Improving Cervical Cancer Screening Rates in HIV-Positive Women

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Presentation PDF

DEFINE OPPORTUNITY

BACKGROUND:
Cervical cancer is the 4th most common cancer in women and is largely due to chronic or recurrent infection with human papillomavirus (HPV). Prognosis is highly dependent on the stage at which dysplasia is first recognized and treatment is initiated. If detected at its earliest stages, the 5-year survival is 93%. This rate dramatically drops to 15% if the disease is discovered in its late stage.

Women living with HIV infection are at an increased risk of developing cervical cancer due to the 2- to 4-fold rate at which HPV-infected cervical cells transform into malignant cells in these patients, as compared to their HIV-negative counterparts.

Screening at-risk patients with regular Pap smears allows for early detection of cervical cancer, and is vital for the ongoing health of HIV-positive women.

Current Alberta guidelines[2] recommend Pap smears every 3 years for all women aged 25-70. Because of their increased risk, it is recommended that immunocompromised women have annual screening begin at the age of 21.

[1]WHO Cervical Cancer Fact Sheet, Feb. 15, 2018, http://www.who.int/en/news-room/fact-sheets/detail/human-papillomavirus-(hpv)-and-cervical-cancer
[2] TOP guidelines, May 2016, http://www.topalbertadoctors.org/download/1958/Cervical%20Cancer%20Screening%20Summary.pdf?_20180716230013

PROBLEM:
For HIV-infected women in the Northern Alberta HIV program, only 72% are meeting minimum Alberta guidelines for cervical cancer screening (i.e., every 3 years). The number meeting the annual screening requirements for at-risk patients is even lower.

The need for screening is typically not identified until the day before the appointment, which disrupts clinic and nursing workflow, proves challenging from a scheduling perspective, and often results in the Pap smears not being completed.

AIM STATEMENT:
By Dec. 31st, 2018:
- 100% of female patients within the Northern Alberta HIV program in need of a Pap smear will be proactively identified and flagged.
- 80% of patients in need of a Pap smear will be booked for testing in advance.
- 50% increase in the number of HIV-infected women actively engaged in care having received a Pap test within the last 3 years.

MANAGE CHANGE

COLLABORATIONS & COMMUNICATION STRATEGIES:
For change implementation to be successful, it is vital to engage the main stakeholders and ensure that they buy into the proposed interventions.

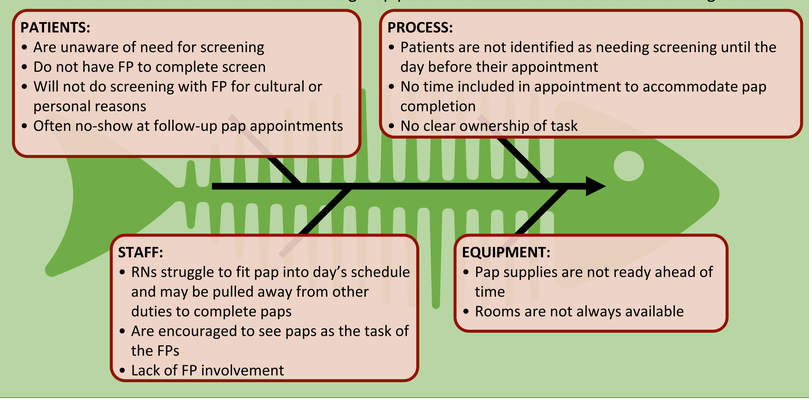
STAKEHOLDER	Clinic RNs	Family Physicians (FP)	Patients
Stage of Preparedness	**Contemplation** (Aware of issue, developing dialogue)	**Pre-contemplation** (Unaware of issue)	**Pre-contemplation** (Unaware of issue)
Engagement Strategies: ATTITUDE	Encourage ownership of the task of screening patients without a GP/unwilling to have test done elsewhere.		Encourage to connect with their GP or HIV clinic to advocate for themselves and seek screening.
Engagement Strategies: KNOWLEDGE	Demonstrate that the resulting workload is low: a maximum of 2-3 Pap smears need to be completed per site per week to get caught up on overdue patients.	Inform about guidelines for screening frequency of high-risk populations, and keep up to date on screening needs of their patients.	Educate about the importance of cervical cancer screening.
Engagement Strategies: TOOLS	Training on E-clinician functionality to easily track Pap smears and automatically flag overdue patients.	Inform about possibility of getting Pap smears done at HIV clinics, if patients have no other options.	

BUILD UNDERSTANDING

PROCESS ASSESSMENT:
Two Northern Alberta Program HIV clinic sites were considered (UAH and RAH) using a mixed-method approach including both quantitative and qualitative analysis. Qualitative tools included **Gemba Walks** (meeting the staff at each site, observing the clinic space and the standard workflow) as well as the **Cause-and-Effect diagram** and **Process Map** shown below.

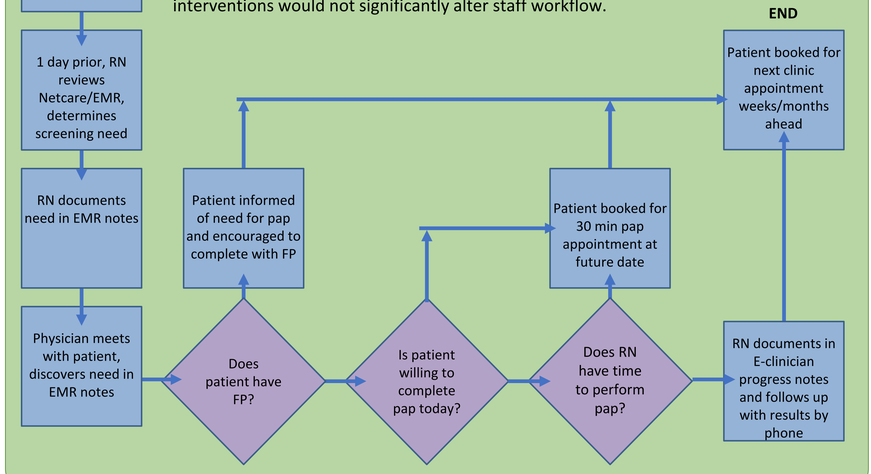
CAUSE-AND-EFFECT/ FISHBONE DIAGRAM

This method allows the team to list and group potential causes behind the low screening rates.

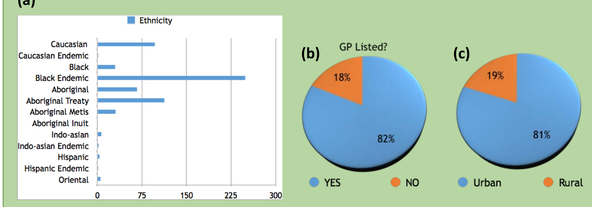


PROCESS MAP

This map illustrates the current procedure for getting patient paps completed, and can be used to identify both gaps in care and areas where interventions would not significantly alter staff workflow.



QUANTITATIVE ANALYSIS



Combined data from both clinic sites demonstrated that the majority of patients had listed FPs **(b)** and were within Edmonton city limits **(c)**, as well as identifying some trends in ethnicity **(a)**. Postal code analysis found that the majority of patients resided within Edmonton NorthEast, with large numbers in Edmonton SouthEast as well.

ACT TO IMPROVE

IMPROVEMENT SELECTION:
Interventions were chosen based on what was most impactful, manageable, measurable, and affordable, as well as what required the least change to existing workflow.

1. **Issue:** Patients unaware of need for screening.
   Arising Intervention: Provide informational pamphlets and review them with patients.
   Role(s) Responsible: ID Physicians, RNs
2. **Issue:** No time or physical space for paps to be done in clinic schedule.
   Arising Intervention: Create hotlist of overdue patients, to be booked in with RNs or clinic GP in a dedicated room on less busy days.
   Role(s) Responsible: Booking Clerk
3. **Issue:** RN workflow interrupted by time required to complete pap.
   Arising Intervention: Stock standardized pap kits with all necessary equipment and paperwork to facilitate swift completion and minimize interruption.
   Role(s) Responsible: RNs
4. **Issue:** Patients in need not proactively identified.
   Arising Intervention: Record pap information in E-clinician as part of standard work; automatically flagging and identifying overdue patients early so clinic schedules can be built to accommodate. Start Oct 15, 2018
   Role(s) Responsible: RNs
5. **Issue:** FPs unaware of high-risk screening guidelines, or option for HIV clinic to perform pap.
   Arising Intervention: Communicate need for screening and/or screening results to patient's FP; include TOP screening guidelines in Alberta Referral Directory.
   Role(s) Responsible: ID Physicians

The first PDSA cycle of interventions is set to begin at the UAH site on Oct. 15, 2018.

SUSTAIN RESULTS

REINFORCE OWNERSHIP & MEASUREMENT:
- After 1 month, an audit will be performed looking at E-clinician entry records and clinic schedules, as well as stock of educational pamphlets and pap kits, in order to ensure that interventions are being carried out.
- A new hotlist will be generated: if the interventions have been effective, the hotlist should have decreased.

CONTINUOUS IMPROVEMENT:
- A new PDSA cycle will begin at the RAH site in late fall, incorporating feedback and lessons learned from the UAH site.
- In early 2019, an Impact Assessment Survey will be cast to staff of each site to formally consider the effectiveness of the interventions trialed.
- E-clinician functionality used will be advised to be included at launch of ConnectCare.

SHARE LEARNING

LESSONS LEARNED:
Role confusion was a major issue in this project. There was no clearly defined ownership of the task, and the end result of this was that it did not get completed.

It also became apparent that a major barrier to change management can be **attitude** — knowledge and tools may strongly support a given intervention, but resistance to change can still be a major hurdle.

ACKNOWLEDGEMENTS
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WHY THIS QUALITY IMPROVEMENT MATTERS

…TO PATIENTS
Early and regular screening for cervical cancer in high-risk HIV-positive populations allows the disease to be caught early and drastically improves the patient's likelihood of survival. Regular pap screening saves lives.

…TO ALBERTANS
Improving education on, accessibility to, and tracking of cervical cancer screening is beneficial to all Albertans.

…TO THE HEALTHCARE SYSTEM
Patients caught in early stages of cervical cancer are significantly more treatable and require less intensive care, and therefore less expenditure and use of resources.

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