PREVENTION & CARE FOR WOMEN

CERVICAL CANCER SCREENING PILOT PROGRAM
A weak adversary

Although it is one of the most common cancers that affect women, Cervical Cancer is an adversary that can be defeated. All it needs is a little care and lots of awareness.

Pathology of the disease

Cervix is the mouth of the uterus. In sexually active women, due to the repeated erosions and the injuries caused during deliveries, the normal cells in the cervical region specially the squamocolumnar junction can undergo physiological change to a dysplastic cell. A virus (HPV), which may normally exist in the Genital tract of either sex, can be transmitted to each other during sexual intercourse. This HPV can increase the chances of this transformation of a normal cell to a dysplastic cell. Various factors such as smoking, drug abuse, poor personal hygiene, poor socio economic status, coitus before 18 yrs of age, multiple sexual partners, delivery of first baby before 20 yrs of age, multiparity, std infections including HIV, immuno suppression can increase the propensity of infection with HPV, and thereby Cervical Cancer. Any sexually active woman irrespective of the presence of the above factors are is susceptible to this cancer.
Present Scenario

The statistics are not heartening - yet. In India, Cervical Cancer kills a woman every seven minutes. In Tamil Nadu, Cervical Cancer is the second most common cancer to affect women, especially those in rural areas. Eighty per cent of women in the low socio-economic strata are at risk owing to the lack of awareness regarding the disease and the services available to combat the disease.

- 1,32,082 women affected by Cervical Cancer every year in India.
- 74,118 women die of the disease every year in India.
- 4,93,243 women affected by Cervical Cancer every year in the world.
- 2,73,505 women die of the disease every year in the world.

(According to the National Cancer Registry Programme by Indian Council of Medical Research in the year 2007 supported by WHO)

![Incidence of Cervical Cancer cases](image)

**Incidence of Cervical Cancer cases**

- India - 27%
- World - 73%

![Incidence of Cervical Cancer deaths](image)

**Incidence of Cervical Cancer deaths**

- India - 27%
- World - 73%

Combat strategy : Early detection

As Cervical Cancer has a very long precancerous period, generally 10 to 15 years, it provides a considerable window of opportunity to detect it and treat it completely. Thus, early detection of the pre-malignant conditions allows the disease to be cured completely. If regular screening is made part of the routine check-up of all women who are susceptible, the onset of cancer can be detected and combated effectively.
Pilot project on Cervical Cancer prevention

Having made considerable strides in combating communicable diseases over the last few decades, Tamil Nadu focused its attentions on the healthcare burden of non-communicable diseases, like cardiovascular diseases and communicable diseases like various cancers which where not given prime focus earlier. As Cervical Cancer is the second most common cancer to affect women in Tamil Nadu, a project to combat the disease was conceptualized.

<table>
<thead>
<tr>
<th>District</th>
<th>Number of women affected (per lakh of population per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Villupuram</td>
<td>31.1</td>
</tr>
<tr>
<td>Cuddalore</td>
<td>29.9</td>
</tr>
<tr>
<td>Thiruvellore</td>
<td>28.6</td>
</tr>
<tr>
<td>Chennai</td>
<td>27.2</td>
</tr>
</tbody>
</table>

(Source: National Cancer Registry Programme, ICMR 2001 supported by WHO)

The idea of implementing the pilot was to provide the Government with an evaluated experience that brings the feasibility of using the visual methods as a screening tool on a large scale and to incorporate the same in the existing Govt Health System.

Protocol to screen for Cancer Cervix was developed by the experts from TNHSP, vetted by Tata Memorial Cancer Institute from Bombay, peer reviewed by the Institutional Board, Madurai Medical College.

Screening tool used

Using the VIA / VILI method under magnification.
Why VIA VILI works as a better screening procedure than Pap smear?

<table>
<thead>
<tr>
<th>Pap Smear</th>
<th>VIA / VILI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requires a Gynaecologist to perform the test.</td>
<td>Even a Paramedic can perform the test.</td>
</tr>
<tr>
<td>Sample has to be preserved and sent for a HistoPathologic Examination.</td>
<td>Can be performed as an op procedure.</td>
</tr>
<tr>
<td>Requires Cytotechnicians and lab support to read the slides.</td>
<td>Does not require cytotechnicians and lab support.</td>
</tr>
<tr>
<td>Pathologist required to interpret results.</td>
<td>Results interpreted on the spot.</td>
</tr>
<tr>
<td>Is a lengthy procedure. Results may take weeks to be reported.</td>
<td>Results can be read on the table, almost immediately.</td>
</tr>
<tr>
<td>Women may be required to come for a follow up to get the pap results.</td>
<td>Women not lost for follow-up, as the results are instant.</td>
</tr>
<tr>
<td>Specificity is higher</td>
<td>Highly sensitive and low rate of false negatives.</td>
</tr>
<tr>
<td>Moderate to low sensitivity and high rate of false negatives.</td>
<td></td>
</tr>
</tbody>
</table>

Pilot Districts

Theni and Thanjavur, being agricultural districts with a high proportion of rural population, were chosen as the two districts to pilot the Cervical Cancer project.
The strategy was two pronged

- Primary intervention focused on creating awareness in the community.
- Secondary intervention aimed at screening for early detection, referral and management.

Primary Intervention

The aim of the pilot project was to ensure that every woman above the age of 30 in Theni and Thanjavur, irrespective of the presence of any symptoms was aware of Cervical Cancer and underwent voluntary screening to ensure detection as early as possible. Hence, the awareness campaign focussed on the following key messages to sensitize the entire community on all aspects with respect to Cervical Cancer and the pilot programme.
**Key messages of the awareness campaign**

- Burden of Cervical Cancer
- Risk factors for Cervical Cancer
- Early detection and screening
- Creating awareness on difference between pre-malignant and malignant conditions and emphasis on complete cure, if detected at an early stage
- Free screening centers and services provided by Government with regards to the Cervical Cancer
- Only female doctors and Staff are involved in screening

**Secondary intervention**

The secondary intervention focused on early detection, referral, and management.

As per the Programme, all women within the age group of 30 – 60 years are initially screened for Cancer Cervix by VIA (Visual Inspection with Acetic Acid) and VILI (visual inspection with Lugols Iodine) tests under magnification and if the tests prove to be positive, they are referred for Colposcopic evaluation and confirmation. If the Colposcopic evaluation turns out to be positive, then biopsy is done and the specimen is sent for histopathological examination. Based on the histopathological examination, the confirmation & grading of Cervical Cancer is done and the treatment is started accordingly.

This pilot screening programme was carried out in 58 Primary Health Centres, 13 Government Hospitals, and 1 Government Medical College and Hospital in Thanjavur District and 27 Primary Health Centres, 6 Government Hospitals and 1 Government Medical College and Hospital in Theni District.
Protocol of the cervical cancer pilot programme

- Vilage link volunteer (VLV) placed in every health sub center motivates target women (30 - 60 years) in field
- Target woman provided with a referral card
- Woman goes to the screening centre and meets Counsellor cum Assistant (CCA) placed in every screening centre
- Women screened using VIA / VILI procedure by female doctors and paramedicals in all PHCs, Govt hospitals and Govt Medical college hospitals
- A copy of the patient card maintained at the institution
- If test turns negative, the woman advised to come for regular screenings
- If tests turns positive, indicates the possibility of presence of cancerous and precancerous lesion.
- Women referred for colposcopy
- Positive colposcopy confirms the presence of cancerous and precancerous lesions
- Biopsy / ECC performed and specimen sent for histo-pathological examination
- Confirmation and grading done
- Results dispersed to the OG Dept / Cancer Control Officer and subsequently to the patient
- Treatment provided by Specialists from various departments of the Medical Colleges
Equipments

The Equipments provided includes the following:

- One VIA / VILI kit including the ring lens magnification system provided to each of the 106 Health facilities.
- 2 Colposcopy Instruments provided to each of the Colposcopic Centers (totally three Colposcopic Centers in each district).
- 2 Endocervical Currettes provided to each of the Colposcopic Centers.
- 5 Cryotherapy Units provided to each District
- One computer is provided for storage of datas in each district.

Roles and responsibilities

State Coordinator (state-level) Part of the Project Management Unit
Diverted from the Tamil Nadu Medical services on regular service /contract
Co-ordinates and monitors all the activities at the state level

Cancer Control Officer (CCO) (district-level) Part of District Project Management Unit
Diverted from the Tamil Nadu Medical services on regular service / contract
coordinates and monitors all the activities at the district level

NGOs Contracted to recruit the Village link volunteers (VLV) & Counselor-cum-assistants (CCA) and monitor their work and to coordinate the programme with the Cancer Control Officer (CCO)

Counselor-cum-assistant (One at every screening centre.) To motivate the women attending the out-patient dept and would guide the women who come for screening after having been motivated by the VLVs (A graduate from any field)

Village Link Volunteer (One at every health sub centre.) To motivate the women in the field (Would have under gone basic schooling)

<table>
<thead>
<tr>
<th></th>
<th>Thanjavur</th>
<th>Theni</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGOs</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>CCAs</td>
<td>72</td>
<td>34</td>
</tr>
<tr>
<td>VLVs</td>
<td>309</td>
<td>160</td>
</tr>
</tbody>
</table>
Training

- VLVs and counselors were sensitized regarding the program during the start of the pilot and then re-sensitized twice a year thereafter.
- Information, education, and counseling materials were provided to all the VLVs, CCAs and the Health Institutions.
- Registers, forms were provided once during the start of the program and thereafter as and when required.
- All the doctors, SNs, ANMs were trained in VIA / VILI technique considering their training status during the start of the program and then as and when required.
- All the OG Specialists were trained in Colposcopy / Cryotherapy technique irrespective of their training status during the start of the program and then as and when required.

Monitoring and Evaluation

Concurrent evaluation was done by National Institute of Epidemiology (Indian Council of Medical Research)

Important findings of the evaluation and the efforts taken simultaneously by Health Systems that helped in executing the pilot smoothly

<table>
<thead>
<tr>
<th>Findings by NIE</th>
<th>Efforts taken by TNHSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of community based IEC and weak hospital based IEC</td>
<td>New set of IEC materials prepared focussing equally on community and hospitals</td>
</tr>
<tr>
<td>Reporting errors at all levels</td>
<td>Monitoring from project management unit strengthened at both district and state level</td>
</tr>
<tr>
<td>Inflation of reports</td>
<td>Field surveys conducted by PMU twice to check out the real picture and efforts taken to bring out the actual reporting</td>
</tr>
<tr>
<td>Variations in VIA / VILI sensitivity between districts</td>
<td>Frequent senstization of MOs and Paramedicals done on this issue</td>
</tr>
<tr>
<td>Lack of reporting from Pathology Department</td>
<td>Separate reporting format designed and collected</td>
</tr>
<tr>
<td>Lack of regular payment to VLVs &amp; CCAs by NGOs in Thanjavur</td>
<td>Respective NGOs sacked and the field workers brought under new NGOs</td>
</tr>
<tr>
<td>Persistent vacancies of VLVs in remote areas in Theni</td>
<td>The number of the NGOs was increased from one to six (one NGO per block) Inspite of that VLVs vacancies remained persistent So services of all NGOs terminated and VLVs brought under the joint control of Deputy Director of Health Services &amp; District Maternal Child Health Officer</td>
</tr>
<tr>
<td>Increased biopsy turnover time in Theni</td>
<td>Reporting strengthened at MC level OG Specialists sensitized to take adequate biopsy specimens Lab technicians given training on processing the specimens periodically To have regular quality check of slides in Madurai MC considered</td>
</tr>
</tbody>
</table>
Cost evaluation

Cost evaluation was done by Public Health Foundation of India

The cost study showed that the pilot program provided a unique low cost screening opportunity for rural population in India at Rs. 102 per person screened for cancer cervix. However, given the low treatment coverage (13% for CaCx), these remain expensive in terms of cost per case treated. Thus the pilot indicates a potential or replication and scale up of the program within existing health systems, provided sufficient follow-up is ensured to treat those screened by the program.

Project Achievement

<table>
<thead>
<tr>
<th>Categories</th>
<th>Thanjavur</th>
<th>Theni</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of target women screened</td>
<td>2,91,525</td>
<td>1,96,559</td>
</tr>
<tr>
<td>Total number of VIA / VILI positive</td>
<td>15,743</td>
<td>5,090</td>
</tr>
<tr>
<td>Total number of Colposcopy done</td>
<td>8,577</td>
<td>3,195</td>
</tr>
<tr>
<td></td>
<td>Satisfactory</td>
<td>6,909</td>
</tr>
<tr>
<td></td>
<td>Unsatisfactory</td>
<td>1,668</td>
</tr>
<tr>
<td>Total number of biopsies done</td>
<td>3,856</td>
<td>1,489</td>
</tr>
<tr>
<td>Total number of endo cervical currettagge done</td>
<td>479</td>
<td>0</td>
</tr>
<tr>
<td>Total number of CIN I cases</td>
<td>177</td>
<td>16</td>
</tr>
<tr>
<td>Total number of CIN II &amp; III cases</td>
<td>91</td>
<td>12</td>
</tr>
<tr>
<td>Total number of Frank / Invasive Carcinoma cases</td>
<td>674</td>
<td>213</td>
</tr>
<tr>
<td>Total number of Cryotherapy done</td>
<td>31</td>
<td>3</td>
</tr>
<tr>
<td>Total number of Conization done</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Total number of Hysterectomy done</td>
<td>180</td>
<td>30</td>
</tr>
<tr>
<td>Total number of Palliative care given</td>
<td>300</td>
<td>43</td>
</tr>
</tbody>
</table>

The confirmed Cervical Cancer cases are tied up with "Kalaignar Insurance Scheme“ and are offered free treatment in Public and Private Empanelled Hospitals.

Upscaling

The upscaling of this pilot will be undertaken in a phased manner over a period of 2 years to all other districts of Tamil Nadu.
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