Pan-Canadian Development of Programmatic Quality Measures for Colposcopy

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Disclosures

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- Pfizer: research support

Pan-Canadian Cervical Cancer Screening Network (PCCSN)

- Convened by the Canadian Partnership Against Cancer (CPAC)and works with:
  - Provincial/territorial cancer agencies
  - Relevant national cancer and professional organizations
  - Patient/family advisors'

- Develops national metrics to measure the quality of cervical cancer screening

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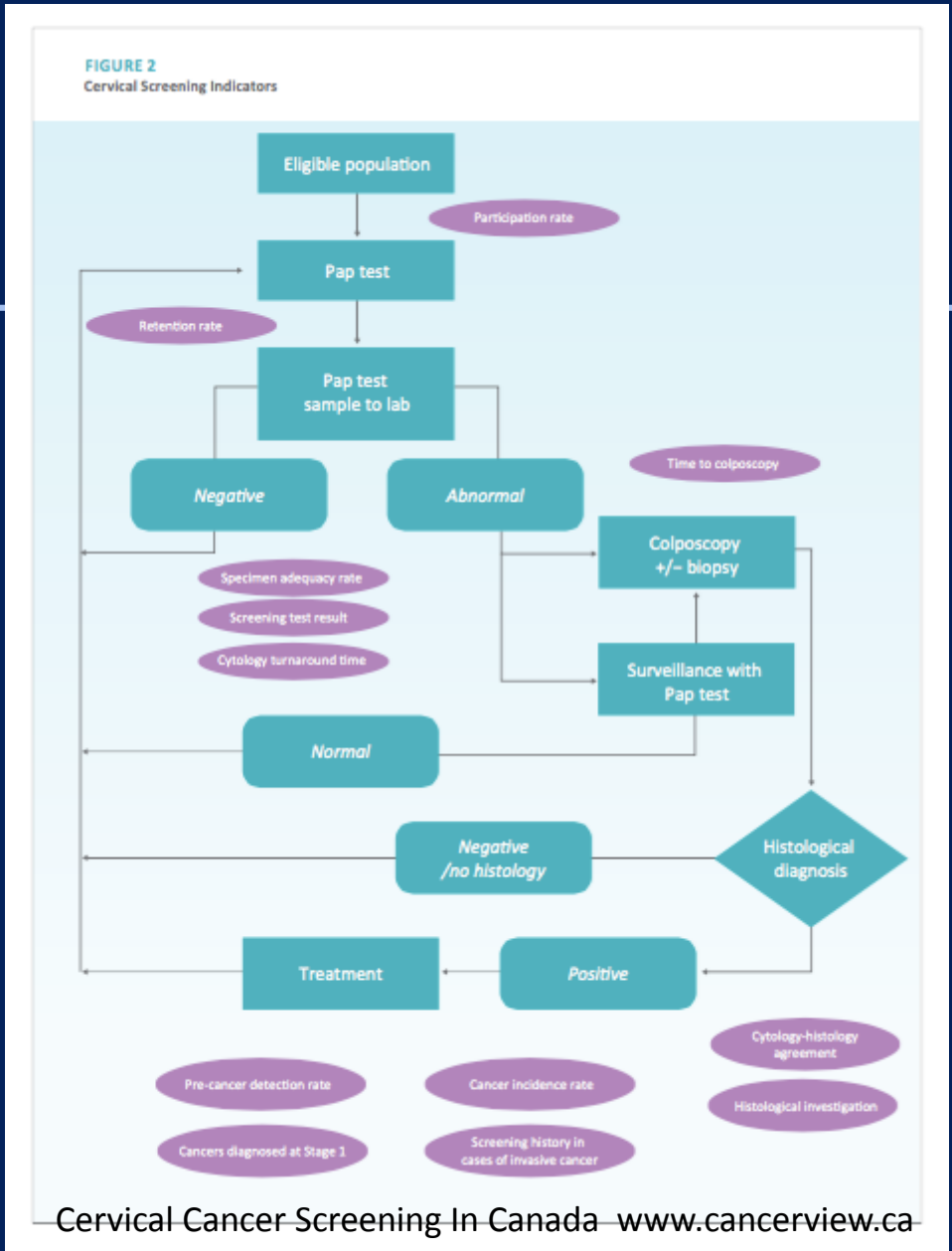
Indicators

- Participation rate
- Retention rate
- Specimen adequacy rate
- Screening test result
- Cytology turnaround time
- Time to colposcopy
- Pre-cancer detection rate
- Cancer diagnosed at stage 1
- Cancer incidence rate
- Screening history of cancer cases
- Cytology/histology agreement
- Histological investigation



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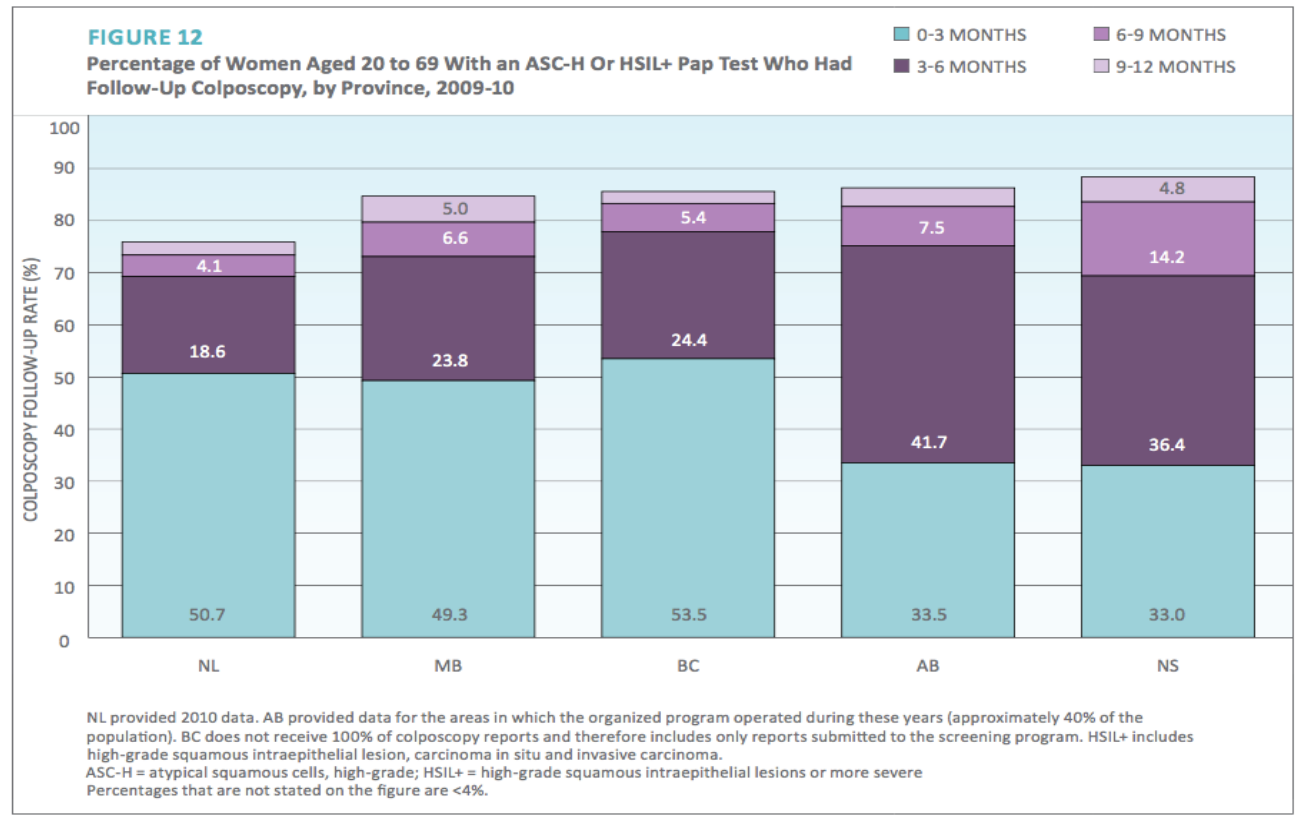
Follow-up colposcopy rate



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Background and Purpose

National quality indicators for colposcopy identified as a Network priority in May 2015

Updated national-level colposcopy quality indicators are needed

- Introduction of HPV immunization
- Transitions from cytology to HPV testing for primary cervical cancer screening

Purpose:

- Develop a set of program-related quality indicators for colposcopy that are supported by feasible and appropriate collection methods and that can be used for reporting on a national level.

Development and Progress

May 2015: The development national quality indicators for colposcopy was identified as a Network priority

Spring 2016: Colposcopy quality indicators working group was formed

May 2016: The working group met to review the purpose, objectives & approach of the working group

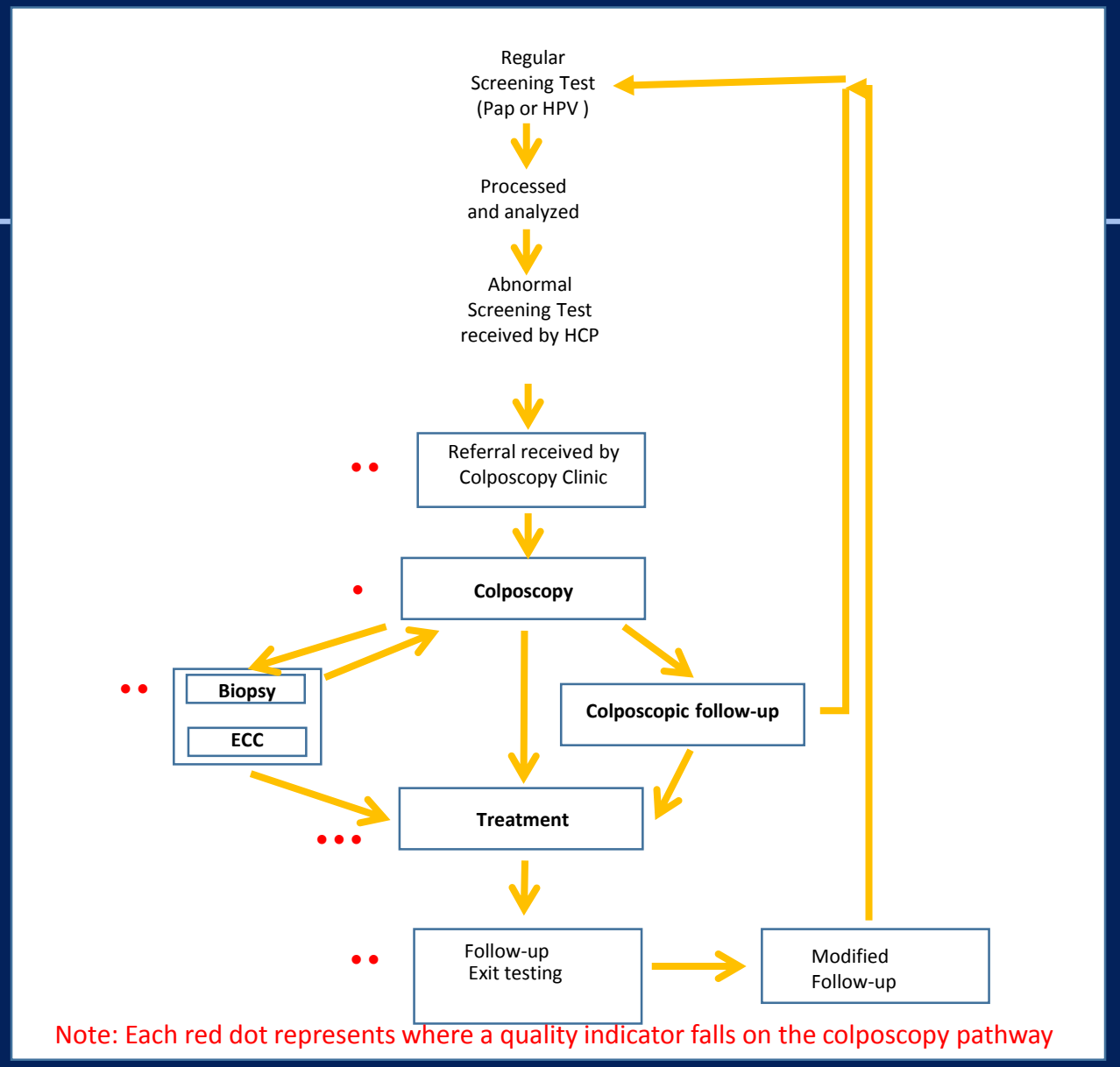
June 2016: The working group met to review literature search parameters and the discuss in-person meeting

July-August 2016: Literature search completed

September 2016: An in-person meeting was held in Toronto to review and come to consensus on a set of national colposcopy quality indicators for further development

October 2016: CPAC developed a data specifications document for the new quality indicators

Colposcopy Pathway



Parameters of the Literature Search

- **Objective**: Develop a set program-related quality indicators for colposcopy that are supported by feasible and appropriate collection methods and that can be used for reporting on a national level.
- **Research question**: What quality indicators have been developed to measure colposcopy quality within the context of a cervical cancer screening program?
- **In scope**: Program-level colposcopy quality indicators for national reporting
- **Out of scope**: Clinician-level quality indicators or a focusing on the implementation of synoptic quality reporting, general guidelines
- **Literature**: Academic and grey (e.g. screening program reports, etc.)
- **Academic Literature**: Medline/Pubmed, Embase, PubMed, Scopus, reference lists of eligible documents
- **Grey Literature**: Google search (list of relevant associations/international guideline developers will be used to guide search)
- **Timeframe**: Last 10 years (2006-present)
- **Countries**: Canada, U.S., Europe, Australia, New Zealand
- **Key words**: Colposcopy, Quality Assurance, quality improvement, indicators, targets, audit, etc.
- **Inclusion criteria**: Published within the last 10 years, published in English, relevant to program-level colposcopy quality indicators for national reporting, published in Canada or country similar to Canada (i.e. US, UK, Europe, Australia, New Zealand)

Criteria for Voting on Indicators

- ***Measurable***: Indicators have numerator and denominator, and data needed for assessment are available and accessible.
- ***Actionable***: Indicator has the potential to inform improvements.
- ***Relevant***: Related to quality determinants within domains, and to overall goal.
- ***Patient centered***: The indicator should be expressed in terms of the relevance to the patient, not at the program level.
- ***Population-level***: The indicator should be measured at the population-level, not at the colposcopist level.
- ***Evidence-based*** (literature or expert opinion): Informed by the highest quality of evidence available.
- ***Ease of interpretation***: The indicator should be clear and easy to interpret.

Overview of the Scoring System

- 30 unique indicators were identified in the literature review.
- A Prioritization Matrix scoring system was used to score the indicators.
- All seven criteria were determined by the working group to be of similar importance and were equally weighted.
- Working group members assigned scores between 1-4 on all seven criteria for each indicator.
- CPAC analyzed the scores and calculated a final score out of 4 for each indicator.

Focus Areas for Indicators

Focus Area	Number of Indicators in Focus Area
Colposcopist/Clinic	2
Referrals	4
Wait Times	4
Positive Predictive Value	1
Test Specificity	1
Biopsy	4
Treatment	3
Follow-Up After Treatment	1
Discharge to Routine Screening	2
Complications	4
Hysterectomy	1
HPV Testing	2
Pregnancy	1

Initial Ranking of Indicators

Rank	Indicator Name	Score
1	Colposcopy uptake	3.69
2	Follow-up after treatment	3.34
3	Test of cure and associated HPV testing	3.23
4	Histological investigation	3.09
5	Treatment at first visit to colposcopy for low-grade dyskaryosis	3.09
6	Positive predictive value of cervical screening test	3.03
7	Number of colposcopists per capita	2.83
8	Percentage of treatments completed as an outpatient versus inpatient	2.80
9	Biopsies conducted after an abnormal low-grade Pap test	2.74
10	Colposcopy-histology concordance	2.71

Note: Indicators highlighted in green were those that the working group agreed were of high importance and warranted further discussion.

Initial Ranking of Indicators, continued

Rank	Indicator Name	Score
11	Treatment at first visit after CIN 2/3 or GIN	2.71
12	Referral for colposcopy after abnormal cytology result	2.66
13	Retreatment rate	2.57
14	Biopsy quality	2.51
15	Time to receipt of colposcopy/biopsy results	2.40
16	Colposcopist volumes	2.37
17	Compliance with referral for colposcopy	2.37
18	Colposcopy in women under 30 with positive HPV result and normal cytology	2.37
19	Colposcopy after abnormal cytology in women with previous hysterectomy	2.26
20	Residual disease after treatment	2.20

Note: Indicators highlighted in green were those that the working group agreed were of high importance and warranted further discussion.

Initial Ranking of Indicators, continued

Rank	Indicator Name	Score
21	Referral rate for colposcopy	2.06
22	Management of pregnant women with high abnormal cytology result	2.06
23	Time to treatment after first colposcopy	2.00
24	Referral for colposcopy after persistent positive cytology	2.00
25	Diagnostic colposcopy completion rate	1.77
26	Return to routine screening	1.69
27	Specificity of screening test	1.49
28	Length of time women stay in a colposcopy clinic rotation	1.29
29	Complications after treatment	1.09
30	Re-admission due to complications after treatment	0.94

Note: Indicators highlighted in green were those that the working group agreed were of high importance and warranted further discussion.

Final Selection of Indicators

- Through discussion, the working group members present at the meeting came to consensus on a list of 10 indicators.
- The votes were averaged across all working group members to rank the 10 indicators from highest to lowest importance.
- Further discussion with the PCCSN group added 2 descriptive indicators

List of Selected Indicators

Quality Indicators	Indicator Name
1	Colposcopy uptake
2	Histological investigation (biopsy) rate
3	Colposcopy referral rate
4	Failure to attend colposcopy
5	Treatment rate in women 18-24 years of age
6	Retreatment Rate
6	Colposcopy exit test rate
8	Biopsies rate after low-grade Pap test result
9	Length of colposcopy episode of care
10	Operating room treatment rate
Descriptive Indicators	
11	Colposcopist Volumes
12	Number of Colposcopists per capita

Indicator #1: Colposcopy uptake

Definition	Percentage of women with a high-grade Pap test result (AGC, ASC-H, HSIL+, AIS) who had a follow-up colposcopy within 3/6/9/12 months of the index Pap test report date.
Rationale	The Society of Canadian Colposcopists (SCC) and the SOGC recommend that all visible lesions should be biopsied and that all women referred with HSIL, even in the absence of an identifiable lesion at colposcopy, should have endocervical curettage and directed biopsy.
Numerator	A) Number of women with a high-grade Pap test result (AGC, ASC-H, HSIL+, AIS) that had a follow-up colposcopy within the time measure specified. B) Number of days at which the 90th percentile is reached.
Denominator	Number of women with a high-grade Pap test result (AGC, ASC-H, HSIL+, AIS) within the measurement timeframe (January 1 to December 31 of each report year).

Note: This indicator was previously developed and reported on in the M&E 2011-2013 Report (Indicator Title: Time to Colposcopy).

Indicator #4: Failure to attend colposcopy

Definition	Percentage of women who do not attend a scheduled colposcopy appointment.
Rationale	This indicator is an important measure of utilization and was suggested based on expert consensus. It is especially important to investigate the first colposcopy appointment because it is related to appropriate patient care.
Numerator	Number of women who have a scheduled colposcopy appointment and do not attend
Denominator	Number of women who have a scheduled colposcopy appointment

Indicator #5: Treatment rate in women 18-24

Definition	Percentage of women between 18 to 24 years old who were referred for colposcopy who received treatment for cervical dysplasia.
Rationale	This indicator measures inappropriate treatment.
Numerator	Women between 18 to 24 years old who are receiving treatment for cervical dysplasia
Denominator	Women between 18 to 24 years old who have been referred to colposcopy

Indicator #8: Biopsy rate after a low-grade Pap test result

Definition	Percentage of women who received a biopsy at the first visit to colposcopy after an abnormal low-grade Pap test result.
Rationale	Because some clinicians bring people in for several colposcopies to monitor instead of taking a biopsy.
Numerator	Number of women receiving a biopsy at first visit to colposcopy after an abnormal low-grade Pap test result
Denominator	Number of women having colposcopy after an abnormal low-grade Pap test result

Indicator #10: Type of facility **where** treatment occurs

Definition	Facility where a colposcopic treatment occurs
Rationale	Related to both space and quality. The number of people who are treated in an OR should be small because it is an inappropriate use of resources. It can be hypothesized that patients in the OR may receive general anesthetic. Experts in colposcopy working group perceive this as an issue in some jurisdictions in Canada.
Numerator	10a: Number of women who have treatment in a clinic 10b: Number of women who have treatment in an operating room
Denominator	Number of women who receive treatment

Conclusion

Evidenced-based methods can be used to develop actionable, national quality colposcopic measures. These measures will be included in the future evaluation of screening by the PCCSN

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