HIV Testing Policy in INDIA

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VCTC as ICTC: Widening the Umbrella

- Today ICTCs in India – 4905
- Over 9 million tested for HIV in year 2008
- Under NACP-III, the target is to counsel and test 22 million clients annually by the year 2012.
HIV Testing Strategies
Strategy I

<table>
<thead>
<tr>
<th>Objective of testing</th>
<th>Prevalence of infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfusion or donation safety</td>
<td>All prevalence</td>
</tr>
<tr>
<td>Surveillance</td>
<td>&gt;10%</td>
</tr>
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</table>

ELISA / RAPID
### Strategy II

<table>
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<tr>
<th>Objective</th>
<th>Prevalence</th>
</tr>
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<tbody>
<tr>
<td>Surveillance</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Symptomatic patients</td>
<td>All prevalence</td>
</tr>
<tr>
<td>Asymptomatic patients</td>
<td>&gt;10%</td>
</tr>
</tbody>
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**Methods:**
- ELISA/ RAPID
- Reactive

**Note:**
Different system (different antigen and principle)
## Strategy III

<table>
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<tr>
<th>Objective of testing</th>
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<td>Asymptomatic patients</td>
<td>&lt;10%</td>
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**ELISA/ RAPID**

- REACTIVE

- Different system (different antigen and principle)
  - REACTIVE

- Third system (of different antigen and principle)
Tests Employed in Our Setup

- Each sample tested by 3\textsuperscript{rd} generation ELISA (Window period 3-4 weeks)
- Positive samples undergo ELISA using different principle and Tridot which can differentiate HIV1 and HIV2
- Dry Blood Testing- done for screening FSW and MSM
- Western Blot- available only at few apex institutes
Indian Scenario
Estimates of HIV burden in India (2007)

Total no of people with PLHA - 2.5 million

Adolescents make up 25% of country’s population but they account for 31% of AIDS burden.
Adult HIV prevalence, 2006-2007
Distribution of PLHA among high burden states 2007

- AP: 21%
- Maharashtra: 20%
- Karnataka: 11%
- West Bengal: 10%
- Tamil Nadu: 8%
- Gujarat: 6%
- Uttar Pradesh: 4%
- Guj: 6%
- TN: 8%
- Other States: 20%
- Rest of States: 11%
HIV prevalence among different population groups in India (2007)

- ANC: 0.48%
- STD: 3.61%
- IDU: 7.23%
- MSM: 5.06%
- FSW: 3.61%
- Migrants: 3.61%
HIV prevalence in different groups in Gujarat

- MSM
- FSW
- ANC
- STD

- 2003: 4.47%
- 2004: 8.40%
- 2005: 6.53%
- 2006: 4.75%
- 2007: 2.40%
2008 DATA SSGH MCB

TOTAL NO.: 4086
TOTAL +VE: 530

AGE GROUP

<10 YEARS 10-19 YEARS >19 YEARS

NUMBERS

MALE
FEMALE

3.3% 3.5%

13 5 8 11 151 13
HIV TESTING AS A PREVENTIVE TOOL

- USA - 25% of HIV positive cases are not aware about their positivity
  - 40% are tested late (testing within 1 year prior to death)
- India - Only 13-25% of HIV +ve cases are knowing their status
  - People are tested late and less

Message
- Encourage early testing
- Referral to VCTC
- Early testing means an opportunity for prevention and treatment

“Take Test, Take Control”

Delayed Diagnosis: Missed Opportunity
When and why of HIV testing in adolescents

Reasons for testing (n=31)

<table>
<thead>
<tr>
<th>Reasons for testing</th>
<th>No. of cases (n=31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever / cough/ diarrhea</td>
<td>14 (45.1%)</td>
</tr>
<tr>
<td>Parents positive</td>
<td>07 (22.6%)</td>
</tr>
<tr>
<td>Spouse positive</td>
<td>01 (3.2%)</td>
</tr>
<tr>
<td>Tuberculosis (TB)</td>
<td>04 (12.9%)</td>
</tr>
<tr>
<td>Herpes zoster</td>
<td>04 (12.9%)</td>
</tr>
<tr>
<td>Other infections</td>
<td>01 (3.2%)</td>
</tr>
</tbody>
</table>

Late Testing: Loss of opportunity
### Clinical Stage at Time of Presentation

<table>
<thead>
<tr>
<th>Clinical stage</th>
<th>No. of cases (n=31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymptomatic</td>
<td>04 (12.9%)</td>
</tr>
<tr>
<td>Symptomatic</td>
<td>08 (25.8%)</td>
</tr>
<tr>
<td>AIDS</td>
<td>19 (61.2%)</td>
</tr>
</tbody>
</table>

- Early diagnosis and intervention may help to prevent developmental delay
- Treatment seeking behavior of the cases need to be modified

Early Diagnosis: Opportunity to intervene
REASONS FOR HIV TESTING IN WOMEN

- In 51% cases, testing was carried out because of unexplained illness, suggesting late testing.
- 49% were subjected to testing because either their spouse or child were positive / as a part of antenatal or as a pre-operative workup.
- Usually females are tested less and late.
### AGE - WISE DISTRIBUTION (n=357)

<table>
<thead>
<tr>
<th>Age Group (years)</th>
<th>No. of Females</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15</td>
<td>20</td>
<td>5.6</td>
</tr>
<tr>
<td>16-30</td>
<td>164</td>
<td>45.9</td>
</tr>
<tr>
<td>31-45</td>
<td>141</td>
<td>39.5</td>
</tr>
<tr>
<td>&gt;45</td>
<td>32</td>
<td>9.0</td>
</tr>
<tr>
<td>Total</td>
<td>357</td>
<td>100</td>
</tr>
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</table>

- 46% females were in the age group of 16-30 years.
- All these females were having potential for conception and thereby vertical transmission.
MARITAL STATUS OF HIV POSITIVE WOMEN

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Present study</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>277</td>
<td>77.5</td>
</tr>
<tr>
<td>Widow</td>
<td>44</td>
<td>12.3</td>
</tr>
<tr>
<td>Divorce</td>
<td>13</td>
<td>3.7</td>
</tr>
<tr>
<td>Unmarried</td>
<td>23</td>
<td>6.5</td>
</tr>
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<td><strong>Total</strong></td>
<td><strong>357</strong></td>
<td><strong>100</strong></td>
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The potential of intramarital HIV transmission is very high taking into account unprotected sexual activity in married couples and high-risk behaviour of male spouses.

The commonest mode of HIV transmission in our country is marital sex.
DETAILS OF SEXUAL ACTIVITY AFTER KNOWING HIV STATUS

<table>
<thead>
<tr>
<th>Sexual activity</th>
<th>No. of females</th>
<th>Present study % age</th>
<th>RN Gupta et al % age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stopped intercourse</td>
<td>31</td>
<td>37</td>
<td>43</td>
</tr>
<tr>
<td>Continued with condom</td>
<td>25</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>Continued without condom</td>
<td>27</td>
<td>32</td>
<td>22</td>
</tr>
<tr>
<td>Total Females</td>
<td>83</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

“Behind most females with AIDS there is a male without condom”
105 HIV positive married females were enrolled

Their spouses were tested for HIV

Seroconcordance i.e. seropositivity in both partners was observed in 60%.

53% of females and 36% of males in the seroconcordant group had STDs that was significantly high (P<0.0001, C.I.=95%) compared to STD rate in the serodiscordant group.

In serodiscordant group, circumcision was observed in more number of cases (37%), than seroconcordant group (6.50%).
Prevention of Parent to Child Transmission (PPTCT)

Indian Scenario

- **27 million** new pregnancies per year
- **97,000** in HIV +ve mothers (prevalence- **0.36%**)
- **30,000** HIV infected babies (**25-30%** transmission rate)
- **< 5%** of all pregnant women receive HIV testing and counseling
- **< 5%** of HIV +ve pregnant women received ART
ISSUES RELATED TO PPTCT IN INDIA

CASE STUDY - 1

F/24, pregnant, tested +ve by ELISA, Husband -ve

As there was no risk factor and no evidence of STD in couple

Repeat ELISA in different lab. +ve

Western Blot -ve

Suggestive of false +ve ELISA due to pregnancy

Confirmation of HIV status is a must before starting ART
Blood safety

- One / 5000-10,000 bottles may be collected in window period.

- Presently >50% blood collected through replacement donor

As per a study HIV, HBV & Syphilis seropositivity is more from this group as compared to voluntarily donated blood

- Only 1% of healthy population of the country donates blood but according to WHO at least 5% of healthy population must donate blood.

No Transfusion is the Best Transfusion
Blood safety in SSG Hospital, Vadodara

<table>
<thead>
<tr>
<th>TOTAL UNITS COLLECTED (JAN-MAY 2009)</th>
<th>AVERAGE % OF VOLUNTARY DONORS</th>
<th>NUMBER OF HIV POSITIVES</th>
</tr>
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<tr>
<td>2681</td>
<td>48.32%</td>
<td>5</td>
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- All samples tested with 3rd generation ELISA and Rapid Test
- Single positive test- blood discarded
- HIV +ve in year 2008 among blood donors in SSG Hospital- 15
Miles to go...

- Widening the umbrella- testing and reporting
- Reducing the window period- advanced techniques
Thank you