PROGRESS IN IMPLEMENTING VIA SCREENING IN BANGLADESH

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Disclosures

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- Ministry of Health and Family Welfare, Peoples Republic of Bangladesh
- UNFPA
- Bangabandhu Sheikh Mujib Medical University, Bangladesh

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INCIDENCE OF FEMALE CANCER IN BANGLADESH
GLOBOCAN 2012

Incidence

- Breast: 13,539 (21.8%)
- Oesophagus: 14,836 (23.9%)
- Cervix uteri: 1,858 (3.0%)
- Lung: 2,123 (3.4%)
- Lip, oral cavity: 2,528 (4.1%)
- Lip, oral cavity: 2,912 (4.7%)
- Other pharynx: 3,430 (5.5%)
- Stomach: 3,495 (5.6%)
- Gallbladder: 5,342 (8.6%)
- Other and unspecified: 11,956 (19.3%)

International Agency for Research on Cancer
World Health Organization
ORIENTATION MEETING ON CC SCREENING (OCT, 2003)
VIA - VISUAL INSPECTION OF CERVIX WITH ACETIC ACID (VIA)

- Process - Swabbing the cervix with 5% acetic acid solution
- Precancerous cell structure temporarily turn white
- Can be easily identified by trained Doctors/ Nurses/ Paramedics
- Relatively simple / low-Cost / Minimum infrastructure
- Results - available immediately
PILOT PROGRAM (2005) IN 16 DISTRICTS

TRAINING OF MASTER TRAINERS (N = 25)

15 days training at BSMMU Colposcopy Clinic
Training of Service Providers (n=113)
District Hospital – 2 Consultant or MO - 1 Nurse, MCWC - 1 MO and 2 FWV
All ever-married women aged 30 years and above

Findings

Normal: VIA -ve
Repeat VIA after 3 years

Abnormal: VIA +ve
BSMMU - Medical Colleges for Colposcopy
Treatment if necessary and examination of tissue
ACTIVITIES OF SERVICE DELIVERY POINTS

Women Getting message

Group Counseling

Message Board

Brochure
AWARENESS RAISING ACTIVITIES

Orientation Meetings / Development of IEC Materials
MOHFW decided to expand the VIA programme and included CBE and SBE to all the districts, selected upazillas and unions.

Establish Referral Services for Cervical and Breast Cancer Screening at BSMMU and government medical college hospitals.

UNFPA agreed to help GOB to implement this programme.
WOMEN ARE GIVEN A BLUE CARD (VIA –VE & CBE –VE CARD) AND ADVISED TO COME FOR TEST AFTER 3 YEARS.
<table>
<thead>
<tr>
<th>Date</th>
<th>VIA</th>
<th>Colposcopy/Biopsy</th>
<th>Treatment</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Diagnosis</th>
<th>Treatment</th>
</tr>
</thead>
</table>
RECORD KEEPING
COLPOSCOPY REGISTER
i) To establish a full-fledged National Centre for Cervical and Breast Cancer Screening and Training Programme - quality control and coordination of the relevant services.

ii) To support capacity development of service providers

iii) To strengthen the capacity of BSMMU and government MCHs for referral services
VIA CENTERS IN BANGLADESH

- BSMMU, MCHs - 15
- District Hospitals - 57
- MFSTC, MCHTI, MCWC - 61
- UHC (subdistrict level) - 191 out of 482
- UH&FWC - 40 out of 3725
- NGOs - 20

Trained service providers: 1731
Doctors = 343
Nurses/FWVs/Paramedics = 1388

N = 384
PERFORMANCE OF VIA IN BANGLADESH
Jan’05 to Dec’ 2016

N = 1386807
Ve+ 65747

Total VIA
VIA+ve

11693 21609 40785 61648 84426 97539 109547 112091 152085 195067 270542 229775
548 925 1918 3181 3652 4885 5698 5971 8361 10214 11239 9155

4.7% 4.3% 4.7% 5.2% 4.3% 5% 5.2% 5.3% 5.5% 5.2% 4.2%

IFCPC2017 World Congress
Year 1993 – Pap Smear
Year 1995 - Colposcopy clinic, facilities of cone biopsy and LEEP (under GA)
Year 2004-5 – Initiated Training on VIA
Year 2006 – Initiated Training on colposcopy
Year 2006 - LEEP (under LA)
Year 2007 - Cryotherapy
2010 - Thermo-coagulation
2012 – Initiated Establishment of national centre through a development project with MOHFW
BASIC / ADVANCED COLPOSCOPY TRAINING

Postgraduate Gynaecologists / Nurses From BSMMU and MCHs/ DHs

- 2006 - 18
- 2007 - 19
- 2008 - 13
- 2009 - 17
- 2010 - 12
- 2011 - 13
- 2012 - 10
- 2013 - 6
- 2014 - 12
- 2015 - 17
- 2016 - 13
TOTAL = 160
EXISTING COLPOSCOPY CLINICS

BSMMU, DMCH, SSMCH, MMCH, SBMCH, SMAGOMCH, CMCH, RMCH, RjMCH, FMCH, CoMCH, BSZMCH, KMCH, DjMCH, SSuMCH

Developing COLPOSCOPY CLINICS:

Pabna MCH, Cox’s Bazar MCH, Jamalpur MCH, Kustia MCH, Potuakhali MCH, Gazipur MCH and Feni MCH, Jessore MCH and so on …
VIA+VE REFERRED WOMEN ATTENDING THE COLPOSCOPY CLINIC OF BSMMU (JAN 05 TO DEC 16)

N=20776
COLPOSCOPY FINDINGS OF REFERRED PATIENTS- BSMMU (JAN 05 TO DEC 16)

- Normal: 9602, 46%
- CIN-I: 7407, 36%
- CIN-II&III: 1412, 7%
- Ca-cervix: 1958, 9%
- Unsatisfactory: 397, 2%

N=20776
MANAGEMENT OF CIN-LEEP
The Teflon-coated thermosounds are heated to a temperature of up to 120°.

It then transfers the heat to surrounding tissues through conduction and allows **ablation of cervical lesions** by boiling.

The aim is to destroy the wholeTZ, using overlapping areas of coagulation.
THERMO-COAGULATION : ADVANTAGES

- Light equipment and easy portability
- Easy sterilization
- Less treatment time/ No need for local anaesthesia
- Electricity as treatment agent
- Does not damage the thread of IUCD
- No noise/smoke/smell of burning tissue during treatment
- Tolerable discomfort
- Safe, acceptable, effective treatment, complications and adverse effects are minimal
- Minimal infrastructural requirements,
- Can be used by mid-level providers
Efficacy of *Thermo-coagulation* in Curing Cervical Cancer Pre-cancer Lesions

<table>
<thead>
<tr>
<th>Findings</th>
<th>Total Number</th>
<th>Number assessed</th>
<th>Cured</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIN 1</td>
<td>1,272</td>
<td>539</td>
<td>471 (87.4%)</td>
</tr>
<tr>
<td>CIN 2</td>
<td>221</td>
<td>137</td>
<td>113 (82.5%)</td>
</tr>
<tr>
<td>CIN 3</td>
<td>121</td>
<td>95</td>
<td>79 (83.2%)</td>
</tr>
</tbody>
</table>

*Source: Results from India, Bangladesh and Brazil*
## MANAGEMENT - BSMMU (JAN 05 TO DEC 16)

<table>
<thead>
<tr>
<th>Management of Women</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow-up after 3 years</td>
<td>8787 (42.00%)</td>
</tr>
<tr>
<td>Follow-up after 1 year</td>
<td>2659 (12.80%)</td>
</tr>
<tr>
<td><strong>LEEP Biopsy</strong></td>
<td><strong>3101 (15.00%)</strong></td>
</tr>
<tr>
<td>Cryotherapy</td>
<td>131 (0.60%)</td>
</tr>
<tr>
<td><strong>Thermo-Coagulation</strong></td>
<td><strong>2197 (10.60%)</strong></td>
</tr>
<tr>
<td>Referred due to Cancer</td>
<td>1155 (5.50%)</td>
</tr>
<tr>
<td>Failure of treatment and follow-up</td>
<td>2746 (13.50%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20776 (100.00%)</strong></td>
</tr>
</tbody>
</table>
TREATMENT FACILITIES OF CANCER PATIENTS

Surgery:
• Cancer Institute
• BSMMU
• 7 out of 14 Govt Medical College Hospitals
• Few Private Medical College Hospitals

Radiotherapy –

Teletherapy
• Cancer Institute
• 7 Medical College Hospitals
• Delta Medical centre, Khaja Yunus Ali MCH (Sirajgonj)/ Square hospital/ United hospital

Brachytherapy
• Cancer Institute / BSMMU
• Delta Medical centre,
• Khaja Yunus Ali MCH / United hospital
## Radiotherapy Facilities available in Bangladesh

<table>
<thead>
<tr>
<th>Institutes/ Medical College Hospital (MCH)</th>
<th>Linear Accelerator</th>
<th>Co60 Teletherapy</th>
<th>Bethterapy</th>
<th>Simulator</th>
<th>Treatment Planning System</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICRH, Dhaka</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Khwaja Yunus Ali MCH</td>
<td>2</td>
<td>0</td>
<td>1, lr192</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Dhaka MCH</td>
<td>1</td>
<td>1 (non-functional)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>BSMMU</td>
<td>1 (in process)</td>
<td>0</td>
<td>1+1 (in process)</td>
<td>1 (in process)</td>
<td>1 (in process)</td>
</tr>
<tr>
<td>Chittagong MCH</td>
<td>0</td>
<td>1 (NF)</td>
<td>1 (Under installation)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SBMCH, Barisal</td>
<td>0</td>
<td>1 (NF)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mymensingh MCH</td>
<td>0</td>
<td>1 (NF)</td>
<td>1 (Under process)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sylhet MAGOMCH</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rajshahi MCH</td>
<td>0</td>
<td>1 (NF)</td>
<td>1 (FU)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rangpur MCH</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Delta Oncology, Centre, Dhaka</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ahsania Missain Cancer Hospital</td>
<td>1 (in process)</td>
<td>0</td>
<td>1 (in process)</td>
<td>1 (in process)</td>
<td>1 (in process)</td>
</tr>
<tr>
<td>Square Hospital</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>United Hospital</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Khulna MCH</td>
<td>1 (in process)</td>
<td>0</td>
<td>0</td>
<td>1 (in process)</td>
<td>1 (in process)</td>
</tr>
<tr>
<td>Shaheed Ziaur Rahman MCH</td>
<td>1</td>
<td>0</td>
<td>1 (in process)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Enam MCH, Savar</td>
<td>1 (in process)</td>
<td>0</td>
<td>1 (in process)</td>
<td>1 (in process)</td>
<td>1 (in process)</td>
</tr>
<tr>
<td>North East MCH, Sylhet</td>
<td>1 (in process)</td>
<td>0</td>
<td>1 (in process)</td>
<td>1 (in process)</td>
<td>1 (in process)</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>
### CENSUS ADJUSTED POPULATION (IN MILLION)

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>75.0</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>74.8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 30 years</td>
<td>21.4</td>
<td>6.0</td>
</tr>
<tr>
<td>30-49 years</td>
<td>13.7</td>
<td>4.2</td>
</tr>
</tbody>
</table>

**Source:** Gender Statistics of Bangladesh-2012, Population Census, BBS
KEY CHALLENGES

- Lack of organized population based screening
- Low population coverage
  - Inadequate BCC activities / Media coverage
  - Improper placement of trained service providers
  - Transfer of trained service providers
  - Lack of co-ordination - supervision & monitoring
  - Less referral system for colposcopy and treatment from upazila level
  - Inadequate treatment facilities – both CIN / Cancer
DGHS MIS incorporated a template up to sub-district level in the system – to develop a database compatible to DHIS2 containing the following:-

- Basic demographic data of 30+ women
- Results from the screening, colposcopy, management and follow-up

Training of statisticians/nurses/doctors/colposcopists on developed template is necessary
1. **Extend services to remaining subdistrict centres (N=300)**
2. Designated ‘VIA and CBE’ room / ‘VIA and CBE’ room - open in all working days
3. Proper placement of trained service providers
4. Training more doctors and nurses.
5. **Orientation / out reach clinics**
6. Agenda in monthly meeting at DH and subdistricts.
7. Referral from grass root level by field workers and CHCPs
Enhance the BCC activities among outdoor and indoor patients along with their attendants.

Involve HA, FWA, CHCP and community support groups in BCC activities in Uthan Bhaithak, EPI session, CC and community.

Media campaign - Radio/TV and Newspaper, TV commercials, Drama
SOCIAL MARKETING - VIA AND CBE OUT REACH CLINICS

- Outreach clinics at subdistrict / district Level / remote places
- Advertisement through local cable line
- Mike announcement at community
- Leaflet
Before January 2010

- VIA Positive
- Colposcopy
- Abnormal findings in Colposcopy
- Punch Biopsy
- Histology confirmed high grade CIN cases treated by LEEP

From January 2010

- VIA Positive
- Colposcopy
- Colposcopy diagnosed high grade CIN
- LEEP or Thermo Coagulation
# The Gynocular versus a standard colposcope

<table>
<thead>
<tr>
<th></th>
<th>Gynocular</th>
<th>Colposcope</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focal distance (mm)</strong></td>
<td>300 mm</td>
<td>300 mm</td>
</tr>
<tr>
<td><strong>Magnification (x) 5</strong></td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td><strong>Field of view (mm) 40</strong></td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td><strong>Resolution (LP/mm) b 25</strong></td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td><strong>Light source</strong></td>
<td>LED</td>
<td>Fiberoptic</td>
</tr>
<tr>
<td><strong>Green filter</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Weight (gram) 420</strong></td>
<td></td>
<td>8,000</td>
</tr>
<tr>
<td><strong>Energy source</strong></td>
<td>Rechargeable battery</td>
<td>Electrical grid</td>
</tr>
</tbody>
</table>
VIA nurses can be trained to perform colposcopy - at rural set-up

The human resource gap in low resource settings may be reduced by nurse-colposcopist teams

**Cold Coagulator for treatment** of cervical pre-cancer at selected subdistrict centres and DHs and VIA Camp
ACKNOWLEDGEMENTS

- Ministry of Health and Family Welfare
- Directorate General of Health Services
- Directorate General of Family Planning
- UNFPA Bangladesh/ WHO Bangladesh
- International Agency for Research on Cancer (IARC)
- All Govt. Health Institutes (UHFWCs, UHCs, DHs, MCWCs, MCHs and specialized institutes)
- Authority and colleagues of BSMMU
- All Doctors, Secretarial Support and support staffs of the programmes
- Women / patients
Thank you very much