines or standards into existing provincial QA programs across the country.
- To ensure uniform quality of diagnostic care for patients, the development of the framework will help guide senior decision-makers in implementing interpretive pathology quality programs within their provinces.

If you are interested in participating in the targeted review period, please email Natasha.Camuso@partnershipagainstcancer.ca

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