Creation of the National Cervical Cancer Control Plan and Strategy: Lessons learnt from the Botswana experience

Africa Regional Conference on New Opportunities and Innovations in Cervical Pre-Cancer Prevention

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Cervical Cancer in Botswana: Background (1)

- #1 cause of cancer-related mortality in women
- #2 women’s cancer (after breast cancer)
- HIV epidemic impacts cervical cancer rates
- For two decades, government endorsed only Pap smear screening
- 2004-2009 Strategy
  - Strong sensitisation, much screening → Pap backlog
  - Few plans for treatment and for program monitoring and evaluation
Cervical Cancer in Botswana: Background (2)

- 2009–2010 – Critical laboratory backlog of Pap smears
  - Short term—slides outsourced to South Africa
  - Long term—consideration of simpler screening methods coupled with treatment (i.e., VIA/cryotherapy)
- 2011 – Ministry of Health (MOH) supported recommendation of CDC consultant to:
  - Develop a comprehensive cervical cancer prevention plan
  - Endorse the addition of VIA/cryotherapy as successfully piloted by Botswana UPenn Partnership
Steps taken to develop Botswana’s comprehensive NCCPP* strategy (2012–2016):

1. Screening/treatment situational assessment conducted
2. NCCPP manager hired
3. NCCPP Technical Working Group (TWG) resurrected (TWG members = stakeholders)
4. Key strategy decisions made at series of stakeholder meetings
5. Permanent Secretary (PS) informed of stakeholder decisions through pre-existing MOH committees
6. Feedback from the PS incorporated; strategy draft finalised

*National Cervical Cancer Prevention Programme*
Situational Assessment

• 2004–2009 National Cervical Cytology Screening Program
  – Focus was on cervical screening
  – Population successfully sensitised to need for screening
  – Plans for treatment of women who screened positive not detailed
  – Numbers of women who screened positive who received treatment unknown
  – Only indicator was number of Pap slides received in the laboratories
Situational Assessment

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LESSONS LEARNT:
✓ Understand your current situation
✓ Identify what should be done differently in the new strategy
NCCPP Manager hired

• Program Manager characteristics
  – Physician; general medical background
  – Experience in service provision of VIA/Cryo /LEEP
  – Dedicated to women’s health

• Tasked with
  – Leading development of the strategy with stakeholders
  – Supervising two staff persons
  – Overseeing and managing strategy implementation
  – Collaborating with other MOH units to carry out cervical cancer program
  – Ensuring that M&E program data are delivered to MoH
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LESSONS LEARNT:
✓ Secondary cervical cancer prevention programs are complex
✓ Need program manager and staff dedicated solely to the program to have chance of success
Stakeholders

• Importance
  – Diversity of opinions and viewpoint
  – Input and buy-in from groups that will impact the program → promote program ownership

• Stakeholder representation
  – MoH officers (Departments of Public Health, HIV/AIDS Prevention and Care, Clinical Services), development partners (e.g., UN Family, CDC, Botswana UPenn), NGOs, and private practitioners

• Stakeholder meetings
  – Several meetings needed to allow for understanding
  – Took time
  – Facilitation used
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  – Took time
  – Facilitation used

LESSONS LEARNT:
✓ Stakeholders are key for development of a strong strategy
✓ Important to provide diverse view points
✓ Worth the time and trouble
Keep Permanent Secretary (PS) informed

- TWG reported to two existing MOH committees, which in turn reported to higher MOH officials, including the PS, to keep them informed of ongoing stakeholder decisions.
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LESSONS LEARNT:

- Politically wise and efficient to keep high level MOH decision makers continually informed about the strategy development
- Provides for timely input and ongoing buy-in of stakeholder decisions
Incorporate PS feedback and finalise strategy document

- PS feedback incorporated during the strategy process
- Strategy components and details finalised
- Actual strategy document drafted
  - Small team drafted document (assistance from outside technical expert); shared iterative drafts with stakeholders
  - Stakeholders’ suggestions and comments incorporated
  - Included executive summary, background, primary, secondary, tertiary, monitoring and evaluation (M&E) components, timeline, estimated budget
  - No standard operating procedures (SOPs) in this document
- Final strategy document submitted to PS; endorsed two months later
LESSONS LEARNT:

✓ Good bi-direction communication between stakeholders and high MOH officials speeds the process
✓ Incorporate high level MOH feedback
✓ Need small team responsible for strategy draft
✓ Assistance from outside technical expert valuable
  – Facilitation of decision making
    • Following international guidelines
    • Keeping feasibility in mind
  – Assistance with drafting document

Incorporate PS feedback and finalise strategy document
Original timeline for activities
5-year strategy

HPV DNA test project

SECONDARY PREVENTION: Screening & treatment

PRIMARY PREVENTION: HPV Vaccine demonstration project
Primary prevention: HPV vaccine demonstration project

Secondary prevention: Screening & treatment

Year 1 Year 2 Year 3 Year 4 Year 5

HPV DNA test project

Primary prevention: HPV vaccine demonstration project
Goal of secondary prevention program

To identify and treat precancer on a population scale
Programmatic decisions that must be made (1)

• Key decisions:
  – Target age range
  – Screening interval
  – Population-level coverage (>80%)
  – Screening method(s)
  – Treatment method(s)

• Project estimated # screening tests and treatment procedures
Programmatic decisions that must be made (2)

• Key decisions:
  – Target age range
  – Screening interval
  – Population-level coverage (>80%)
  – Screening method(s)
  – Treatment method(s)

• Project estimated # screening tests and treatment procedures
## Demographics

**Females by age and HIV status (2011)**

<table>
<thead>
<tr>
<th>Age groups</th>
<th>Population (2011)</th>
<th>HIV prevalence (%)</th>
<th>HIV +</th>
<th>HIV-</th>
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</thead>
<tbody>
<tr>
<td>25-29</td>
<td>88,481</td>
<td>41.9</td>
<td>37074</td>
<td>51,407</td>
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<tr>
<td>30-34</td>
<td>73,897</td>
<td>43.1</td>
<td>31850</td>
<td>42,047</td>
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<tr>
<td>35-39</td>
<td>56,004</td>
<td>39.2</td>
<td>21954</td>
<td>34,050</td>
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<tr>
<td>40-44</td>
<td>40,537</td>
<td>27.9</td>
<td>11310</td>
<td>29,227</td>
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<tr>
<td>45-49</td>
<td>32,925</td>
<td>26.9</td>
<td>8857</td>
<td>24,068</td>
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</tbody>
</table>
### Scenarios by age groups in Botswana*

<table>
<thead>
<tr>
<th>Age range</th>
<th># WOMEN TO SCREEN (80% in target age group)</th>
<th>TOTAL SCREEN TESTS (during 5 years)</th>
<th># screening tests (per year)</th>
<th>TOTAL ABNORMAL SCREENING RESULTS (during 5 years)</th>
<th># LEEP (during 5 years)</th>
<th># cryo-therapy (during 5 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-39</td>
<td>103,921</td>
<td>112,886</td>
<td>22,577</td>
<td>8,965</td>
<td>7,531</td>
<td>1,434</td>
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<tr>
<td>35-44</td>
<td>136,350</td>
<td>147,412</td>
<td>29,482</td>
<td>11,061</td>
<td>9,292</td>
<td>1,770</td>
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<tr>
<td>30-49</td>
<td>162,690</td>
<td>175,412</td>
<td>35,082</td>
<td>12,722</td>
<td>10,687</td>
<td>2,036</td>
</tr>
</tbody>
</table>

*Table reflects numbers for 80% coverage in the respective target age groups using population and HIV data from the 2011 national census.

~28,000 Paps/ year  
~7,000 VIAs/year
SCREENING/TREATMENT ALGORITHMS CAN GUIDE INVESTMENTS
SECONDARY PREVENTION ALGORITHMS
PAST

SCREENING METHOD
(+ test)

Pap smear
(cytology)

DIAGNOSIS

Colposcopy & biopsy

HISTOLOGY
needed

TREATMENT

Cold knife conization
(hospital/gen anesthesia)

HISTOLOGY
needed
SECONDARY PREVENTION ALGORITHMS
NEW STRATEGY

SCREENING METHOD
(+ test)
- Pap smear (cytology)
- Visual inspection with acetic acid (VIA)

DIAGNOSIS
- Colposcopy & biopsy
  - HISTOLOGY needed

TREATMENT
- Cold knife conization (hospital/gen anesthesia)
  - HISTOLOGY needed
- LEEP
  - HISTOLOGY needed
- Cryotherapy
SCREENING METHOD
(+ test)

Pap smear (cytology)

Visual inspection with acetic acid (VIA)

HPV DNA testing

DIAGNOSIS

Colposcopy & biopsy

HISTOLOGY needed

TREATMENT

Cold knife conization (hospital/gen anesthesia)

HISTOLOGY needed

LEEP

HISTOLOGY needed

VIA skills needed

Cryotherapy

VIA skills needed
Systems investments sensible for now and for the future

1. Histology laboratory services (i.e., pathology)

2. Equipment for outpatient treatment (cryotherapy & LEEP machines)

3. VIA training for health care workers
Recommendations for strategy creation

1. Assess your current situation
2. Consider hiring program manager
3. Bring together a strong representative stakeholder Technical Working Group to agree on strategy decisions
4. Plan on holding a series of stakeholder meetings to make decisions (target age, target numbers, algorithms, investments, M&E)
5. Keep MOH Permanent Secretary and high level officials informed during strategy process
6. Realise final document drafting is back and forth process; takes time
Acknowledgements

• Pink Ribbon Red Ribbon
• CDC
  – Botswana
  – Atlanta
• Botswana UPenn Partnership
• National HIV/AIDS Coordinating Agency
Thank you