

Research in the field of mother to child transmission of HIV – past experiences and future directions.



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Background

- Barbados is among the few developing countries, where PMTCT of HIV has received high priority.
- Program for the surveillance of the MTCT has been in operation since early nineties has facilitated vast amount of research in this field.

Background

- Surveillance of MTCT is useful for assessing the trends in HIV epidemics and effectiveness of the prevention programs.
- It is also useful in studying the trend in the over all HIV epidemics in the population.

Objectives

- ❑ describe the studies undertaken in the field of MTCT of HIV.
- ❑ highlight the salient findings from these studies in the context of the HIV prevention programs.
- ❑ outline the directions for future research.


Methods

- This report focuses on the period from 1994 through 2003.
- It is limited to the research in the field of MTCT of HIV in Barbados
- Need for future research and its directions were based on the ongoing program requirements and findings from the past research.

Methods

Studies covered in this presentation are those that

- have been presented at various regional and international conferences or
- have been published in international journal.

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- All the research in this area over the study period was reviewed for their background and objectives.
 - Their salient findings and its significance in the context of the over all HIV prevention program were reviewed.

HIV infection among children in Barbados.
1996

- We studied cohort of HIV infected children born between 181-95.
- To estimate the prevalence and characterize the course of this infection.
- Number of children infected with HIV increased from 5 during 1981-84 to 21 during 1990-95.
- Most deaths occurred in infancy secondary to PCP pneumonia.

Concluded

- that number of children with HIV infection was rising rapidly and was becoming an important cause of infant mortality and
- that over 95% of infections was from MTCT.

Kumar A, Presented at 43rd Scientific meeting, CCMRC, 1998.

Kumar A, St. John MA. West Indian Medical Journal 200; 49(1): 43

*Prevention of MTCT using ZDV (PACTG 012)
1998(interim analysis), 2001(final)*

- A cohort of HIV infected mother-infant pairs were studied to evaluate the efficacy of ZDV in PMTCT.
- Use of ZDV resulted in over two third reduction in the risk of transmission form the mother to the infant.
- All HIV positive mothers were advised against breast feeding.

Conclusion

- Use of ZDV was highly effective in reducing the MTCT of HIV to around 5% compared to nearly 30% before the use of ZDV.

St. John MA, Kumar A Presented at 44th CHRC meeting 1999.

St. John MA, Kumar A, Cave C. Pediatrics Infectious Disease Journal 2003, April.

Surveillance of perinatal HIV transmission.

1999



- ❑ To analyze the results of 10 years of PMTCT surveillance.
- ❑ Incidence of babies born to HIV infected mothers increased from 3.2 (1990) to 9.2 (1998) per thousand live births.
- ❑ Increasing repeat pregnancies among HIV infected women.

Conclusion

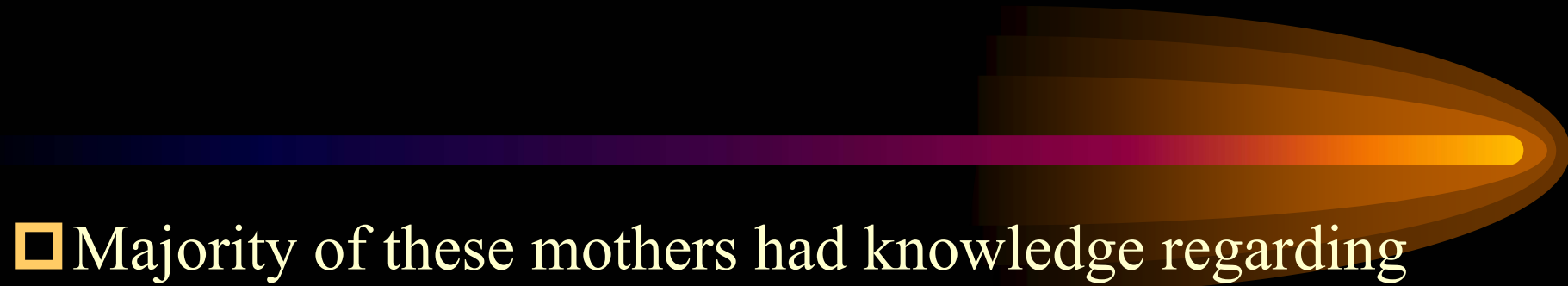
- increasing incidence of babies born to HIV infected women and
- much of these resulted from repeated pregnancies among the women know to be HIV infected.

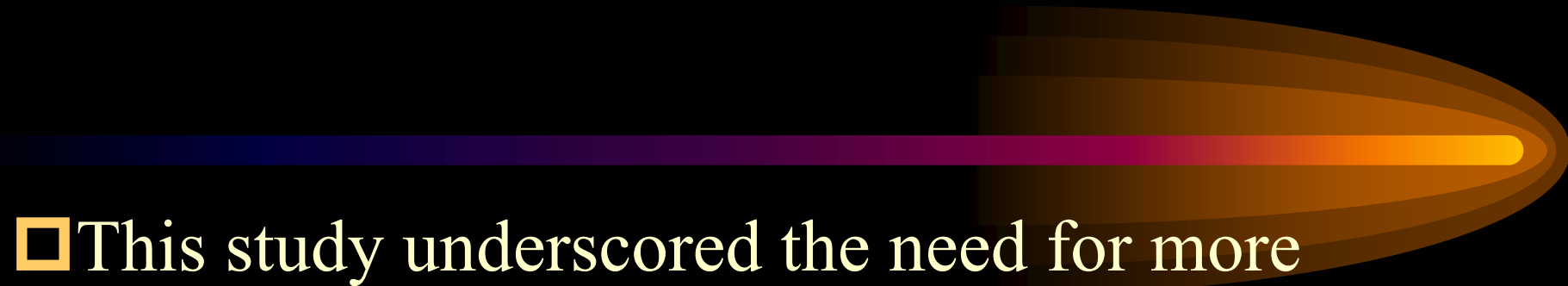
Kumar A, St. John MA. CHRC annual conference, Port of Spain, 2000.

*Knowledge, attitude, and practice among HIV
infected women with repeated childbirths.
2000.*



- Seventy-eight percent of pregnancies were unplanned, 73.9% of cases different fathers were involved.
- Fear of breakdown of the family, loss of financial support and possibility of social isolation

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- ❑ Majority of these mothers had knowledge regarding their HIV illness and that it could be transmitted to their babies. However their attitude and practice did not reflect their knowledge.
 - ❑ Denial and high degree of fear with respect to this deadly disease and the social stigma attached to it could be responsible for their undesirable attitude and practice which perpetuates HIV spread.

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- This study underscored the need for more comprehensive education and repeated counseling of HIV infected women, to help them overcome their denial and fear and so that they could feel free to approach the systems which are in place to help them.

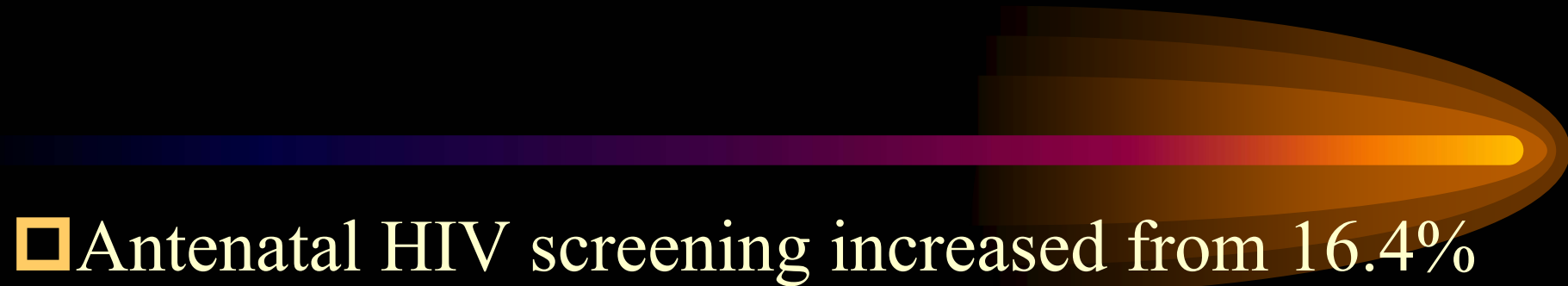
Kumar A, St. John MA. JHAPEAC 2001 VOL. 4(2/3)


Kumar A, St. John MA. CHRC annual conference, Jamaica, 2001.

Epidemiology of perinatal HIV transmission.

1981-2000

- Since 1981, 181 HIV infected women have given birth to 233 HIV exposed infants.
- Number of repeat pregnancies among women know to be HIV infected increased from 4 (1986-90) to 33 (1996-2000).
- Of the 233 infants exposed, 2 were still born and 231 born alive with two neonatal deaths.

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- Antenatal HIV screening increased from 16.4% in 1990 to 93.1% in 2000.
 - Proportion of HIV exposed infants diagnosed before birth increased from 25% (1981-85) to 84.4% (1996-2000).
 - The rate of perinatal HIV transmission declined from 30.4% (1991-95) to 13.3% (1996-2000) when prophylactic Zidovudine was used.



□ Incidence of perinatal HIV exposure has been increasing and this may offset the significant reduction in the rate of perinatal HIV transmission achieved with the use of prophylactic Zidovudine.

Kumar A, et al. Conference on Global Strategies on prevention of MTCT of HIV, UGANDA, 2001.

Characterizing HIV infected women 2001



- ❑ In comparison to the control group, the HIV-infected women were younger, more often multiparous, and more likely to have been unemployed at the time of their pregnancy.
- ❑ The HIV-infected women also had had an earlier onset of sexual activity, had had more sexual partners during their lifetime, and were more likely to be currently involved with an older sexual partner.

Conclusion

- The early age of sexual activity with repeated pregnancies especially from different and older partners as noted in this study may have contributed significantly to both the vertical and the horizontal HIV transmission.

Kumar A, Bent V. PAHO Journal of Public Health, 2003, Jan.

Trends in HIV prevalence among women and characteristics of HIV infected childbearing women. 1986-2000.


- reported AIDS cases among the women increased from 34 (86-90) to 211 (95-00).
- Proportion of HIV infected adults as women increased from 25.6 (86-90) to 49.6 (95-00).
- Proportion of HIV infected mothers younger than 25 years increased over the same period.

Kumar A. XI symposium on HIV. TOULON, FRANCE, 2001.

*Trends in seroprevalence of HIV in pregnant women.
1994-2001*



- The Antenatal HIV screening increased from just over 20% in 1992 to over 80% since 1997.
- The incidence of perinatal HIV exposure to infants increased from 3.8 per thousand live births in 1992-93 to 9.3 during 1998-99 and then declined to 6.9 in 2000-01

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- The incidence of perinatal HIV exposure from pregnancy in women not known to be HIV positive increased from 3.3 (1992-93) to 6.7 per 1000 live births (1998-99) and then decline to 3.9 per 1000 live births (2000-01)


Kumar A, St. John MA. AIDS Conference, BARCELONA, 2002.


Voluntary Counseling and Testing

2002



- ❑ To determine the success of the VCT and the implementation barriers when offered as a package with the antenatal care delivery.
- ❑ All the post-parturient women at the QEH between April and September 2002 for the antenatal VCT for HIV service offered to them.

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- ❑ Over all, 71.1% women were pre-counseled and offered an HIV test.
 - ❑ Most of the women who were offered HIV test after counseling, accepted the test, and were tested for HIV.
 - ❑ There were 192 women who were tested without documented pretest counseling.



Of the post-parturient women surveyed, 82.4% have had a documented HIV test and 61.2% had a documented HIV results at the time of delivery.

Kumar A, et al. CHRC annual conference, Bahamas 2003.

Kumar A, et al, PAHO Journal of Public Health, 2004, Jan.

Disclosure among post-parturient HIV infected women.

- ❑ A substantial proportion of HIV-infected pregnant women never disclosed their result to a partner or a close female relative.
- ❑ Lack of disclosure may limit their ability to engage in preventive behaviors or to obtain necessary medical care & emotional support.

Alok Kumar, et al. CHRC annual conference, Grenada, 2004
Accepted for publication in AIDS Care

Future Directions



- Where is the 'M' in MTCT?
- The 'AIDS orphan' situation?
- Prevention of horizontal transmission?



Thank you