

## **Proceedings of the EPHA Monitoring and Technical Support Workshop for Post Graduates of DCH, AAU**

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### **BACKGROUND AND RATIONALE:**

The objectives of the EPHA/CDC Project include strengthening of operations research in HIV/AIDS/STI/TB and enhancing EPHA's collaborative efforts with local and international organizations in the fight against HIV/AIDS.

As part of the 2<sup>nd</sup> year plan, EPHA/CDC Project allocated \$ 29,842 budget to sponsor and monitor 10-12 post graduate theses. EPHA identified, selected and funded 12 postgraduate theses in collaboration with the teaching institutions. In 2003/04 Academic Year, EPHA sponsored from the Community Health Department (10) (Faculty of Medicine), Pediatrics Department (1) (Faculty of Medicine) and from the Regional & local Development Studies (1), AAU.

The postgraduates have developed their study protocol (including instruments for data collection). At the moment, data collections have been completed, and are in the process of analyzing and preparing their reports. Compared to previous years, the Community Health Department has quadrupled its annual intake for the MPH program. This Academic year alone, the Postgraduate School at the Community Health Department is running its program in a condition where a few advisers have to handle more than 40 postgraduate theses. It would be very difficult for the advisers to go repeatedly through each and every thesis and provide technical support it requires in order to enhance quality of the work. Hence, it is quite necessary to convene a consultative workshop in order to provide technical supports and monitor their progresses more systematically and efficiently. It is also anticipated that a timely workshop like this one will provide with technical arms that the postgraduates need crucially at times like this. Bringing the postgraduates together would also enable them to benefit from each other and from the experiences and skills of advisers in different institutions with diverse outlook, motivation and exposures. Therefore, the consultation workshop tentatively planned to take place from 15<sup>th</sup> to 17<sup>th</sup> April 2004.

### **Main objectives of the workshop were to:**

- Monitor progress of the postgraduate thesis sponsored by EPHA.
- Provide technical support to post graduate students on data analysis and document development to enhance quality of output.
- Help the postgraduates acquire experiences in defending their thesis

### **Expected outputs of the workshop**

- Status of the post graduate thesis clarified
- Common understanding would be reached on mechanisms of improving outcome of the research being undertaken by the postgraduates through supports received from the workshop
- Enhanced EPHA collaboration with partners

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### **Introduction**

Master of public health program in AAU medical faculty started in 1984. Since then over 200 graduates are produced with a yearly average of 10-12 graduates until the year 2001, when the uptake abruptly raised to a yearly average uptake of 40 graduate students per year. Among the programs in MPH, thesis work is most important and a requirement that needs close supervisions and follow up. With the abrupt increase in an intake DHC has to run its program in a condition where few advisors have to handle more than 40 postgraduate thesis works. In this situation it is understood that it would be very difficult for the advisor to repeatedly go through each and every thesis and provide technical support it requires. Hence consultative workshop was organized to provide technical support and to monitor progress of EPHA sponsored postgraduate students in more systematic and efficient ways. The workshop was found to be timely crucial and benefited all postgraduates from sharing experiences among themselves and the skills of advisors from different departments.

To this end a three days consultative workshop for “technical support and monitoring progress of EPHA sponsored postgraduates was held at Adama Ras hotel Nazreth, from April 15-17 2004. The workshop was organized by EPHA and DCH under the cooperative agreements signed between EPHA and CDC Atlanta, USA. The workshop was attended by 40 postgraduates and 10 advisors.

The workshop was started by welcoming address of Ato Berhanu Legesse, the Research and Dissemination officer of the EPHA-CDC Project and introductory remark by Dr. Alemayehu Worku, postgraduate coordinator of DCH, AAUMF followed by an opening address by Dr. Damen H/mariam the Head of DCH, AAU medical faculty and the president of EPHA. Dr. Damen stressed the importance of such timely and important consultative workshop, and thanked EPHA for sponsoring 10 graduate students from the DHC, and organizing this timely workshop.

This was followed by presentation skill course facilitated by Dr. Gail Davey consultant, DCH. The course was participatory that gave chance for each graduate students to learn from their own and others mistakes in presentation skill, and constructive feedback from the facilitator and other audiences.

Then there were four successive progress reports by EPHA sponsored students on “Response to HIV/AIDS prevention messages among university students in Bahirdar based on parallel process model, Assessment of perceived barriers to wards the prevention of HIV/AIDS in Bahirdar town, Process evaluation of INH prophylaxis of HIV positives at ENARP site and socio demographic collarets of VCT users in Guraghe zone”.

On the second day morning session of the workshop the progress report by the postgraduates continued and four successive presentation on “Stigma toward Tb patients

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in Shashemen Town’, ‘Assessment of risky sexual behavior for HIV infection with especial focus on night market and mobile people’, ‘Impact of HIV on public health sectors in Diredawa town’ and ‘Impact and behavioral assessment of HIV/AIDS in AA police force’. This was followed by a presentation on Challenges common in postgraduate research in public health by Ato Wagary Teresa, a PHD candidate at the DCH.

In the afternoon after following discussion and sharing experiences on the challenge in post graduate research in public health progress reports of the four remaining EPHA sponsored students continue “ on effect of living arrangements and parental attachments on sexual risk behavior and psychological problem of Dessie preparatory school students, assessments of the Safety of injection and related practices in Sidama zone of SNNP, Knowledge and attitudes of mothers to wards MTC of HIV/AIDS and its prevention among post natal mothers in BLH and Zewuditu memorial hospitals and cost of HIV/AIDS on public health institute’.

The last day of the workshop 17<sup>th</sup> of April was devoted for panel discussions that summarized all workshop activities, indicated the good parts and potential area of improvements for future, showed strengths and limitations of the workshop and forwarded recommendations for the way forward.

Finally Dr.Alemayehu Worku, the facilitator of the day and graduate coordinator at the DCH promised that the department with cooperation from EPHA and other stockholders to work on the recommendations and thanking EPHA for organizing the workshop and participants for their active participations the workshop was concluded on April 17, 2004.

## **Introductory remarks**

**By Dr. Alemayehu Worku Graduate coordinator,  
DCH, AAUMF**

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As a graduate program coordinator of the Department of Community Health, it is my privilege to welcome you all to this consultative workshop, which was organized by the Ethiopian Public Health Association and the Department of Community Health.

I would like to say in brief about the profile of the Department. The Department of Community Health was established at the inception of the Faculty of Medicine in 1964. At establishment it was called Department of Preventive Medicine and Public Health. Currently the Department has 12 academic staff members specialising in some 7 major public health disciplines. The Department offers courses for undergraduate medical students. The Courses are wound up by a six weeks intensive Rural Community Health Practice in the final year of the Medical Education in Zeway. A public health course is also offered for senior students at the School of Pharmacy.

Postgraduate training in public health at a master's level (MPH) was started in 1984. Over 200 graduates are produced until now with a yearly average of 10 up to the year 2001 and about 40 intakes per year then after. The graduate public health program incorporates theoretical courses, practical fieldwork and research. A master's thesis is a requirement for graduation. The graduates of the program have key positions in governmental and non-governmental organisations, including in community health departments of higher institutions in the country. A course in Epidemiology is also offered to graduate demography students from Demographic Training and Research Centre (DTRC), Addis Ababa University.

The Department has started Ph.D. training in public health. Future plan includes strengthening of the existing MPH program. There is also a plan by the Department as well as by the University to establish a public health school.

The Department is widely involved in community-based activities. It also serves as a national public health centre by producing public health specialists and by publishing the Ethiopian Public Health Journal. The Department is also engaged in several research works that are related to the training it offers and in collaboration with other institutes in the country and abroad over years. It has a research field laboratory (the Butajira Rural Health Program) maintained since 1986, currently over 50, 000 individuals are involved in the surveillance.

International and national research collaborations have been the tradition of the Department, to mention some: Johns Hopkins University, USA, Umea University, Sweden, Bergen University, Norway and McGill University, Canada. Publications in the Department include: 5 Ph.D. dissertation by staff in Universities abroad, about 200 MPH

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theses by students in the graduate program, about 112 district health profile by graduate students, 150 undergraduate students research reports, and 103 peer-reviewed articles. In this academic year, EPHA has sponsored 10 MPH students, which was funded by the US Centres for Disease Control and Prevention. It was believed that conducting a consultative workshop provides technical supports to our students.

The Workshop is divided in to three parts: Training on presentation skill, to be moderated by Dr. Gail Davey, Presentation by Wakgari on Challenges common in postgraduate research and progress report by all EPHA sponsored students. The schedule is flexible and we are free to comment on it and revise it during our stay. We will decide whether we need to stay Saturday morning or not tomorrow after the end of all presentations.

Now, I would like to invite Dr. Damen H/Mariam: President of EPHA and Head, Department of Community Health to make an Opening Address.

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**Opening Address**

**By Dr.Damen H/Mariam:**

**President of EPHA & Head, Department of Community Health**

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Dear Participants,  
EPHA-CDC Project staff and colleagues,

It is with great pleasure and honor that I deliver this remark for this consultative workshop, which aims at appraising the EPHA-CDC project support for graduate students. This is a component for graduate students doing their thesis in the area of HIV/AIDS/STIs and TB.

Dissemination is one of the components of the EPHA-CDC project. The project overall goal is to improve health practice in the area of HIV/AIDS/STIs and TB. This component aims at supporting operational research that advises policy and practice that we hope will enhance actions to be taken towards these diseases. Nevertheless the process of realizing this ideal is by no means a simple task given the limitation we have in resources and manpower.

Therefore it is expected that you might not have benefited from ample advice and information in doing thesis research activities. However, we hope that through time and process this aspect will improve, as it is a factor that makes graduate training rigorous. It is also through this consultative process like this that this type of rigorous program is dealt with. This means we expect to gain a lot from this consultative workshop for our future activities.

Thank You

**Presentation Skills Course for MPH Students  
By Dr Gail Davey**

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**Acknowledgements:**

This course could not have been run without the support of the US Centers for Disease Control and Prevention via the Ethiopian Public Health Association.

**Objectives**

By the end of this seminar, you should be able to:

- Show and feel more confidence when presenting in English;
- Set realistic goals for your presentation;
- Appropriately select and structure your material for your audience;
- Use visual aids for maximum effect;
- Handle questions after a presentation.

**Methods**

This is a skills-based course, and therefore you are not provided with much conceptual framework. This handout is designed to help jog your memory about the course when you come to need presentation skills at various times in the future.

We will learn by practicing – by making short presentations and receiving feedback on these from each other with the help of video replay. This means that you will be asked to give and to receive feedback – remember a few guidelines on feedback:

- It should consist of both positive and negative messages;
- It should always be constructive, that is, based on something that can be improved;
- It should concentrate on the most important things first.

Through feedback you will learn which styles and methods of presentation work best for you.

**Timetable in brief.**

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10:00-10:45	Introductions with video feedback
10:45-11:30	Good and bad presentations
11:30-11:45	Audibility exercise
11:45-12:30	planning your short presentations
12:30-14:00	Lunch
14:00-15:00	Presentations and feedback

### Planning a short presentation

In the afternoon, you will have the chance to present a very brief summary of your research thesis findings. You have up to 3 minutes in which to present – you will be stopped if you overrun. You may use a maximum of 2 overheads.

Think through the following areas;

- 1. Structure** – What is the main finding from your research? (Think back to your Objectives). In describing the background and methodology what does your audience need to know to make sense of your results? How will you capture the interest of the audience at the beginning? How many points will you break down your key findings into? (Again, think of your Objectives). How will you explain or illustrate each point? How will you review or reinforce these points before concluding? How will you finish?
- 2. Visual aids** – How will these aid memory or stimulate interest? How can you make them as clear and simple as possible? Remember that an overhead transparency or PowerPoint slide should have **NO MORE THAN 7 LINES** of text, and **NO MORE THAN 7 WORDS** on each line ('7 x 7' rule).
- 3. Rehearsal** – With whom can you practice your presentation? How can you familiarize yourself with the equipment available? Do you know the first few lines by heart? Do you know how long the presentation takes to deliver, and what you would cut if you ran out of time?

### Responding to questions

– **Key points.**

**1. Change gear.**

At the end of your presentation, change position, hand over the session to the audience, and give everyone a quick pause in which to think of questions.

2. Look interested.

*Pay attention to the question. Don't be afraid to pause to gather your thoughts before answering.*

**3. Summarize or paraphrase the question.**



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This ensures that everyone can hear the question and that you have understood it correctly. Try not to repeat word for word, but make a concise summary. You may wish to thank the questioner briefly but do not be too effusive. “Good question” is usually sufficient.

**4. Answer the question!**

In as short a time as possible, give an answer that deals with the question raised. Do not repeat your entire presentation, or use the opportunity to go off on some sidetrack. Keep it short so that plenty of people have the chance to ask questions.

**5. Check the questioner is satisfied.**

Make sure they feel their question has been fully answered. This may mean you simply look at them while answering and wait for them to nod, or you may ask at the end “Does that answer your question?” or even (in less formal situations) “OK?”

**Features of Good and Bad Presentations:**

<b>Bad</b>	<b>Good</b>
<b>Speaker</b>	
‘Boring’	Engages audience at start and keeps assessing communication with them
Under- or over-dressed	Appropriately dressed for audience
Under-informed	Knows subject well
Mis-judges level of understanding of audience	Has obtained information about audience before arriving
Speaks too fast	Times talk well using variable speeds and dramatic pauses where appropriate
Speaks too slow	
Inaudible	Projects voice adequately for room or uses microphone competently
Transmits nervousness to audience	Controls nervous behaviour
Has distracting ‘twitches’	Has identified and minimized such behaviour
Is late	Has organized journey to arrive with time to spare for setting up
<b>Setting</b>	
Room too small or big for audience	Room holds audience comfortably, but still feels intimate
Room stuffy	Room well ventilated

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Room too dark	Room lit so audience can see speaker, visual aids and own notebook
Seats uncomfortable	Seats adequate
<b>audio-visual aids</b>	
Don't work properly/are incompatible with material brought by speaker	Have been ordered in advance and tested before talk begins
Distract from talk	Complement talk helpfully
Speaker hides behind or is 'chained to' AV aids	Speaker is free of AV aids and moves around appropriately.
Suddenly blow up or fail	Are not completely essential to communicating message
<b>Other</b>	

**Course Evaluation:**

Your feedback is very valuable. We can change the course for future students if we know which sessions are useful and which are not. Please be honest.

**1. Course Aims.**

Did the objectives of the course meet your expectations?

Yes     No    Do  know

Were you expecting anything else from the course?

.....

**2. Sessions.**

Please rate each session by circling a number on the scale.

1=completely useless, 2=slightly useful, 3=useful, 4=very useful, 5=extremely useful.

Introductions with video feedback	1	2	3	4	5
Good and bad presentations	1	2	3	4	5
Audibility exercise	1	2	3	4	5
Planning your short presentations	1	2	3	4	5
Presentations and feedback	1	2	3	4	5

**3. Other sessions.**

Is there anything else that you would like to see included in future?

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4. Other comments.

Is there anything else you would like to comment on (timing, handout, administrative arrangements, location, equipment, catering, etc)?

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Thank you for your feedback!

**NB:** Apart from few minutes of introduction the presentation skill course was participatory and practical. The practical session was started by giving chance to all graduate students to tell their name and speak about the worst thing that happened during their thesis work in 30 second and their presentation was video recorded. Afterwards the video was displayed so that every one learn from looking at his/her own and others mistake and the pertinent feed back from the facilitator and other audiences

Observed problems include:

- Speaking too fast
- Poor of no eye contact (looking too up or too down)
- Searching for language by looking some where else
- Audibility problem
- In ability to use microphone
- Improper positioning of hands (in the pocket frequent waving)
- Physical symptoms of fear like tremor, speaking too fast

Feeling of the speaker during presentation

- Feel frighten
- Avoid eye contact to reduce fear
- Use of destructive words like “Ah”
- Inaudible voice
- Too much body movement
- Standing still
- Speaking too fast

**Question:** there are different cultures and each culture has its own way of communicating in formations, is there any ideal way of presentation that fits for all culture?

**Answer:** presentation should be adjusted depending on audiences however there are accepted ways in formal presentations. For example, IMRAD is an accepted way for Thesis presentations

**Question:** What is the effect of knowing audiences?

Answer: it helps to prepare the presentation according to the level of your audiences. It also helps in selecting what part to give stress, how to present it and even to select words to be used in the presentations.

**Comments**

Every one has fear of facing audiences even teachers fear facing their students. Especially if the presentation has to be delivered in the presence of video camera where the presenter feels she/he is being recorded with bad gesture and saying things inappropriately. To avoid at least the physical sign of fear, prepare your presentation well structured, rehearse and practice it repeatedly, assume you are the best in the area, assume all audiences are the same (don't let their status disturb you) and build on and maintain confidence in your presentation. For some of the physical signs of fear that you cannot avoid be aware about it and prepare ways of minimizing its effect:

- If you have tremor put something to hold or hold your hands together
- If you have sweating prepare handkerchief
- If you have dry mouth make water available
- If you forget something to say do not stop or try to search, proceed on your speech and reintroduce it when you remember
- If you have audibility problem try to speak louder even if you use microphone (be aware that we Ethiopians have soft voices).
- While presenting keep good eye contact, look and read your audiences and adjust your presentation accordingly.

Body language might have different impressions and different interpretations (even bad) by different audiences, thus try to control body language when delivering speech

To prevent the distractive effects of audiovisual aids during the presentation, try to practice and make sure that you can properly handle the audiovisual aid you are going to use before your presentation.

**As part of planning for short presentation 11 EPHA sponsored students' presented the summary of their thesis in three minutes**

**1. The cost of HIV/AIDS on health institutes  
By Melese Tamiru**

Statement of the problem

- HIV/AIDS involves several opportunistic infections that have to be treated. This is an additional burden on the health care system
- Therefore this study was designed to determine the cost before any change in the health service delivery is made.
- Since no study in the country has put special emphasis on estimating the hospital cost of HIV/AIDS versus non-HIV/AIDS patients, this study is an attempt to fill the gap

- Method of data collection
  - Patients and administrative record review

Approach

- Service bases
- Unit cost base

**2. Knowledge of mother's on MTCT of HIV and their attitude toward VCT  
By Solomie Jebessa**

**Introduction**

Globally 42 million PLWHA, out of which 19.2 million are women  
Route of transmission -25-35% via MTCT

**Objective**

To assess Knowledge of mothers about MTCT and HIV  
To assess their knowledge and attitude toward VCT  
To assess attitude toward bf in face of risk of HIV

**Methodology:**

Institution based cross-sectional study

Results

- All of the mothers included in the study have heard about HIV
- 82.3% know major routes of transmission
- 89.8% knew MTCT
- 82.6% knew VCT and 82.3% agreed to have it
- 74.5% wanted to have VCT before breast feeding
- Conclusions and Recommendations

**3. Assessments of safety of injection and related medical practice  
By Yoseph W/Gebrel**

**Background**

Blood born pathogens are transmitted by blood and body fluid contacts  
Unsafe injection can cause patient-to-patient, patient to health workers and health worker  
to patient transmissions of blood born pathogens.

**Objective:**

To assess the safety of medical practices in peripheral health institutions

**Methods:**

Exit interview of patients and observation of injections, delivery, and dressing at government, NGO, and private institutions

**Results:**

131 (73.6%) injections were found to be unsafe.

**4. The effect of living arrangements and parental attachment on sexual behavior and psychological problems of Dessie preparatory school students**

**By Solomon Shiferraw**

**Background:**

Opening of preparatory and technical schools recently has led rural to urban displacement of students

**Objectives:** Assess and compare levels of sexual risk behavior and psychosocial problems between urban and rural students

**Methods :** Comparative cross-sectional study +FGD+PPI

**Findings:**

- Living with both parents and good parent-teen association was related with reduced odds of sexual activity and having depressive symptoms but not associated with suicidal attempts.

-The findings were largely consistent with earlier findings

**Conclusion:**

Living with both parents and good parent-teen connection is highly associated with psychosocial health and sexual abstinence

**5. Impact and behavioral assessment of HIV/AIDS in Addis Ababa police force**

**By Solomon Emyu**

**Objectives and results:**

1. Does HIA/AIDS contributed in human resource loss of the police force?

➤ Definitely yes! 63(75%) officers cause of death was HIV/AIDS.

2. Is HIV/AIDS a financial burden in the police force medical service?

➤ Yes it seems

	OPD cost/visit	Administrative cost
HIV positive	27.93 birr	548.65 birr
HIV negative	24.94 birr	261.48 birr

3. What looks like officers behavior regarding HIV/AIDS?

It is worrying /scaring.

❖ 27.5% had multiple sexual partner in last year

❖ 33.4% had risky sex in last year

❖ Only 14% consider themselves as HIV vulnerable

## **6. Assessment of risky sexual behavior for HIV infection with focusing on night markets and mobile people**

**By Jemal yusuf**

### **Background:**

- HIV/AIDS has currently become a major public health problem
- Heterosexual intercourse is responsible for over 70% of all HIV infection in the world

### **Major objective:**

- To assess risky sexual behavior for HIV infection with special focus on the night market and mobile people

### **Method and Material:**

Study area: Gumer woreda

Study design: Cross-sectional descriptive study with qualitative components

### **Results:**

- 7% of respondents had extramarital, unprotected sex in relation to the night market
- 1.7% of them had exchanged sex for money
- 17% had extra marital sex
- Both literates and illiterates had extramarital sex
- Alcohol has influence on extra-marital sex
- It needs urgent preventive measures

## **6. Stigma to wards TB Patients in Shashemene Town**

**By Hussen Mekonnen**

- A cross-sectional study was carried out From November 2003 to March 2004 among the residents of Shashemene town to assess the magnitude of stigma towards TB patients in the town
- Multi stage sampling procedure was used to select 845 respondents
- Both quantitative and qualitative data collection methods were used
- There are misconceptions about TB and its causal transmission.
- 737(92.2%)of respondents cited cold as major cause of TB
- 397(48.6%)think that all TB patients are infected with HIV
- 469(54.4%)and 375(45.9%)believe TB could be transmitted by eating together and sharing toilet with TB patients
- Most of the respondents mentioned stigma towards TB patients
  - 612(74.9%) were not willing to disclose their disease status
  - 364(44.6%) were not willing to have their child learn with TB patients
  - 503(61.6%) were not willing to send their children to schools where there are teachers with TB

-Addressing the issue of stigma related to TB should be part of any TB program

- Integration with HIV prevention
- Further study in the area

**7. Socio-demographic collarets of VCT users, Gurage Zone, SNNPR  
By Getachew Wondimagegn**

- HIV/AIDS is a terrifying epidemic, mostly affecting SSA countries
- <10% of PLWHA know their Sero-status. The level is as low as 6% in SSA
- Are VCT users different from non-users?
- Institution based cross-sectional studies that used both qualitative and quantitative methods were conducted in 6 VCT centers

**Objective:**

- To Identify determinants of VCT utilization and assess the quality of VCT services

**Results:**

- There is a link between religion, educational status, occupation and marital status
- Differences in attitude exist between VCT users and non users but no Knowledge difference
- Reason for VCT use pre-marital (75%)
- Reason for VCT non use partner and self trust
- Lack of training, supervision, referrals systems and targeted services.
- Positive social ground, involving others and use of local resources.
- Sustained information dissemination, using local resources and mechanism for training, monitoring and evaluation.

**9. Process evaluation of INH prophylaxis program for HIV positive patients by Dereje Belew**

**Objective:**

Evaluation of the program in terms of Adherence, study uptake, drug side effect

**Methodology:**

Cross-sectional study supported with review

Study population: all HIV positive

**Result:**

- Study uptake
  - Health education given for 97.2%
  - selected those who are beneficial TST,DC4 + Active TB screening done
  - Provided prophylactics treatments
    - 57.4% completed
    - 24.6% discontinued
    - 11.7% still on treatment

Adherence:

- Willingness



- Habit
- Knowledge

Assessment of Adherence

Cost-the cost spent

Conclusion

-TST and, DC4 has limited application to select those who benefits the most

- Mechanism to adherence should be based on well- studied strategy

### **10. Assessment of barriers to behavioral change to wards the prevention of HIV/AIDS in Bahirdar town, North Ethiopia**

**By Befekadu Sedeta**

#### **Background:**

HIV/AIDS has been a great challenge to mankind making impact on health hand development

Studies indicated that there is high awareness of HIV/AIDS but behavioral change is low

#### **Objective:**

To assess barriers which determine behavioral changes

#### **Subject and methods:**

Study area: Bahirdar Town

Study population: all urban residents aged 15-49

Study design: cross-sectional utilized quantitative and qualitative methods

Sample size: using one population proportions n=922

Data collection tools structured closed ended questionnaire and FGD

#### **Results:**

Barriers

Low IEC work 31.3%

Unemployment 29.5%

Increasing video showing houses 28.7%

Low community involvement 22.5%

Traditional malpractice 10.8%

Stigma and discrimination 10.1%

Low recreational facilities 8.1%

Low involvements of religious organization 7.1%

Socio-demographic variables: Sex, age, marital status, occupation and exposure to media had influence on behavior

Thank you,

### **11. Response to HIV/AIDS Prevention Messages Among University Students: Based on Extended Parallel Process Model**

**By Amsalu Shiferaw**

-Models are useful in understanding and explaining health intervention Extended Parallel Process Mode (EPPM) was used to guide this study

**Research question:**

Is there a linear relationship between perception of threat and efficacy to behavioral change?

**Objective:**

**General:** To evaluate the response to HIV/AIDS prevention messages based on EPPM

**Specific:**

To assess perception of threat

To assess perception of efficacy

To compare the relationship between risk communication variables and behavioral responses

**Methods and material**

Study design: cross-sectional

Study area: Bahirdar University

Study population: regular students 2<sup>nd</sup> year and above

Sample size  $n = \frac{(Z_{\alpha/2} + Z_{\beta})^2 * s^2}{\rho^2} + 15\%$  non-response. = 225

**Sampling procedure :** multi stage

Pretest of self-administered questionnaire was used

Analysis was made using SPSS version 10.0

**Results and discussion**

- 456 students filled the format
- 36% reported having sex
- Perception of susceptibility was high particularly for females
- Perception of severity was fairly high
- Self efficacy to wards abstinence was high
- Self efficacy to wards condom use was between mid points
- Perception of threat was low
- Perception of efficacy was high for abstinence and lower for condom use

**Response to HIV/AIDS Prevention Messages among University Students: Based on  
Extended Parallel Process Model  
By Amsalu Shiferaw  
Advisors: Ato Fikre Enquselassie,  
Dr. Abera Kumie**

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**Introduction**

- Models help to explain the process of change in individuals as they interpret messages
- The use of models/theories to develop persuasive messages saves time and money
- Models are useful in understanding & explaining the success or failure of health interventions
- EPPM is used to guide the observation to which information might be relevant for HIV related message acceptance or rejection among University students

**Problem statement**

1. KAP-gap observed in several studies
2. Psychographic profile of University students

Can be categorized in to three:

**The “no response” or “no action” group**

- May be younger in age
- Never had sex
- Valued religion & other social Values
- Usually disapprove pre-marital sex
- Feel unsusceptible to HIV/AIDS

**The “danger control group”**

- Ever had or planned to have sex soon
- Believe abstinence is difficult
- Approve pre-marital sex
- Frequently talk about sex
- Feel that they are vulnerable
- Take actions depending on the time and level of efficacy

**The “fear control” group**

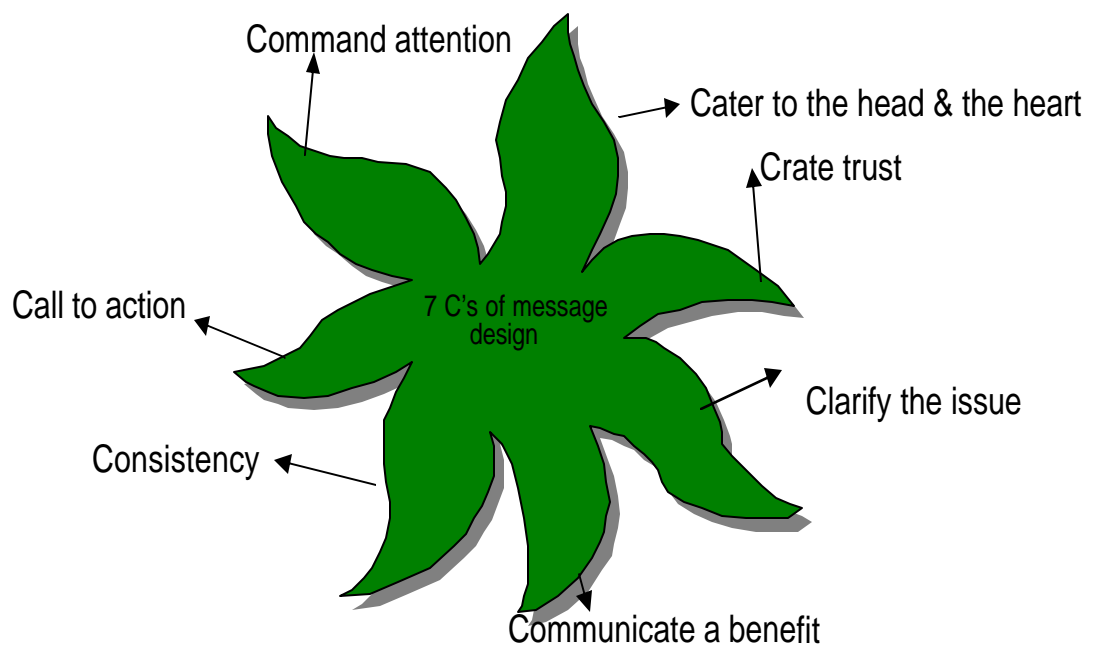
- Small in proportion
- Tend or feel to be as “Modern”
- Do not bother about social values &/or religion
- Interact with several opposite sexes
- Experiment several risk behaviors
- Avoid to listen about HIV messages
- Do not consider the threat seriously
- Enjoy today tomorrow we may die

**3. Message Characteristics**

Most messages disseminated are not persuasive & appealing

### 3. Message Characteristics

Most messages disseminated are not persuasive & appealing



The TV spot Astwelo yemiramed bizu erqet yegozal exemplifies some of these cxcs

Literature review

**Proceedings of the EPHA Monitoring and Technical Support Workshop for Post Graduates of DCH, AAU**

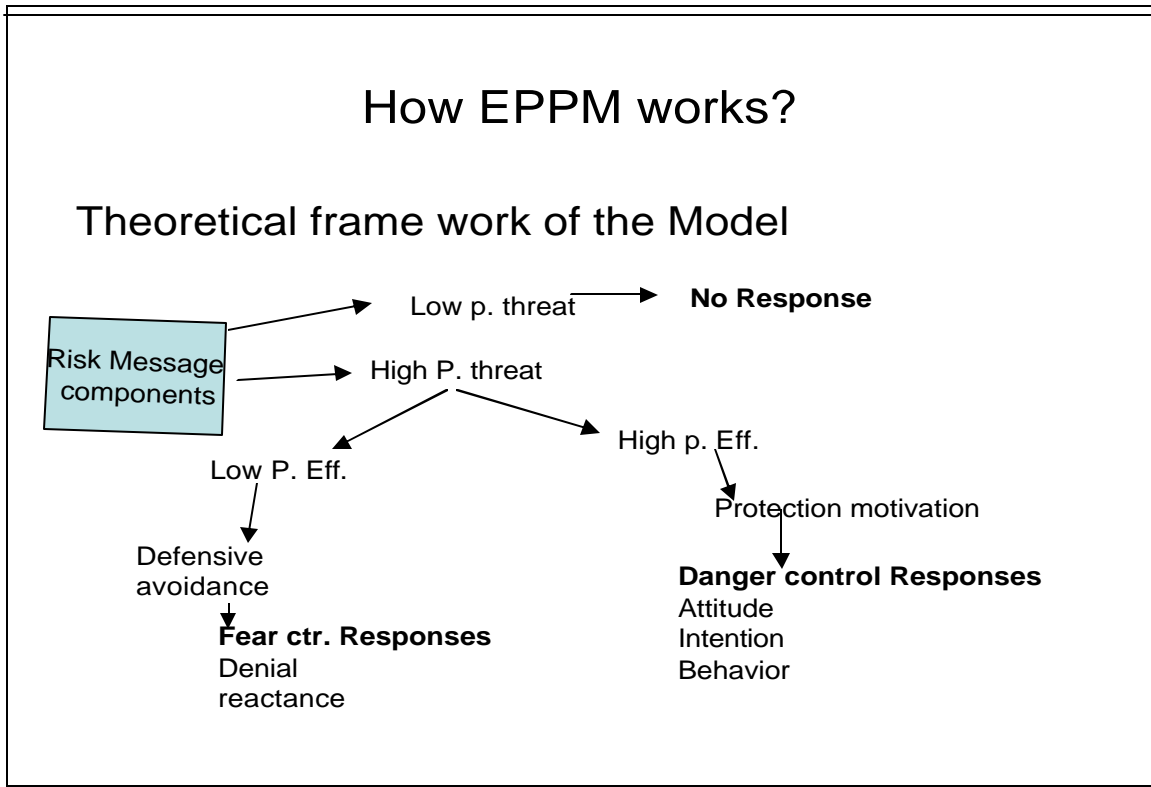
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Common Health Behavior Change models

Models	Level	Key Conc.	Application
Stages of change	Individual	Pre-cont. Cont. Preparation Action Maintenance	Drug use Alcohol & smoking cessation Weight cont.
TRA	Individual	Believes Value/Att. Subjective N.	HIV/AIDS Fp BF
SCT	Interpersonal	Self-eff. Beliefs Modeling, Experiences	HIV/AIDS Trachoma cnt. Belt
HBM	Individual	P.sev. P.susc. P.ben P.bar. P.Cues & S.Eff.	All health issues Accidents & Diseases

How EPPM works?

Theoretical frame work of the Model



### Research Questions

- Is there a linear relationship between perceived threat and perceived efficacy towards responses to HIV/AIDS prevention methods?
- Do prevention practices particularly abstinence and condom use vary by gender among students?

### Objectives:

#### 2.8.1 General Objective

- To evaluate the responses to HIV/AIDS prevention messages based on the Extended Parallel Process Model (EPPM) among Bahir Dar University students in order to design appropriate intervention messages.

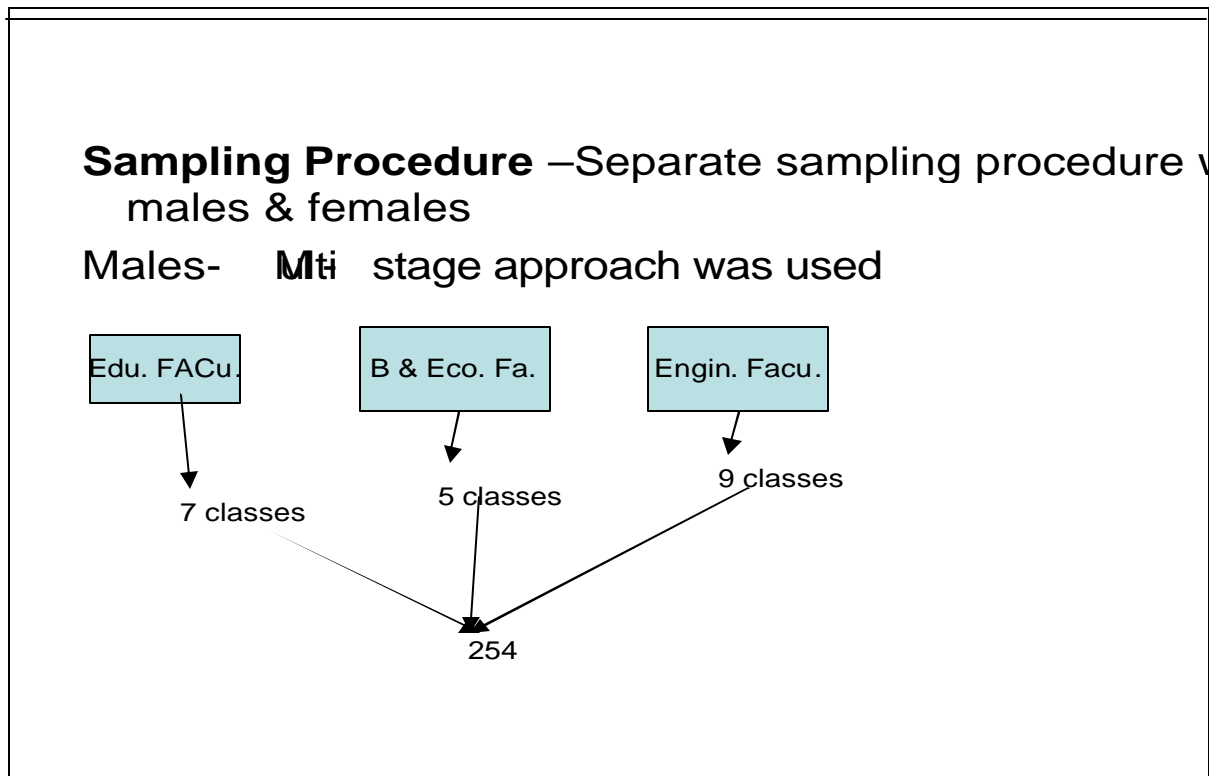
#### 2.8.2 Specific Objectives

- To describe sexual experience of the students
- To assess perceived threats towards HIV/AIDS infection
- To assess perceived efficacy to prevent HIV/AIDS
- To compare the relationship between risk communication variables and behavioral responses.
- To examine factors that predict behavioral response
- To list preferred source, message type and most important ways of learning about HIV/AIDS

### Methods and Materials

- **Study Design**- Cross-sectional
- **Study Area**- Bahir Dar University
- **Study Population**- Regular students 2nd +
- **Sample Size** –Determined by the following formula

$$n = \frac{\{(Z_{\alpha/2} + Z_{\beta}) * s\}^2}{?^2} + 15\% \text{ non-Res.} = 225$$



- Selection of Female students
- From all classes

How?

Female education support unit arranged the meeting

After briefing questionnaires were distributed for those who came for the meeting

### **Instrument Development & Data Collection**

- **Questionnaire**

Based on EPPM

Five domains & 85 items

Multiple questions can be collapsed in to variable

Reliability can be measured

**Type** – Check list, likert, ranking format

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- **Questionnaire**

Based on EPPM

Five domains & 85 items

Multiple questions can be collapsed in to variable

Reliability can be measured

**Type** –Checklist, likert, ranking format

- **Data Processing**

Questionnaire was checked, sorted, classified & Pre- coded

Data entry was made using EPI-Info 2002

17% of the questionnaires were double entered

Data cleaning was performed by using frequencies

Then transported to SPSS version 10.0 for analysis

Scales were building for some items

### **Data Analysis**

- Frequencies of each item was observed
- Descriptive were examined
- Cross tabulation & comparison of means were performed
- $\chi^2$ - test for categorical and t-tests for equality of means were used
- Results were displayed using graphs

### **Results and Discussions**

- 456 students filled the format
- About 89% were between 18-23yrs (21.4±1.97)
- Three-fourth were Orthodox
- 97% were not married at all
- About 36% reported having sex in the past
- Mean age of sexual commencement 18.8±2.08
- Only 55% reported regular condom use
- Mean sexual frequency in a single night 3.3±1.34

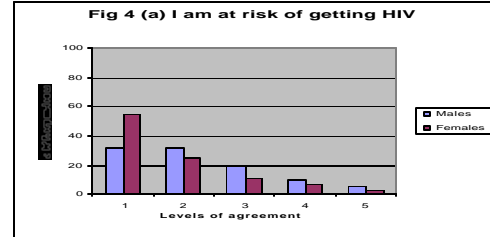
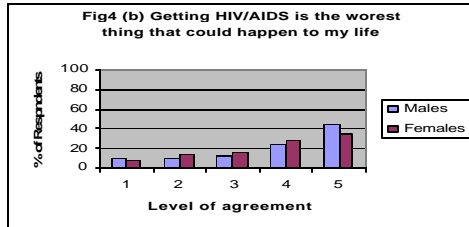
### **Individual factors**

- Gender view- Positive
- Self-esteem scales –Females felt to have high self –esteem ( $t=-3.06$ ;  $P<0.002$ ) than males
- Self-control Greater than a quarter tend to do the thing that comes to their mind and said they break rules sometimes
- The majority (mean score=3.8±1.15) reported that they are future oriented



## Perceptions about HIV/AIDS Infections and Preventions

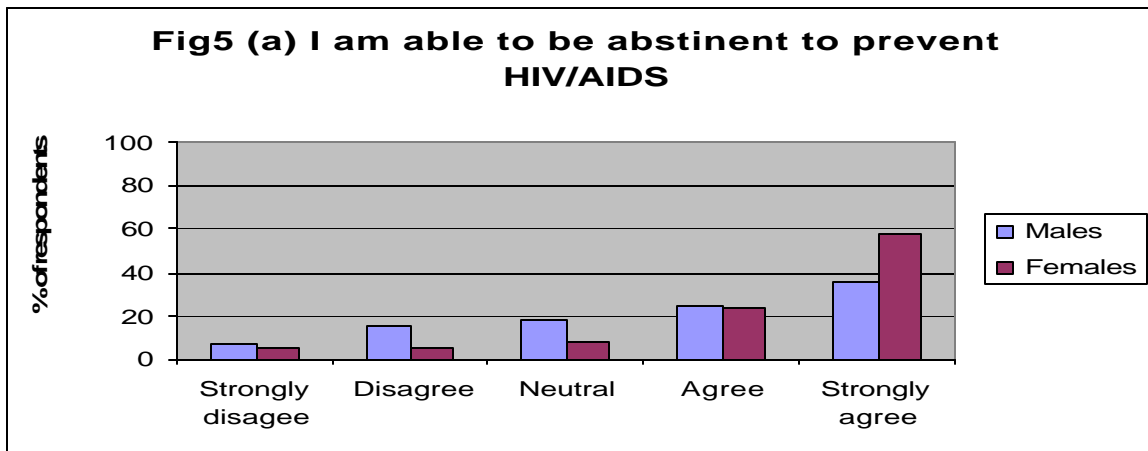
- Perception of threat



### Perception of Efficacy

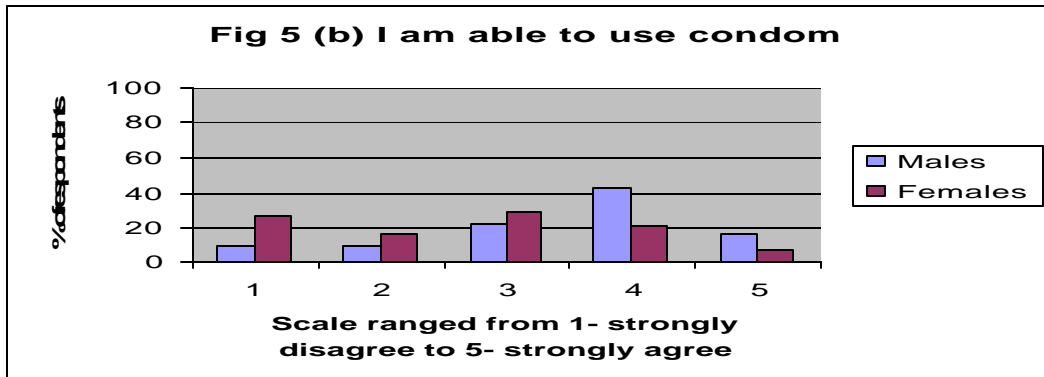
Self-efficacy towards abstinence

- Self- efficacy towards condom use

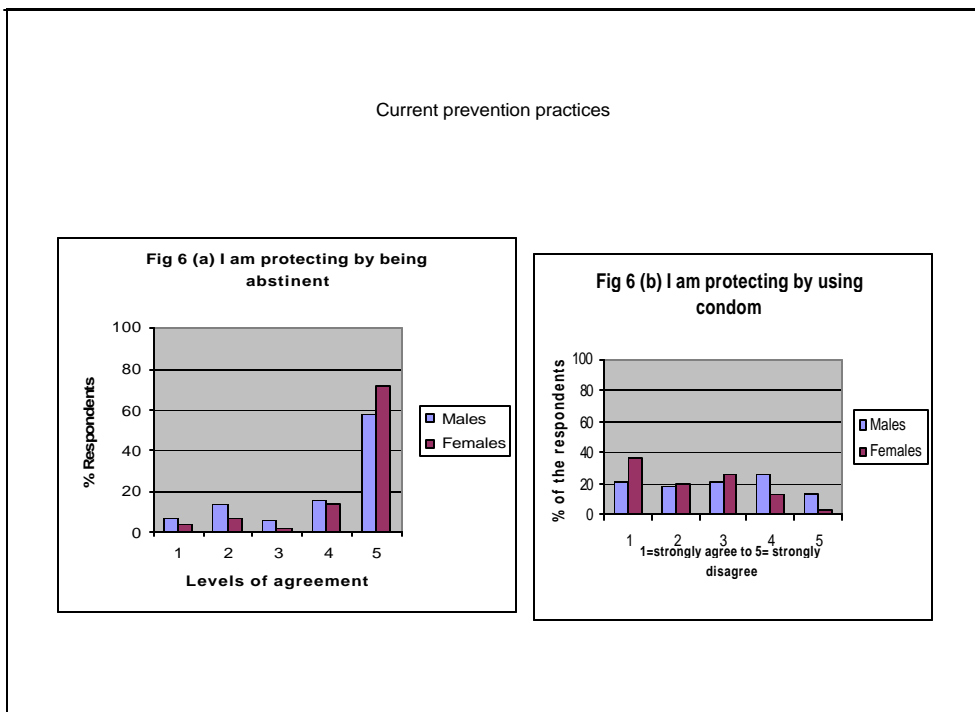


- Self- efficacy towards condom use

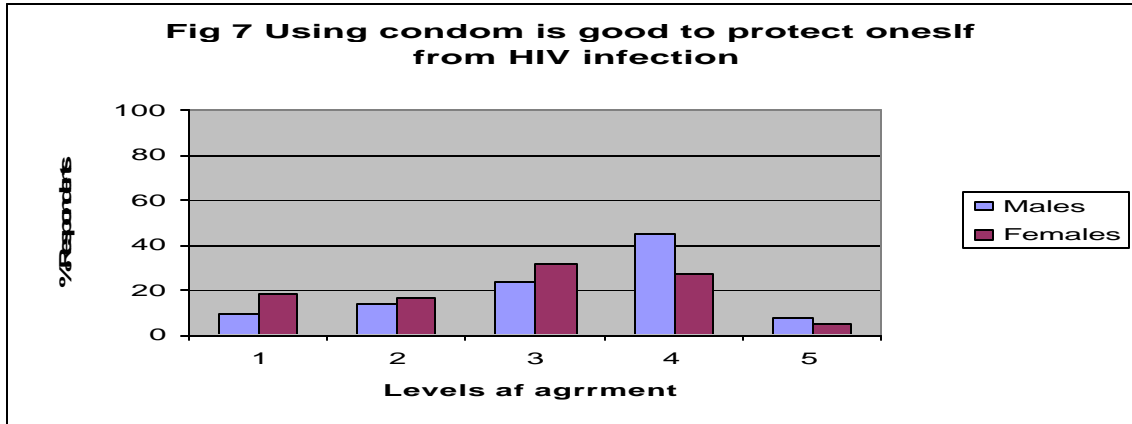
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Current prevention practices



Attitudes towards condom use as prevention means



### Beliefs about HIV/AIDS

- About half agreed to the statement “God will protect me from getting HIV”
- 39% also agreed that “AIDS is curse from God”
- 14% agreed & 29% remained neutral for the statement that “Condoms disseminate virus”
- 13% agreed to the statement that “I try not to think about HIV/AIDS when having sex”
- 25% disapprove the statement that “HIV/AIDS prevention messages are clear and consistent”
- More than three-fourth had positive attitude towards the TV ad, which says, “*Astwelo yemiramed bizu eriket yeguazal*” (He who walks carefully can cover a long distance).

### Preferred source, message type and channels

- **Sources:** PLWHA, Religious persons, HP, Parents and spouse were ranked in order
- **Message type:** With real experiences, with reasons, facts and arguments, entertaining and messages that influence emotion
- **Channels:** IPC at religious places, with parents, with peers, Drama/theatre one to one discussion TV & radio

### Strength & Limitations

#### Strength

- The study used empirically tested Model to guide the assessment of the constructs.
- The reliability of the items is also checked and some results are measured as scales than a single item.

#### Limitations

- In cross-sectional survey risk communication variables may not linearly predict the relationship with behavioral response.

- As one model/ theory may not explain all factors that determine the behavioral change, this study examines only proximal individual factors and risk communication variables. Therefore, it might not be absolutely sure that all relevant variables are included.
- Missing items
- Lack of adequate literature in the country

### **Conclusions**

Consistent with the theory there seems to appear three distinct groups:

- Those with a low perception of threat (more females than males) were perceived as not susceptible to HIV; e.g. those who never had sex are categorized as the “No response group”
- Those respondents who have high efficiency in applying prevention methods and who have positive attitudes e.g. towards condom use & currently protecting themselves against HIV could be grouped as the “danger control” group
- The other small proportion group constitutes the low efficacy and low behavioral control group; e.g. those who don’t want to think about sex when having sex can be considered as “fear control groups”
- Misconceptions about condom and HIV still existed.
- Efficacy, self esteem & attitude predicted abstinence for females while risk perception, efficacy and attitude predicted condom use for males
- The results suggested that the TV spot had a positive impact

### **Recommendation**

- Messages should emphasize personal susceptibility to AIDS and Efficacy towards prevention methods
- Behavioral change communication (BCC) strategies need to address misconceptions about condom and mythical beliefs.
- PLWHVA, religious persons, health professionals and parents must be involved in persuading young people
- Messages that express real experience, with reasons, facts and entertaining messages should be promoted for this target group.
- Models/ theories need to be used to assess, design, pre-test, develop and produce messages.
- As the TV spot has positive impact on target groups, it needs to be continuing with additional season and similar message need to be developed and produced.

### **Acknowledgements**

- To my Advisors Ato Fikre & Dr. Abera
- Institutions; DCH, EPHA, BDU, ARHB, HEC, the AIDS Resource center
- All people who gave me comments, encouragement & supported in every aspect of this study.
- Study participants & Facilitators
- Kim Witte

**Title- Assessment of Perceived Barriers towards the Prevention of  
HIV/AIDS in Bahir Dar Town, Northern Ethiopia.**

**By Befekadu Sedeta  
Advisors- Dr. Ahmed Ali,  
Ato. Fikre Enquisellasi,  
Sponsoring Agent - EPHA**

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## **1. Introduction**

**HIV/AIDS-** has been a great challenge to mankind

**Impacts-** on health, education, agriculture, industry

**Magnitude :-**

Globally - 65 million living with the virus (2002)

- 25 million already died

- 42 million PLWHA

■ At the end of 2001- 2.2 million (200, 000 children)

The adult prevalence rate was estimated to be 6.6%

-More common in urban than rural

Urban -13.7%

Rural-3.7%

In 2014, PLWHA will be more than 4 million (projections)

■ Sentinel surveillance (MOH,2001) in pregnant women:-

-Bahir Dar- 15.6%

-Jijjiga-19.0%

-Nazareth -18.7%

-Addis Ababa -15.6%

■ At the end of 2001- 2.2 million (200, 000 children)

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■ Ethiopia at the end of 2001- 2.2 million (200, 000 children)

The adult prevalence rate was estimated to be 6.6%

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Rural-3.7%

In 2014, PLWHA will be more than 4 million (projections)

■ Sentinel surveillance (MOH,2001) in pregnant women:-

- Bahir Dar- 15.6%
- Jijjiga-19.0%
- Nazareth -18.7%
- Addis Ababa -15.6%

- **Mode of transmission-** sexual, parental and prenatal  
Developed countries- homosexuality and drug abuse  
Developing countries- heterosexual transmission (>80%)
- **Preventive methods -** abstinence, being faithful and condom use (ABC).
  - ultimate goal is to bring about positive behavioral change with subsequent improvement in health status
  - **IEC-** ultimate goal is to bring about positive behavioral change with subsequent improvement in health status
  - Though unreserved efforts were made in the past two decades in increasing awareness related to HIV/AIDS, the behavioral change observed among the population is not significant.
- **Studies -** showed that poverty, illiteracy, gender inequalities, traditional malpractices, inadequate health infrastructure, low community interventions are contributing factors for low achievement of behavioral change.
  - Were effective in increasing awareness but the desired behavioral change is not yet achieved.

In fact, with efforts of health education and promotion, there were some changes of behavior in most African countries

- Increase age of sexual intercourse and condom use

In Ethiopia, IEC works – carried out for many years, but there is still gap between awareness and behavioral change.

This gap can be attributed to many factors, and thus this study is intended to assess barriers, which determine behavioral change towards the prevention of HIV/AIDS.

- To assess factors which determine behavioral change towards the prevention of HIV/AIDS

## **2. Objectives of the study**

### **General**

To assess factors which determine behavioral change towards the prevention of HIV/AIDS

### **Specific**

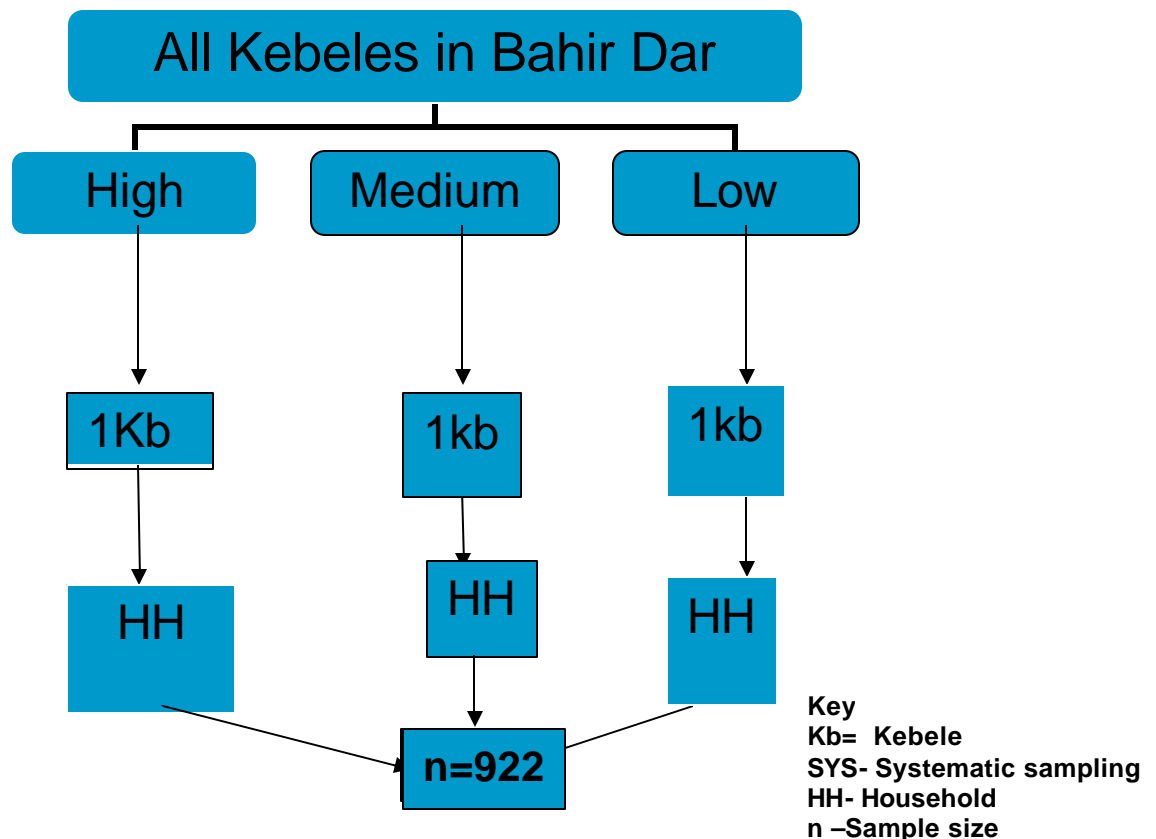
To assess opinions of the population towards the prevention

To identify factors which hinder behavioral change

To assess socio-demographic factors pertinent in predicting behavioral change

## **3. Subjects and methods**

- **Study area-** Bahir Dar Town, 563kms from Addis Ababa.  
Population of about 160,603 and 17 kebeles  
Health institute: 1 government hospital, 1Health Center, 1health station and one regional laboratory, 13 private clinics and three diagnostic laboratory facilities.
- **Study design-** cross-sectional quantitative survey -substantiated by qualitative method.
- **Study population-** individuals aged 15-49 years
- **Exceptions -** Living in Bahir Dar for less than 6 months
  - Inability to hear/ mental disability
  - Inability to hear or speak Amharic language
- **Sample size:-**  
 $n = \frac{(Z_{\alpha/2})^2 P(1-P)}{d^2}$  , n=sample size,  $Z_{\alpha/2}=1.96$  ,  $P= 50\%$   
 $d = 0.05$   
 $n = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384.16 \times 2 = 768.32$  (design effect=2)  
Adding the non-response rate (20%) =  $768.32 + 20\% = \mathbf{922}$  study subjects



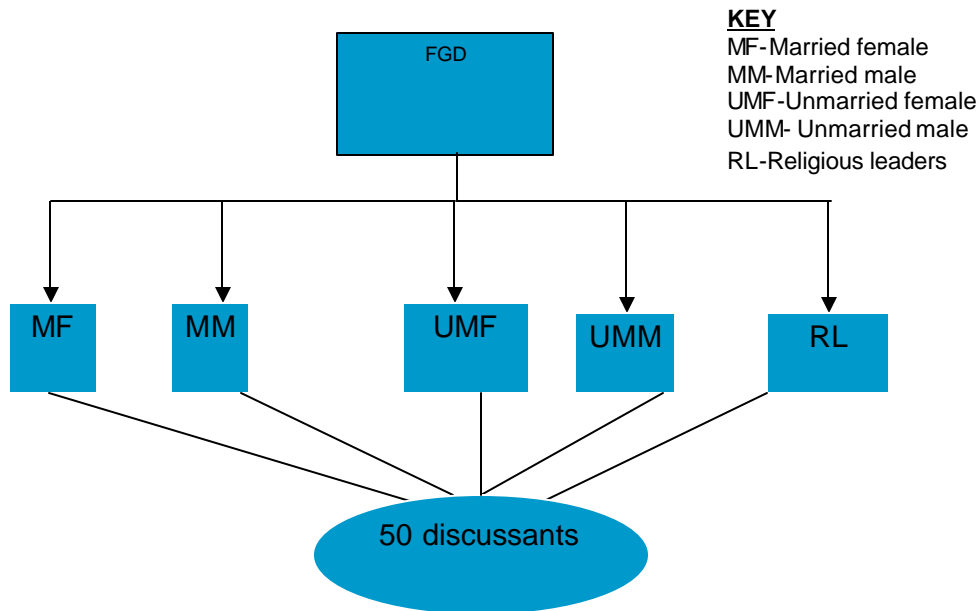
Data collection tools - structured & closed – ended questionnaire

- 10 interviewers and two supervisors
  - Training conducted for three days
  - Questionnaire was translated to Amahic language
  - Pretest was done on 20 respondents not part of the main survey
  - Questionnaire was modified after pretest
  - Data collection was completed within six days
  - Surprise and informed supervisions were made.
  - **FGD** -five sessions on 50 discussants
- sex, marital status and age were mainly considered.  
- led by PI and assisted by note taker and recorder.



- semi –structured questions were used to guide the discussions & points were transcribed and summarized

**Fig.2. Schematic presentation of FGD**



- **Data quality assurance-** proper design of the questionnaire
  - Training and daily review and check ups
  - Pre-testing and continuous supervisions
- **Data entry & analysis-** data entered using Epi6 and SPSS 10 versions, cleaned and frequency distributions were made.
- Bi-variate analysis and logistic regressions were computed.

**Study Variables:-**

**Dependent variables-** knowledge, attitudes and practices

-Barriers to behavioral change towards the prevention of HIV/AIDS

**Independent variables:** Socio- demographic factors and exposure to IEC.

■ **Ethical consideration.**

- Ethical clearance from AAUMF
- Formal letters to the concerned bodies
- Consents from study subjects

- Anonymity and confidentiality of information

- **Operational definitions -**

- Positive behavioral change
- Perceived barriers
- Behavior
- Knowledge
- Attitude
- Practice
- Perception
- Knowledge of MOT
- Knowledge of preventive method
- Substance abuse

#### 4. Results and Discussion

- **910 (98.7%) respondents participated in the study**

- **Socio-demographic variables**

**Sex-** Females- 68.2%

**Age** -15-24 years (54.5%), 25-34 years (26.0%), 35-49 years (19.5%)

**Religion-** Orthodox (87.4%)

**Ethnicity-** Amhara(90.5%)

**Marital status-** Single (53.0%), married (47.0%)

**Education-** Illiterate (25.1%), literate (74.9%)

**Occupation-** Employed (22.7%), unemployed (77.3%)

**Income** - < 100 birr (22.6%), 100-199 birr (10.2%), 200-299 birr (7.8%), 300+ birr (17.1%), do not know (42.2%)

**Media-** **Radio-** (89%), **Television** (42.1%).

- **Sexual History**

**Had sex** - 56.9%,

**Age sex started** – minimum 10, maximum 35, mean age =18±3.7

- **Sexual practice- 75.3% (in the past one year)**

- **Multiple sexual partner (>1) - (5.4%) Condom utilization -16.4%.**

- **Knowledge of mode of transmission-**Unprotected sex (92.0%), parental (82.7%), PMTCT (21.2%)

- **Knowledge of prevention-** Abstinence (70.0%), being faithful (67.7%) and condom use (52.7%)

- **Name the three MOT and preventive -19.6% and 29.1% (BSS (30)-about 50%)**

- **Sources of information-**Radio (67.0%), TV (42.2%).Pr. mat. (33.2%)

- **Perceptions, attitudes and practices related to HIV/AIDS**

**Perceived behavioral change -91.1% (Uganda (19)- was high)**

**Perceived perception of seriousness-** 78.4% (BSS (30)-lower than this)

**Perception of increased unsafe sexual practices- 64.1%**

**Preference of settings** –HIs(65.5%), RL (29.5%),schools (23.2%)

**Preference of means of communication-** drama (62.2%), discussions (52.4%), songs (28.8%)

- **Attitudes and practices towards VCT-heard about VCT -68.5%**

**Favorable attitudes to VCT-** 96.8%, **Undergone VCT-** 30.5%

**Reasons for not undergoing VCT-** trust in a partner -51.3%

**Perceived barriers to behavioral change.**

- Low IEC works (31.3%)
  - Unemployment (29.5%)
  - Increase in videos showing and chat houses (28.7%)
  - Low community involvement (22.5%)
  - Gender inequalities (12.2%)
  - Traditional malpractices (10.8%)
  - Stigma and discrimination (10.1%)
  - Low recreational facilities (8.1%)
  - Low involvement of religious Institutions (7.1%)
- Studies (6, 18) showed that poverty and gender inequalities hinder behavioral change.
- **Relations of socio- demographic factors and sexual practice**  
-*Significantly associated with sex, age and marital status*
  - **Relations of socio- demographic factors and sexual partner**  
-Significantly associated with sex, age and marital status
  - **Relations of socio- demographic factors and condom utilization –**  
- Significantly associated with sex, marital status, occupation and having radio
- 
- **Sex, age, marital status** and occupation were significantly associated with risks of having HIV/AIDS in the past one year.
  - **Relations of knowledge of MOT and preventive methods** with sexual practice, sexual partner and condom utilization were not directly related.
  - The study in Uganda (19)- indicated that sex , age, ethnicity and education influence behavioral change related to HIV/AIDS.

### Results of Focus Group Discussion (FGD)

- *Five group sessions each with 10 discussants*
  - *Unmarried males and females*
  - *Married males and females, religious leaders*
  - *Topic guidelines*
  - *Means of transmission and prevention of HIV/AIDS*
  - *Barriers to behavioral change towards HIV prevention*
  - *Impacts of socio-demographic variables on behavior*
  - *Important sources of information for behavioral change*
  - *Impacts of IEC on behavioral change*
  - *Suggestions to bring about desired behavioral change*
- Barriers to behavioral change
    - Poverty /unemployment
      - Inappropriate IEC methodologies
    - Lack of open discussion among parents and their children
    - Adoption of western culture (youths)

- Poor school education (e.g. lack of ethics in the curriculum)
- Pornographic films
- Existence of stigma and discrimination among the population
- Increase in number of illegal video houses and night clubs
- Substance abuse
- Misconceptions
- Low awareness about VCT

**Majority of the groups suggested the followings**

- Improve IEC works
- Create job opportunities
- Reduce substance abuse
- Restrict pornographic films and dances
- Abstain from sex until marriage
- Be faithful to only one partner after marriage

**Most of the groups suggested the followings**

- Reduce stigma discrimination
- Increase awareness of VCT
- Increase community participation
- Incorporate civics and ethics in school curricula
- Take legal actions against illegal video houses
- Discourage improper wearing
- Discourage harmful traditional practices
- Increase recreational facilities

**Some of groups suggested the followings.**

- Increase number of AACs
- Open discussion between parents and children
- Give health education by HIV cases
- Promising oneself not to do sex until marriage (by putting ring)

**Few of the groups suggested the followings.**

- Prohibit condom use
- Maintain useful culture
- Empower women
- Share experience of other countries like Uganda.

➤ **Similar findings with the quantitative study.**

**Key- Majority- 4 groups, most 3 groups, some 2 groups and few 1group.**

■ **Strengths and limitations of the study**

**Strengths** – gives baseline information about barriers to behavioral change

- Adequate sample size and appropriate stat. method
- using both quantitative and qualitative methods
- High response rate

**Limitations** - Biases related to some sensitive questions and social desirability

- Lack of standardized questionnaire

- Paucity of similar results to compare the results

## **5. Conclusion and Recommendations**

### **5.1. Conclusion.**

- Many factors affect behavioral change towards HIV/AIDS
  - **Socio-demographic factors**- sex, age , marital status, occupation and Exposure to media influence behavioral change related to HIV/AIDS
  - **The perceived barriers**- were related to problems of communication, economic status, culture and gender relations.
  - **Knowledge** - was not directly related to practice
    - was not comprehensive
- Early commencement of sexual intercourse existed, showing risky behavior
- Rate of condom utilization was also low (16.4%)
  - It was indicated that unsafe sexual practices are increasing among the population though there is high awareness of HIV/AIDS

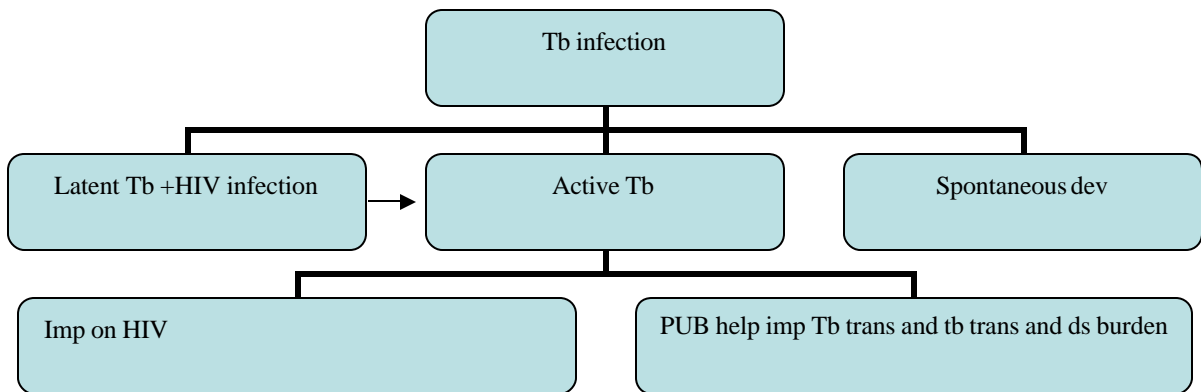
### **5.2. Recommendations**

- Re-evaluation of the current IEC works and designing appropriate and effective strategy
- Creation of job opportunities especially for youths
- Empowering women
- Strengthening community and multi-Sectoral interventions
- Taking legal actions against illegal video showing houses and night clubs
- Incorporation of ethics and civics education in school curricula
- Giving health education by PLWHA
- Strengthening AACs
- Reducing stigma and discrimination via appropriate IEC works
- Promotion of VCT services at all levels
- Conducting further operational researches related to behavioral interventions at wide scale.
- References- 40

Introduction

- The decline in mortality rate from TB in the early century led some to predict its eradication in developing countries,
- They believed that TB would disappear if re-infection could be prevented by isolating all infectious cases
- Now it is clear that TB developed largely from the reactivation of dormant infection

The fate of tuberculosis



- HIV → Accelerated progression to TB → by diminishing cell mediated immunity  
↓  
Host immune-reaktivation  
(Inc cap. Macro. Harb. TB bacilli)  
by releasing pro-inflammatory Cytokines (TNF & IL-1) Enhance HIV replication

**Magnitude of the problem**

Annual risk of TB varies depending on TST status from 0-4.5% in TST negative to 5-16% in TST positive individuals.

In 2000 world wide 1/3 of 36.1 million people living with HIV/AIDS co-infected with TB

- Ten percent (10%) prevalence of HIV will cause an excess of 40% in TB case.
- 11% (640000) of new TB infection occurred in 2000 attributed to HIV infection
- 10% of TB infected HIV positive person develop TB with in one year.

#### **Magnitude of the problem in Ethiopia**

- The number of TB case increase rapidly as consequence of the spread of HIV
- In 1984 it was 50000
- In 1989 it raised to 82680
- In 1994 it was 126830
- By the year 2014 the projection indicate that the number will raise to 238820

#### **Prophylaxis treatment**

- Now there is strong evidence from several randomized controlled trials for the efficacy of PT in prevention of TB in dually infected persons.
- PT is a treatment of a symptomatic person infected with m.bacteria tuberculosis to prevent development of active tuberculosis
- The rational for the use of one or more anti-tuberculosis drugs as a preventive therapy is that,
- It inhibits the establishment of latent infection
- Reduce small population of dormant bacilli to such a level that the chance of reactivation significantly reduced
- PT should be consider as feasible medical intervention for HIV infected individuals and taken as part of package of care for people living with HIV/AIDS.
- PT increases access to VCT.
- Pt encourages people to develop habit of taking treatment regularly.
- Pt decrees TB incidence, morbidity and mortality related to tuberculosis.
- Implementation of PT is manageable in industrialized countries because
- It is affordable
- Infrastructure is in place to screen
- To treat and monitor patient on regular base

#### **Problem and justification**

##### **Feasibility issue such as**

- Identification of large number of HIV infected person
- Exclusion of active TB
- Identification of those most likely to benefit

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- Supervision of PT and monitoring of adverse drug effect
- Evaluating this program
- Give idea on how to provide PT
- How to integrate VCT service with IPT
- Feasibility of introducing INH PT into established HIV VCT setting where possible to exclude active TB and monitoring.

### **Objective of the study**

#### Main objective:

- To assess operational aspect of INH prophylaxis program for persons infected with HIV in the ENARP project site.

#### Specific objective:

- To assess study up take, adherence, drug administration, adverse drug reaction, and benefit of preventive therapy.
- To assess the cost incurred by implementing the IPT program and its applicability in a VCT setting

#### Method and study design

- Design---cross-sectional survey supplemented with review of data
- Setting ---in the two Ethio- Netherlands AIDS research project sites

#### Study population

- All HIV positive participants of the two cohorts
- Among these HIV positive participants, the project has made selection for IPT using the following procedure
- Health education was given to all participants concerning IPT.
- HIV positive with CD4  $\leq 350$  cell/mm<sup>3</sup> were selected
- Those who were selected tested for skin reaction (PPD)
- Screening for active TB, clinical, sputum for AFB, C-X-Ray was done
- Liver function test to exclude those who are contraindicated for IPT
- For those who fulfill selection criteria the project has given INH 300mg per day including 50mg pyridoxine as a daily base.
- Supplies were given monthly and instructions were given on signs and symptoms related to adverse reaction to the drug.

### **Instrument**



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- To have more relevant information, in addition to the review all HIV positive participants were interviewed on
- Their willingness, knowledge, drug administration habit, reason for missed treatment, past and current TB history, waiting time, staff approach, administrative support, and health education given
- For this purpose structured questionnaire was prepared and administered by data collectors.

Current study evaluate

- The selection criteria
- Treatment given and regimen
- Adherence to treatment
- Drug toxicity
- Cost incurred by implementing this program

### **Data collection and management**

- Data collection
- Statistical analysis
- Ethical consideration
- Dissemination and utilization of result

### **Result**

- During the study period of February 1997 up to December 29 2003 a total of 1888 employee of 2 factory workers were admitted to the ENARP cohort.
- HIV positive prevalence at entry was 156(8.3%)
- Gradually 23 sero-converters were observed. And making the incidence rate 2.3 per 1000 PY

### **Mortality**

- With in 6 years period 83 deaths observed
- 67(80.7%) deaths were HIV positive participants and 16(19.3% ) deaths were among HIV negative participants ( $X^2=504.79$  ; $P<0.00001$ )
- Among HIV positive death (n=26)38.8% were attributed to tuberculosis

### **Health education attended**

- Out of 112 informants except 3(2.7%) ,109(97.3%) were attend session ( $X^2=194.7$  df=2,  $p<0.00001$ )

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- Neither sex nor previous educational backgrounds were associated with health education attendance.

### Heard about IPT

- Of 112 respondents 108(96.4%) were heard about IPT. The rest 4(3.6%) never heard about IPT
- ( $X^2$  193.4;  $p < 0.00001$ )

### **Screening for active TB and Past TB history**

- Of 112 subjects 84(75%) doesn't had close contact with TB patient the rest 28(25%) had contact with TB patient either in home or working area
- Of 112 informants 20 (17.9%) of them had past TB history

### **Relation of past TB with CD4**

Of 20 subjects who had past TB history 17(85%) of them had CD4 count below 350cell/mm<sup>3</sup>

(RR=1.37, 95% CI 1.07-1.75)

Past TB history doesn't have association neither with presence of BCG nor with TST status ( $X^2$  10.41 df=6,  $p > 0.1082$ )

- C-X-Ray was done for 61 study subjects
- Except 5(4.2%) who had abnormal finding but not compatible with active TB the rest had normal C-X-Ray.
- Sputum test for AFB was performed but not reveal tuberculosis.

### **Targeting the most likely to benefit with IPT.**

- TST status 27(44.3%) were non reactive
- 18(29.5%) were normal
- 16(26.2%) were positive for TST
- CD4 >350 were 38(31.9%)
- CD4 between 200-350 were 47(39.5%)
- CD4 <200 were 34(28.6%)
- Correlation of CD4 & TST (Pearson)

### **Reason for exclusion**

- Of 58 study subjects 37(63.8%) were had CD4 count above 350
- 13 (22.4%) of them excluded due to active and resent tuberculosis history.
- 5(8.6%) were refused to participate in the study

### **Provision of IPT**

- Of 132 study subject 61(46.2%) of them commenced IPT
- Among 61 subjects 35(57.4%) were successfully completed IPT
- Fifteen (24.6%) participants were discontinued IPT.
- Seven (11.5%) were still on treatment during the time of data collection.

### **Mortality and TB incidence after commencing IPT**

- Of 61 study subject who commenced IPT 7(11.5%) were died
- Of these seven death three of them died after completion of IPT. The rest 4 individuals were died while they were on treatment
- Among those who discontinued IPT 3 of them subsequently develop tuberculosis making the incidence rate of TB during the study period 2.6/100PY.
- Effect of IPT on CD4 and weight using Wilcoxon sign rank test

### **Reason against IPT**

- 4.5% were not convinced on the benefit of the drug
- 3.6% of them said they afraid to take drug that will make them suspicious to their partner
- 1.8% because of inconvenience to collect drug.
- 0.9% said they were not advised by the doctors
- Of 32 who successfully completed 5 of them missed only for a days

### **Cost incurred by implementing IPT**

- If all who were commenced treatment completed the required period of treatment the program would cost 7287.75 Birr
- Benefit: cost (1) treatment cost saved for indx + added cases/cost of the program=0.154

- Benefit: cost (2) treatment cost +lost income=4.99

Benefit exceeded the cost of the program by a factor of 4.99

### **Discussion**

- Even though appropriate use of IPT has proved to be effective in preventing active illness, its effectiveness has often been limited due to several reasons.
- Identification of HIV infected person and confirm the association observed between TB and HIV is the first requirement for implementation of IPT

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- However VCT services are not widely used and therefore candidate for IPT are not easily identified.
- The next important point is having willingness to participate in the IPT
- In our study 89.3% informants were willing. This finding is inline with the study conducted in Botswana where more than 90% were willing to seek VCT in exchange for a medical benefit
- Based on WHO recommendation participants were screened for active TB. Even though it adds further time, expense and an additional steps where patients are lost to follow up

### **To identify those who are benefited**

- Analysis of CD4 count
- TST
- WHO HIV disease classification (by ES.Lugada)
- Lymphocytes count (Godfrey in Zambian)
- We explore the correlation of CD4 with TST using Pearson and linear regression analysis the result was against the Burkinafaso's finding.

### **Identification of those who are benefited**

- Need of CD4 counter
- Need of capital investment
- Availability to get at VCT center
- Need of skilled person

Limited its use in poor setting countries

Appropriateness of Selection criteria using CD4 count

- The cut of point for eligibility were taken CD4 count below 350 cells
- Among those who had history of TB except 3 the rest 17 were develop TB while their CD4 cont drop below 350 cells, therefore the risk having TB increase with lower CD4 count, in contrary to the Ugandan and Zaire studies indicate they develop TB while the immune status is adequate.(Aster & T)

### TST

- TST studies to date indicate that those who are TST positive individuals are most likely to benefit from preventive therapy.
- Limitation of TST- the presence of large number of TST positive in TB pandemic area and lack of specificity
- Problem of allergy in HIV positive individuals and skin reaction may not correlate

with disease severity. Our findings indicate that 44.2% were allergic and 16(26.2%) had positive TST, therefore only these individuals could have been started treatment. Our findings indicate that 44.2% were allergic and 16(26.2%) had positive TST, therefore only these individuals could have been started treatment.

- Ugandan study indicates persons who are allergic are less likely to benefit from IPT
- Creates additional time, expense, where patient lost to follow-up.
- The project had given IPT irrespective of TST status (In line with Karachi)
- Simplification of enrollment criteria improve participation
- Of 132 only 61(46.2%) were selected for IPT
- Initiation rate favorably compare with Thailand therapy started varies between 30% and 60% in Uganda 51% commenced IPT
- Low initiation explained in that to maximize the utility and to select those who are benefited most.

#### Provision of IPT

- Several studies had proven the efficacy of different regimens in Haiti, Thailand, and Uganda
- Using more than one drug allow shorter duration of treatment, superior adherence
- But its cost is high, and may have drug side effect.
- Rifampin may be mal-absorbed and intermittent treatment may insufficient in HIV positive patient
- Therefore the recommended drug for developing countries by WHO is INH

#### **Duration of treatment**

- In area where continued exposure to infection occurs, longer period of treatment required to sufficiently reduce TB bacilli.
- In low prevalence areas where re-exposure is rare protective effect of INH lasts up to 19 years or maybe life long (study by Halsay)
- In Zambian study IPT is effective during treatment and shortly there after and this raise the question of re-prophylaxis
- Longer duration of therapy may provide additional benefit

#### **Adherence**

- 57.4% of who commenced IPT completed therapy. Completion rate was in line with Thailand but low in comparison to Ugandan study the reason is that there are some individuals who are on treatment during the time of data collection

#### **Non adherence**

- In our study 25% failed to complete the required period of treatment and this was better than Ugandan 38%, Thailand 31%, in Nairobi also 31% failed to complete IPT
- Techniques used to maximize adherence, health care with medical support, frequent health education, minimizing waiting time, creating conducive environment to take pills. This and others were in line with the Italian study.

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- Tracing of those who missed scheduled date of treatment. of 19 who missed 16(84.2%) of them reminded by active tracing of social worker. unfortunately this service is unlikely to be feasible if IPT were more broadly implemented

### Adherence assessment

- INH metabolites test were performed in 46 (75.4%) individuals of who started IPT. IN 37(80.4%) the test result were positive which is comparable to the Ugandan study where they found 88% positive

### **Adverse drug effect**

- The major side effect of all anti TB drugs are hepato-toxicity, which is uncommon below the age of 35 but incidence increases with age

### **Effect of IPT on TB incidence, CD4 count, and weight**

- Among those who discontinued IPT 3 (20%) of them develop tuberculosis, once PT is discontinued acquisition of new infection with rapid progression to active TB is possible.

### **Cost assessment**

- The cost of counseling was taken considering the average payment requested by VCT centers in A.A
- The cost of drugs were taken from the MOH drug dispensing office
- Our finding reveal that 93.7% of the over all cost of the program spent before start IPT and the finding favorably compared with the study of Zambia where 81% spent before IPT.
- We tried to limit assessment only by 2 additional cases per index case, but under certain condition where the index case comes into contact with many others, one case can lead to very high numbers of new infections.
- Establishment of IPT should be consider for people whose work or living situation places them in close contact with large numbers of other people including very large number of house hold

### **Conclusion and recommendation**

- IPT has been proven to be effective in preventing active TB, in subjects at high risk and should be taken as a part of package of care for people who are living with HIV/AIDS.
- To select the most benefited method used in the project (CD4 & TST) had problems like cost, skilled manpower, regarding TST problem of non specificity and allergy limited their use in the expanded program, therefore other mechanism should be studied in our context.
- Provision of IPT done as it was recommended by WHO, monthly supply, self administered treatment gives a chance to monitor adherence and side effect of the drug. Therefore this should strengthen.
- Techniques to enhance adherence should be evaluated other with when IPT started to

utilized widely, providing free medication and other support compromise its sustainability, therefore well studied strategy should be established.

- The initiation and completion rate of IPT looks adequate and these reflect the strong capacity of the project in terms of organizational structure finance and trained manpower.
- And this particular study provides appropriate information on how to implement PT in other VCT center. The next steps should be developing system that greatly increases the accessibility of PT to people living with HIV/AIDS.

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## Socio-Demographic Correlates of VCT users in Guraghe Zone, SNNPR, Ethiopia

By: Getachew Wondimagegn (M.D)

Advisors: Negussie Deyssa (M.D,MPH)

Misganaw Fantahun (M.D,MPH)

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### Progress report

- Proposal development & finalization:- Aug-Sept/2003.
- Securing Fund /EPHA:- Oct-early Nov/2003.
- Field Research:- end of Nov-January/2004.
- Data entry, Clearing, Analysis:- Feb- March/2004.
- Write-up of preliminary result:- end of March-April/2004.

### Problems/ Solutions

- Communication-Transportation
- Administrative-High expectation resources
- Using all possible means of communication
- Transparency, closing gaps.

### Introduction

HIV/AIDS: most terrifying epidemic

16,000, infections/day

3 million deaths

>40 million PLHWA in SSA 70% case load

ECSA 50% burden, epicenter

- Ethiopia: 6.6% national, 13.7 Urban & 2% rural prevalence.
- 2.2million PLHWA
- Heterosexual transmission like SSA.
- VCT: Less than 10% know sero- status but knowing sero-status is a human right & public health measure
- 6% in least developed SSA
- Majority do not know sero-status  
Signifies to scale-up the intervention for proper prevention.
- Ethiopia 2 % men had VCT ,144VCT centers/2003
- Guraghe Zone -Male migration, 100,000  
estimated HIV/Are VCT users different from Non-users in their Socio-demographic characteristics
- AIDS infection, 8 VCT centers. No such study in the area
- Are VCT users different from Non-users in their Socio-demographic characteristics?

### Objectives



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## *General*

- To identify determinants of VCT utilization and assess Quality of VCT service

## *Specific*

- \_ Assess Socio-demographic and other factors associated with VCT utilization.
  - Compare knowledge, attitude and practice towards HIV/AIDS and VCT
  - -Assess Quality of VCT service
  - Describe reasons of VCT use and non-use

## **Methodology**

### Study area

- Gurghe Zone, SNNPR, has a population of 1.4 million, 12 woredas, 8 VCT centers.

### Study design

- Health institution- based cross sectional comparative study.

### Source population

- Zonal residents in age group 15-49 years

### Study population

- Individuals who came to 6 VCT centers.

### Sample size

- Two proportion formula, using EPI-INFO v 6
- *population allocation ratio of 1:2*
- *PI=lack of specific knowledge to avoid contracting HIV*  
*Among VCT users  $\approx 18\%$*
- *Level of significance  $\alpha=0.05$  and Power of 80%*
- *To find an odds ratio of at least 0.45 between users & non-users of VCT.*
- *Compensate non-response rate of 15%.*
- *A total of  $N=656$  ( $n_1=219$ ,  $n_2=437$ ) was needed.*

### Sampling Technique

- *6 VCT centers at least 6 months functional, 2 hospitals, 4 H/centers.*
- *Allocation- average capacity*

### Inclusion Criteria

- VCT users-15-49, came to 6 VCT centers, Volunteer, not critically ill and residents >6 months.
- Non-VCT users- matched age, sex and residence, but came for non-VCT services

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### Data Collection

Qualitative 4 FGD,

-Semi structured Questionnaire guide  
to assess operational aspect of 6 VCT centers.

Quantitative standard WHO/BSS Questionnaire,

-Consistency of Questionnaire maintained,

4 Data collectors and 2 supervisors trained, 2 days

Pre-tested, modified.

### Analysis

- Data Entry using EPI-INFO v6, SPSS v10,
- OR 95% CI, X<sup>2</sup> P-value, using logistic regression

### Dependent variables-

- being VCT user and Non-user)

### Independent variables-

- Socio-demographic variables, knowledge, attitude towards HIV/AIDS, VCT.  
Ethical considerations maintained.

### Result

- Response rate 97.4%
- Reason for non-response was
  - Time shortage
  - Lack of reagent
  - Refused

Table-1: Socio-demographic characteristics of study subjects, Guraghe Zone 2004

Religion

Educational status

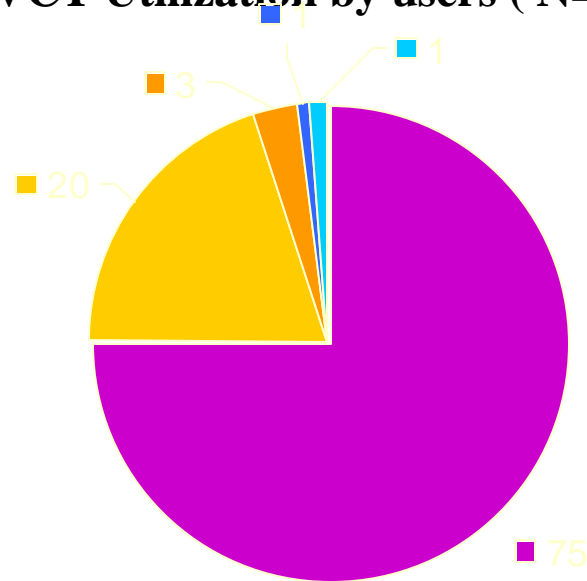
Ethnicity

Occupation

Marital Status

Showed difference between VCT users and non-users.

Cont...  
**Reason for VCT Utilization by users ( N=175)**



■ Pre-mar. ■ Self knowing ■ Visa... ■ Asked partner ■ Ordered H/W

Graph 2-Reason for non-utilization of VCT by Non-users (N=190)

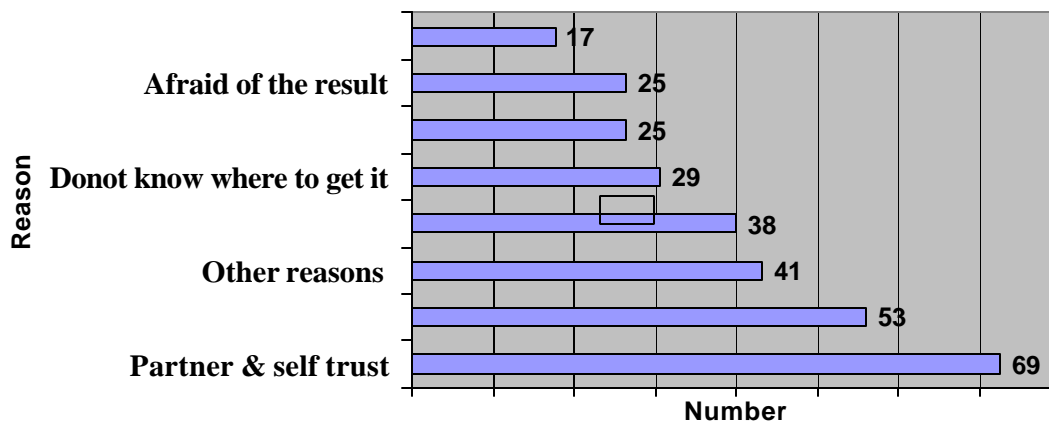


Table-2: Comparison result of VCT users and non-users on knowledge and Attitude towards HIV/AIDS, Guraghe Zone 2004.

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Characteristic (Average score)	VCT		Crude OR (95%CI)	Adjusted OR (95%CI)
	users N= n (%)	Non-users N= n (%)		
<b>Stigma Average score=4</b>				
Below average	140 (66%)	221(52.1%)	1.00	
Above average	72 (34%)	203 (47.9%)	1.79 (1.27,2.54)	1.90(1.23,2.82)*
<b>Discrimination average score= 5</b>				
Below average	118 (55.7%)	176 (41.5%)	1.00	
Above average	94 (44.3%)	248 (58.5%)	1.77(1.27,2.50)	1.57 (1.05,2.35) *
<b>Desire to keep HIV/AIDS secret</b>				
Yes			1.00	
No			1.47 (1.03,2.11)	1.47 (0.97,2.23) *

\* \_Statistically significant associations with non-VCT users after adjusting for socio-demographic variables

-No difference in knowledge and practice among VCT users and Non-users

**Association of Socio-Demographic Variables with VCT utilization in Guraghe Zone, 2004**

Religion \*

Education \*

Occupation \*

Marital status \*

Polygamy \*

\* Statistically significant associations with non-VCT users, after adjusting for socio-Demographic variables.

**The 6VCT Centers**

- Lack of- supervision,
  - Follow-up training,
  - Referral systems
  - Targeted service
- FGD
  - Involvement of others, role models, utilization of H/posts, monitoring training outcomes in the community

**Conclusion**

- No difference in Knowledge & practice
- There is difference in Attitude –Stigma & Discrimination
- Service –Delivery factors
- Presence of favorable social ground for further expansion but with proper training & monitoring mechanism.
- Reasons for VCT utilization Pre-marital and voluntary knowing self status, but for non-use were, partner and self trust, lack of information, social reasons, and lack of near by service.

**Recommendation**

1. Appropriate & continued information dissemination to bring behavior change, using local resources.
2. Follow-up training, supervision and referral system.
3. Training with monitoring /Evaluation mechanism at community level
4. Further study, counseling aspect, involvement of H/posts.

**Discussion**

**Question:** How valuable was the extended parallel model you used to measure your variable? Has it been tested for its reliability in other studies?

**Answer:** Yes the model was tested in more than 15 studies abroad and one study locally to eat different health issues especially in message design has shown reliability. And we considered alpha test to measure of reliability and therefore it is reliable.

**Question:** Alpha test measures only reliability what standard did you used to measure Validity?

**Answer:** the aim of the study was not to validate the model rather to use the model, rather to apply the model to fulfill the objective of the study therefore validation was not measured

**Question:** Did you try to see the possibility of repeated visit to the VCT centers and created mechanism to exclude repeat cases in the study?

**Answer:** Yes it was considered before starting data collection and care fully controlled and we only involved new cases only

**Comments**

•Time management and time allocation still needs to improved, brief introduction and methodology and detailed result and discussion should be the way to present at this stage. Avoid crowded slides/transparencies, in presentation follow seven rules (7 lines, 7 sentences per transparency)

•Use tables and graphs rather than narratives to present your results. Important area missed in the last for presentations were one three of the four presenters reported that they have collected both qualitative and qualitative data but none of them presented the results of the qualitative part. All the presenters tried to describe their study area by

calling the region and woreda but none showed the area maps that would facilitate easier understanding where the study area located in the country.

- Colleagues should communicate and exchange information with similar topics to have updated information and so that similar figures could be observed on the same variables.

**Stigma Towards Tuberculosis Patients in Shashemene Town  
By Husein Mekonen**

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### Background and Literature Review

- TB is a chronic infectious disease
- TB Poses a major public health problem
- It constitutes 2.5% of the global disease burden
- 26% of preventable deaths are caused by TB
- AFRICA is the continent most severely affected

#### **Ethiopia:**

- Is listed among the top 10 high burden countries.
- 110,000 TB pts were DX,Rxed in 2003 in Ethiopia.
- The HIV pandemic has altered the epidemiology of TB & stigma of HIV has Added to the existing stigma.
- **Stigma:** is a Greek word meaning disgrace or shame.
- Social level, which discredits the way people are viewed by others or by themselves
- **Stigmatization** is a process which creates “undesirable differences” among people and often leads to discrimination
- **Discrimination** is any form of distinction, exclusion or restriction because of some personal characteristics, or in terms of illness, disabilities.

Stigma could be felt (self) enacted.

TB becomes one of one of stigmatizing diseases than ever before because of:

- its association of TB with HIV/AIDS.
- fear of contagion/myth
- incurable
- wrong doing, marginalized group, etc.

#### **Stigma may vary from community to community:**

Stigma fuels the TB epidemic by creating a culture of secrecy, silence, ignorance, blame shame& victimization. It also increases pain & suffering & devastating social & economic consequences. It is a major barrier to health service utilization  
It also affects their ability to fulfill necessary: culturally expected & economically productive roles in a society.

- Since the start of TB prevention & and control program & current implementation of DOTS, Ethiopia has played its part in the prevention & control of TB. However, there is information which tells the growing of stigma among the community on TB pts
- TB patients are facing many problems: coping with the disease, poverty, lack of knowledge about the disease, negative attitudes from the community
- Refrains many people from knowing their disease statues for fear of associated stigma, violence, break up of relationships
- Many research works have been done on the prevalence of TB. However, scrutiny of the public understanding about the disease condition & related stigma is not well studied.
- Attempts to assess stigmatization of TB pts in urban communities of Shashemene town. Useful for policy makers, interested groups who are devoted in prevention & control of TB & related stigma.

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## Objectives

### General objectives:

To assess magnitude of stigma towards Tuberculosis patients in urban communities.

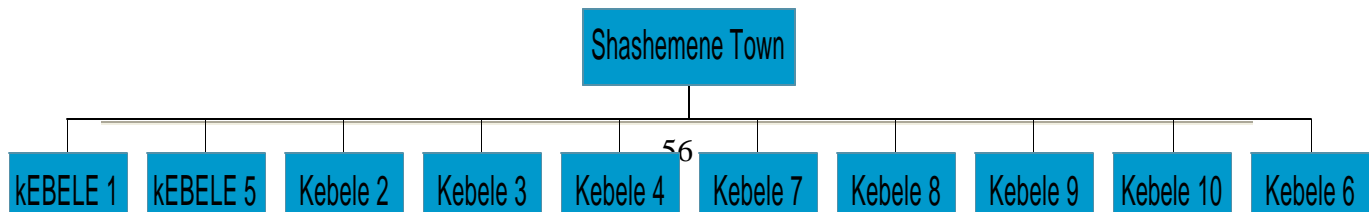
### Specific Objectives:

1. To assess knowledge of people about TB and its mode of transmissions
2. To assess peoples belief about causal transmission of TB.
3. To assess attitudes of the public towards TB patients.

### Research Methods

- **Study Design:** Both Quantitative & qualitative studies.
- **Study Area:** Shashemene Town, located 250km from Addis, situated at crossroads to (Bale, Sidamo, Arsi, North & South Omo), is transition town through which app. 18,000 passengers every day.
- **Total population** of 52,080(51% Female, 49% Males, with 10 kebeles (smallest Administrative Units).
- **Source population:** residents of the town both sexes during the study period
- **Study population:** individuals (males & females), six months prior to the date of interview, includes age 18 years and above.
- **Sample size:** estimated using formula for single population using the following Assumptions; Prevalence level of 50%, marginal error (d) 0.05, non-response rate of 0.1, design effect of 2 with 95% confidence certainty=845.
- **Sampling procedures:** using multistage sampling was used, 6 kebeles were selected randomly from 10 kebeles,
- Sampling fraction was calculated based on PPS of housing units in each kebele
- $K=H/h$
- Random number between 1&K. starting.
- One individual by lottery methods
- 3 repeated attempts before labeling absent for the study

## Multistage Sampling Procedure





■ **Data collection procedures& data quality.**

■ Quantitative

■ Questionnaire development.

■ Collected by using structured questionnaire

■ Quantitative data: 12 data collectors,2 supervisors

■ Training was given

■ **Pre test**

■ English version was translated in Amharic

■ was pre tested in Adama Town

■ **Qualitative**

■ Semi- structured questionnaire FGD guide was prepared by PI reviewed by an expert

Six FGDs were conducted in two kebeles

■ Based on three age categories: (18-25, 26-49,50 years and above) and gender in one side( to facilitate common understanding among the participants)

▪ Facilitator PI, 2 supervisors were note keepers, and the discussion was tape recorded Each group was formed minimum 6 & maximum 12.

▪ It took an average of 1-2 hours to conduct discussion with each group.

**Variables**

■ Independent:  
Socio-demographic

■ Dependent:  
Knowledge,  
Beliefs  
Attitudes (feelings, Avoidance)

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### Management of data collection

- 12 data collectors (6 males & 6 females) & 2 supervisors, training was given by PI, were 12<sup>th</sup> grade, with diploma.
- Each supervisor was responsible for 2 groups of data collectors (3f+3m).
- There was daily meetings
- During data collection, data collectors were not able to locate 10(1%) housing units, 18(2%) 5f% 10m were not willing to give consent for the interview and 3(0.4%) were not available for the interview after three attempts. This gives a total sample of 817

### Data entry and analysis

- **Quantitative:**
- Data was entered in to **EPI info 6** and analysis was don by using **SPSS 10**, frequency and percentage, OR was used to see the associations.
- **Qualitative** results from **FGDs** were translated in to English by PI, Maine concepts were identified, findings different from the survey result were summarized and presented
- Findings from note keepers were also considered when appropriate.

### Communication of the Results

- Findings of the study will communicated to all relevant organizations and bodies who can make use of the findings: the study area, AAU, DCH, EPHA,CDC & will be published in Local and International Journals.

### Ethical Consideration

- Ethical clearance was secured from FM,AAU.permission from Oromia Regional State,from administrative bodies of the Town including Kebeles.

Table 2 Knowledge about TB among study subjects, Shashmene, Town, Ethiopia, and March. 2004, n=817.

Variable	Correct *		Incorrect **	
	N <sup>o</sup>	%	N <sup>o</sup>	%
Do all TB patients are infected with HIV	420	51.4	397	48.6
Could TB comes from cold	80	9.8	737	90.2
Do one acquire TB by drinking dirty water	522	63.9	295	36.1
Do one get TB by sexual intercourse	557	68.2	260	31.8

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A person can get TB by Germs	447	54.7	370	45.3
A person can get TB by sharing injection	286	35.0	531	65.0
Could TB transmit by sneezing & coughing	674	82.5	143	17.5
Do TB transmit from overcrowding	563	68.9	254	31.1
Pregnant women transmit TB to her fetus	334	40.9	483	59.1
Infected women can transmit TB to her infant through breast milk	246	30.1	571	69.9
Can a person with TB can transmit HIV	435	53.2	382	46.8
Can TB be preventable	668	81.8	149	18.2
Can TB be curable	715	87.5	102	12.5

\*Correct = right answer for the respective questions.

\*\* Incorrect = wrong answers for the respective questions

Table 4 Response to questions related to belief about TB transmission through causal contact among the respondents, Shashemene Town, Ethiopia, March 2004.

Variables	Incorrect belie*		Correct belief**	
	N <sup>o</sup>	%	N <sup>o</sup>	%
How likely is it that a person could get Tuberculosis				
Sharing toilet with a person with Tuberculosis	375	45.9	417	51
Eating food with person with Tuberculosis	469	57.4	326	39.9

N.B all will not add up to 100% because some of he respondents were not sure about causal transmission of TB.

\*Incorrect belief category combines responses "very likely" & "some what likely"

\*\* Correct belief category combines "very unlikely" & "impossible"

Table 6 Stigmatization and non-stigmatizing responses to Stigma variable among residents of Shashemene town, Ethiopia, March 2004.

<i>Feeling towards TB patients</i>	Stigmatizing *		Non-stigmatizing**	
	N <sup>o</sup>	%	N <sup>o</sup>	%
Angry at TB patients	200	24.5	611	74.8

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Afraid of TB patients	184	22.5	626	76.6
Disgusted by TB patients	299	36.6	510	62.4

NB Total may not add up to 100% because some of the respondents were not sure

\*Stigmatizing category combines responses "Very angry" & "Some what "

\*\* Non-stigmatizing category combines "Little" & " Not at all

Table 7 Stigmatization and non-stigmatizing responses to Stigma variable among residents of Shashemene town, Ethiopia, March 2004. N=817

Avoidance behavioral intention	Stigmatizing*		Non stigmatizing**	
	N <sup>o</sup>	%	N <sup>o</sup>	%
Allowing your child to attend in the school where one of the student was known TB and on treatment	364	44.6	453	55.4
Willingness to continue friendship	111	13.6	706	86.4
Willing to work with your colleagues who had TB and on treatment on the same office	148	18.1	669	81.9
Willing to care for relative with TB at home	63	7.7	754	92.3
Willing to shop from shopkeeper with TB and on treatment	184	22.5	663	97.5
Keep personal disease status secret	612	74.9	205	25.1
Willing to move in to the house of neighbor with TB	70	8.6	745	91.4
Allowing a person who was cured from TB to marry your daughter or son	391	47.9	426	52.1
Allowing a teacher with TB and on treatment to continue teaching	503	61.6	314	38.4
Willingness to allow someone to be the member of Ider	99	12.1	718	87.9
Willingness to participant religious ceremony with TB patient	102	12.5	715	87.5

\* Stigmatizing wrong answer for the respective questions

\*\* Non- stigmatizing correct answer for the respective questions

- Survey questionnaire was anonymous, interview was conducted in private setting to maintain privacy of the respondents for sensitive questions.
- FGDs were conducted in convenient area
- Verbal consent was obtained from each respondents

- Instruments do not cause any harm to study subjects, the community and interviewers.

### **Strength and limitations**

#### **Strength**

- Gives baseline information
- Use of both methods
- Sufficient sample size
- 

#### **Limitations**

- Suffers from all forms of limitations to cross-sectional studies
- Compromised by the stigma itself
- Absence of similar studies

#### **Conclusion and Recommendation**

- Conclusion
- Majority have misconceptions about cause & transmissions of TB
- Widespread stigma against TB patients was indicated
- Only few people willing to disclose their disease status
- Avoidance of TB patients & their relatives clearly observed
- Need for public awareness
- Strengthen strategies to tackle both Epidemics

#### **Recommendations**

- Programs designed to prevent and treat TB should address the issue of stigma
- Incorporate TB related points in the package of information by anti-AIDS clubs.
- Use social gatherings
- Institutions working on TB should consider the issue of stigma
- Further studies, to enrich knowledge about stigma.

#### **Acknowledgement**

- DCH,FM,AAU
- Advisors: Dr. Mesfine Addisse & Ato Fikre Enqusilassie
- School of Nursing,FM,AAU
- CDC /EPHA
- Oromia Regional State,administrators of the town, and kebeles
- Data collectors,supervisors & the community
- Dr.Alemaye Worku & Dr. Abera Kumie, other instructors,
- Ato Feleke Tades,coordinator ACORD Shashemene
- Relatives and friends.

**Progress report on Thesis Research Assessment of risky sexual behavior for HIV infection with special focusing on night market and mobile people in Gumer woreda, Gurage zone**  
By Jemal Yousuf, BSC

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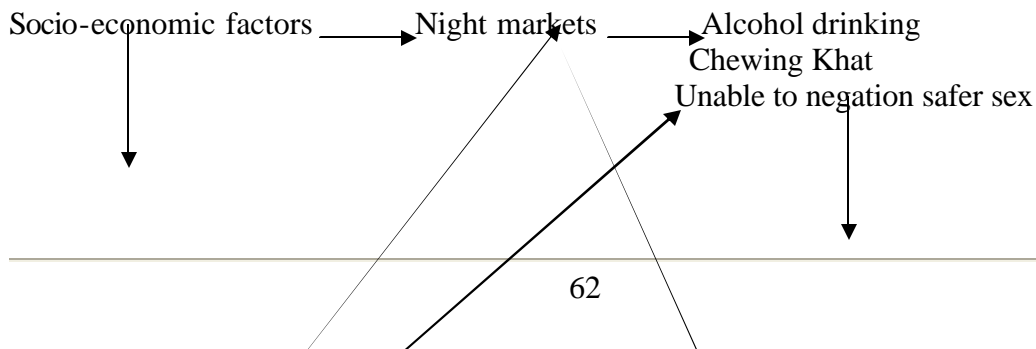
Advisors: Damen H/Mariam (MD,MPH,PhD )  
Wakgari Deressa (BSC, MPH)  
Funding Agency: EPHA/CDC Project

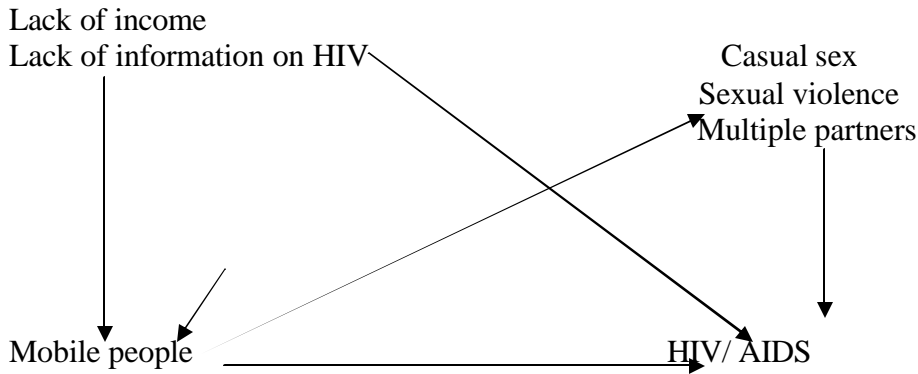
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## Background

AIDS has become the current major public health Problem in both developed and developing countries.

- Globally:
  - UNAID updated December 2003 reported
    - PLWHA is estimated 40 million (34-46million)
  - Number of death were
    - 3 million (2.5-3.5 million)
- And the people newly infected
  - 5 million (4.2-5.8 million),
- The rates are not equally distributed around the globe.
- In 2003 SSA
  - Worst affected by HIV/AIDS epidemic
  - An estimated PLWHA 25.0 –28.2 million
- Death due to AIDS 2.2-2.4million adults and children
- Newly infected people 3.0-3.4 million adult and children
- Its current adult prevalence is range from 7.5 – 8.5%. It is vary in the continent in Botswana and Swaziland almost 40%.
- Ethiopia
  - Is one of the most seriously affected countries in the world
  - PLWH currently 2.2 million,
  - The prevalence in the adult population rose from 3.2% in 1993 to 6.6% by the end of 2001
  - The prevalence e of urban is 13.2% (range from 3%-23%)
  - The prevalence of rural is 3.2 % (ranges from 1.1%-4.6%)
- A study in Tanzania has shown that change in closing hour of bars, local beer shops, and traditional dances before darkness falls and women only collect water and/or firewood after dark when men accompany them
- There is no study concerning night market contribution for HI
- V infection in rural Community where most of people live in Ethiopia.





## 2. OBJECTIVES

### General Objective

To assess risky sexual behavior for HIV transmission with special focus on night markets and mobile people in Gummer Woreda, SNNPR.

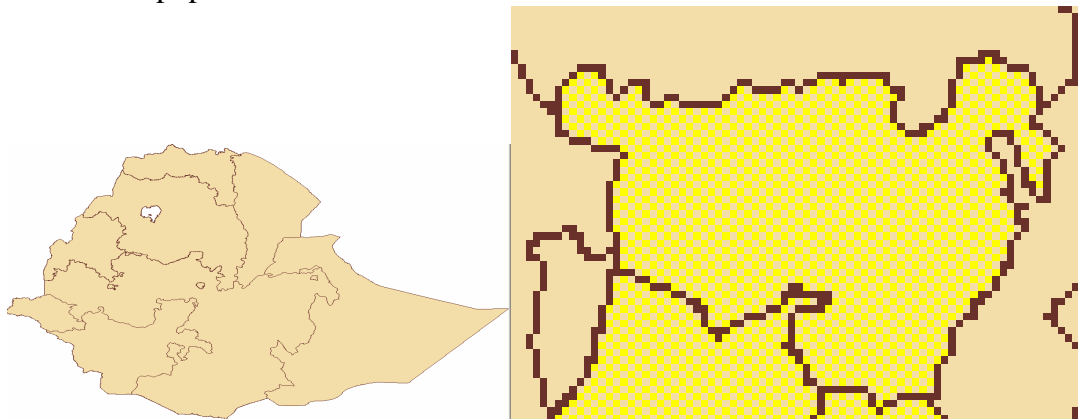
### Specific objective

- To assess whether night markets contribute to risky sexual behavior for HIV transmission.
- To assess whether mobile people involve in risky sexual behavior for HIV transmission
- To determine groups with risky sexual behavior for HIV transmission

### Methods and materials

Study area:

- Gumer woreda ,Gurage Zone
- Total population 185,888
- 38,727 households
- There are 9 mark
- Mobile population



**Study design:**

- cross-sectional and qualitative study

**Source of population:**

- Adult dwellers of Gumer woreda

**Study population:**

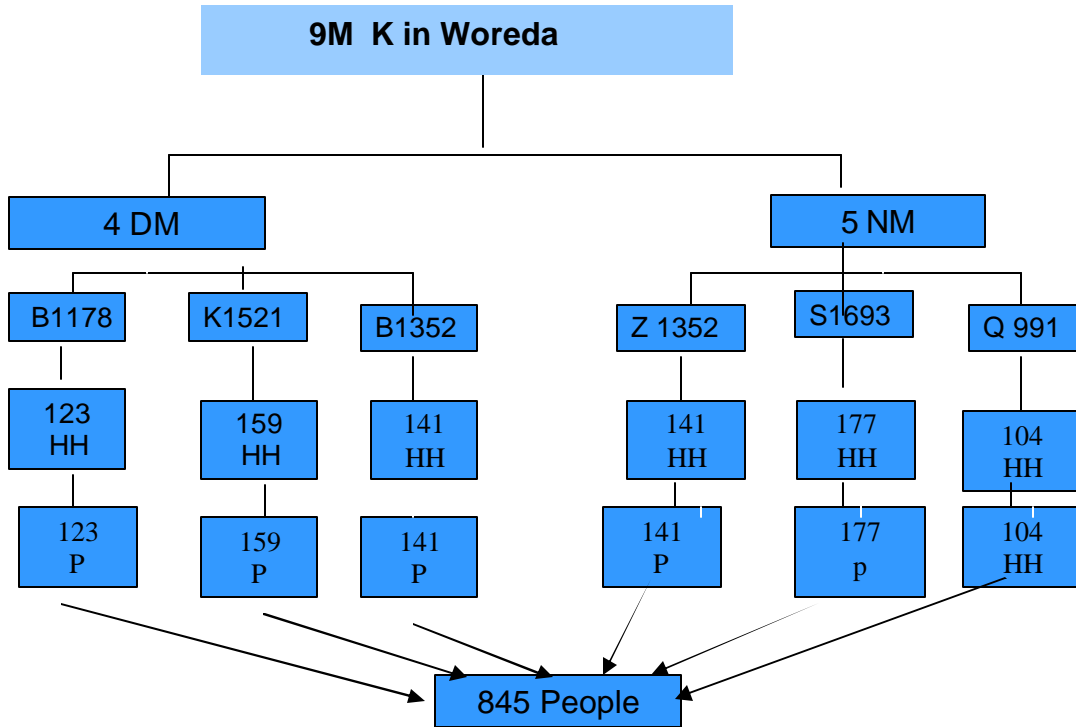
- both sex of age between 15-54 years ,
- who live in 6 selected kebeles

**Sample size determination:**

- single population proportion with the following assumptions;
  - a prevalence level that estimated maximum sample size (50%) was considered,
  - marginal error ( $d=0.05$ ),
  - 95% confident certainty ( $Z=1.96$ ) and
  - design effect two
  - non response rates of 10% in the study
  - Total sample size=845



## Schematic presentation of sample procedure (Multistage)



### Data Collection Procedure

- Questionnaire was developed
- 4 data collector and 2 supervisor were recruited
- Training was given for 3 day
- Pre-testing was done
- Daily follow up was done in the field

### Qualitative data

- 4 FGDs and 14 IDIs were selected and interviewed
- During FGD and IDIs discussion and interview tape recorders was used
- Ethical issue
  - Agreement consents obtained
  - Privacy maintained

### Results and discussion

- 99.17% response rate
- Non-responses
  - Not available for the interview after three attempts.

Table 1. Socio-demographic characteristics of respondents Gumer woreda, November to December 2003. (n=838)

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Variable (%)	Frequency	Percentage (%)
<b>Sex</b>		
Male	437	52.1
Female	401	47.9
<b>Age in years</b>		
15-24	279	33.3
25-34	196	23.4
35-44	225	26.8
45-54	138	16.5
<b>School attendance</b>		
Attended school	431	51.4
Never attended school	407	48.6
<b>Educational status</b>		
Read and write	56	13.0
Elementary	176	40.8
High school and above	199	46.2
<b>Religion</b>		
Muslim	579	69.1
Christian	214	25.5
Other Christians	45	5.4
<b>Marital status</b>		
Married	503	60.0
Unmarried	287	34.2
Divorced/ separated/ widowed	48	5.7
Polygamous marriage	42	7.6
<b>Occupation</b>		
House wife	287	34.2
Farmer	259	30.9
Student	178	21.2
Farmer and trader	62	7.4
Other trader and jobless	52	6.2

- Among the respondents who mentioned their partner during the first sexual intercourse,
  - 9(3.3%) of males and 4 (1.2%) of females had sex with casual partners
  - 26(10.8%) of male and one female had sex with unknown partner.
  - 14(1.7%) had ever exchanged sex with money or materials in relationship with night markets
  - 505(89.5%) had single partner, 37 (6.6%) had two, 20 (3.5%) didn't have and two had three or more sexual partners.

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Table 2. Socio-demographic characteristics of respondents who practiced risky sexual practice in relationship with night markets

Variable	Risky sexual practice in relation to the night market		Crude OR (95% CI)	Adj.OR (95 % CI)
	Yes ,n =61	No, n=787		
<b>Sex</b>				
Male	33 (7. 6)	404 ( 92 .4)	1.00	1.00
Female	28 ( 7. 0 )	373 ( 93. 0)	.92 (.55,1.55)	.22 (.08,.59)
<b>Age</b>				
15-24	5 (1.8)	274 (98.2)	1.00	1.00
25-34	20 (10.2)	176 (89.8)	.02 (.01,0.04)	.23 (.13,.40)*
35-44	26 (11.6)	199 (88.4)	0.11 (.07,.18)	.23 (.14,.39)*
45-54	10 (7.2)	128 (92.8)	.13 (.09,.2)	.15 (.07,.33)*
<b>Education</b>				
Literate	29 (6.7)	402 (93.7)	1.00	1.00
Illiterate	32 (7.9)	375 (92.1)	.85 (.50,1.42)	.87 (.38,1.96)
<b>Religion</b>				
Muslim	38 (6.6)	54 (93.4)	1.00	1.00
Christian	23 (8.9)	236 (91.1)	.72 (.42, 1.24)	.51 (.84,2.70)
<b>Marital status</b>				
Married	50 (10..00)	453 (90.0)	1.00	1.00
Single	11 (3.3)	324 (96.7)	.31 (.16,.60)	.03 (.01,.07)*
<b>Occupation</b>				
Farmer	17 (6.6)	242 (93.4)	1.00	1.00
Other	44 (7.6)	535 (92.4)	1.17 (.66,2.09)	2.51 (1.07,5.89)

- Among sex 51(11.7%) of males and15 (3.7%) of females had extramarital sex influenced alcohol
- Among the age group, 25-34 years 22 (11.2%) had extramarital sex. This age group had 7 female had more exm. in

**Qualitative study**

- Most of the participant and respondents of interviewees were responding about night market contribution for HIV/AIDS. They have similar feeling in that night markets have become source of HIV transmissions. “----- Nowadays the night markets have become source for HIV transmissions”
- Among all of the participants and some respondents ideas share each other in that risky sexual practices had occurred in the way of night market willingly or

- unwillingly. However, most of the times the events were not reported as a cause of cultural influence.
- Females were not informed even if they are raped some of the respondents mentioned that the females were told only when they become pregnant or labor. Otherwise they did not tell their secrets to any persons. Especially unmarried, divorced and widowed. For example as one of the middle age respondents said,
  - ” .... I remember a divorced women was returning from Bad night market had a casual sex with a married person in the Bamboo forest.  
The same person--- with her for the second time in the darkness.  
Consequently, she became pregnant and has told while she was on labor.”
  - There are different similar evidences concerning night market contribution that were reported by FGD and IDIs. The other way of HIV spreading in the area as almost all of the FGD and IDIs reported relating with mobile people and their wives. These are because of the absences of husbands from the family for a year. Some of them have two wives, one in the countryside and the other in the town where they work.

### **Strengths and Limitations**

#### **Strengths**

- It gives baseline information concerning night market and mobile people contribution for HIV spreading in rural areas.
- Its design is appropriate for this study
- Flexibility in the use of tape-recording and choice of place by discussants and respondents.

#### **Limitations**

- Unable to observe risky sexual practice in observations area.
- Unable to hear the discussion of night market participants in the way of their home.

#### **Conclusion and Recommendations**

- All respondents had sufficient awareness about HIV/AIDS.
- However, there is no satisfactory behavioral change in the community.
- There is wide night market and mobile people contribution for HIV/AIDS spreading in the study area.

#### **Recommendations**

- Based on this finding, it needs urgent preventive measures.
- All night markets in the study area should be stopped and shifted to the morning time.
- The presence prevalence of unprotected sex should be monitored.

**Impact of HIV/AIDS on Public Sector Health Care Services  
in Dire Dawa Administrative Council Eastern Ethiopia.**

**By Lemessa Oljira**

**Advisors: Dr. Alemayehu Worku**

**Dr. Damen H/Mariam**

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**INTRODUCTION**

**Global estimates of HIV/AIDS at the end of 2002 indicates:-**

- 42 million people living with HIV/AIDS
- 5 million new infections in 2002
- 3.1 m deaths due to HIV/AIDS in 2002
- 29.7m cumulative deaths since 1981.

**In Ethiopia:**

- 2001 estimates of HIV prevalence- 6.6%
- Urban prevalence- 13.7%
- Age of reported AIDS case 91% 15-49

**HIV/AIDS -not only become a global epidemic but also:**

- major impediment to development
- Substantial threat to human security

**SSA- is the region most affected by HIV/AIDS**

- 29.4m -estimated people living with HIV/AIDS
- 3.5m- New infections in 2002
- Millions of adults are dying young or in early middle age
- Average LE in SSA is 47 years-62 years without AIDS

**IN all affected countries HIV/AIDS epidemic:**

- Is bringing additional pressure to bear on the health sector?

**Health sector is under pressure from:**

- Actual care of the sick
- Epidemiological & behavioral surveillance
- Blood safety
- Voluntary counseling & testing
- Planning & mx of initial prevention responses

**Health care system:**

- Have to deal with increasing numbers of patients with AIDS related illnesses
- HIV/AIDS is diverting scarce resources from other major health concerns.

**Africa's already inadequate health systems:**

- Have become severely strained by the HIV epidemic:
- In some regions 1 in 4 Hospital beds is occupied by AIDS victims
  - In some cities-majority of hospital beds
  - In Cote d'Ivoire, Zambia and Zimbabwe:

- 50-80% urban Hospital beds&
- In Ethiopia (2000) -estimated 42%

**AIDS affects the health sector in two ways:**

- Increasing demand
- Reducing the supply of a given quality of care at a given price. As a result:
- Some HIV negative people would not obtain treatment
- Total expenditure on health will rise

**World Bank estimates:**

25% of people with out HIV who die of tuberculosis would not have been infected in the absence of the HIV epidemic.

**The health sector sees:**

- The first impacts of AIDS
- As those who are experiencing periods of ill health seek medical care.

**In assessing the impacts of AIDS:**

- The emphasis is on the public sector health care system.
- For the private sector (in the short term) increased illness will Present an opportunity.

**Impact studies of HIV/AIDS are of paramount importance:**

- Important tool of advocacy-engage in prevention
- Act as signal to plan for in creased demand.

**If we are successful in our advocacy:**

- Prevention may be effective and reduce impact

**In countries with more advanced epidemic:**

- No doubt that there will be an impact
- The challenge is to predict and mitigate it

**There are no published studies in Ethiopia exploring the impact of HIV/AIDS on the health care services.**

**Therefore the purpose of this study is:**

- To explore the Impacts of HIV/AIDS on the public sector Health services.
- Finally the results may help:
- In advocacy for prevention
- For planning to mitigate the current and/or forthcoming impacts of HIV/AIDS.

**Objectives:**

**General Objective:**

- To assess the impact of HIV/AIDS on the public sector Health care services in Dire Dawa Administrative Council.

**Specific Objectives:**

- To describe the number and characteristics of HIV/AIDS Clients seen in the last on year
- To estimate the average health care system perspective resources being utilized per HIV/AIDS clients
- To describe health workers death in the last ten years due to any cause.

**Methods and Materials**

**Study area:**

- DD Administrative Council- 525km east of AA
- Total population -342,000(72.8% urban)
- Two Hospitals & three HC(2002/03)
- Dil chora is the only public sector Hospital
- In Dil chora Hospital July 2002-June 2003:
  - 81,346 outpatients treated
  - 7474-inpatients
  - Average length of hospitalization -6.37 days
- In 2001 HIV prevalence for Dil chora Hospital was-15.2%  
In the Administrative Council:
  - Health prof. -1: 7,773- physician
  - 1: 2,631- nurse

**Study design:**

**Retrospective review of:**

- Financial expenditure documents
- Cards/registration books of HIV/AIDS clients
- Health workers death information

**Study subjects include:**

- All HIV/AIDS clients' seen in Dil chora Hospital for one complete fiscal year.
- Health workers died in the last ten years.

**Eligibility Criteria:**

- Documents/cards/registration books possibly retrieved.
- Death information obtained from personal admin.

**Methods of data Collection:**

- Data on HIV/AIDS clients:
  - . Using format prepared separately
  - . Cards traced by registration numbers
- Interview with key informants and observing what is going on to-describe activities of HIV/AIDS.
- Review of accounting records & inventory of items

**Quality control methods:**

- Secondary source-quality of the recording system
- Reviewers-health workers minimum of diploma level
- Training for two days
- Daily checking for completeness
- Data double entered and validated.

**Data processing technique:**

- Data: - entered
  - Cleaned
  - And analyzed - Epiinfo version 6
  - SPSS version 11.
- Percentages, averages & OR and  $X^2$

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- Data presented using tables and figures.

### **Variables of the study:**

#### **Independent:**

- Age, Sex, reason of HIV test, address, occupation, educational status, marital status,

#### **Dependent:**

- Result of HIV test, estimated average cost per HIV/AIDS clients.

#### **Ethical Consideration:**

- Ethical clearance obtained from faculty of medicine
- Review of cards-no issues of patient consent
- However confidentiality of information was kept.
- Cards-only identified by numbers
- Reviewers cautioned not share with another party
- Consent also secured from concerned authorities at different Level.

#### **Results and discussions:**

##### **1. Users Characteristics**

- 809 HIV/AIDS related service users
- 729 (90.2) clients of VCT
- 80 (9.9%) - opportunistic infections.
- HIV test result showed:
  - . 206(25.5%) positive
  - Higher than the rate for the same Hospital in 2001(difference)
- Majority 188 (91.3%) were 15-50 years.

##### **2. Cost of HIV/AIDS activities**

#### **Cost Burden.**

##### **Description of HIV/AIDS activities**

- Only Dil chora Hospital
- Treatment & opportunistic infections
- VCT (process)
- Activities are funded by (MOH) & other multilateral organizations (donations)
- No follow up of patients
- Blood samples are tested in Hospital compound and fees are charged for the services.

#### **Activity-based cost framework by types of inputs:**

- Financial costs- expenditure on the program
- Economic costs- measure of the value of opportunities lost.
- Recurrent inputs-resources that are used up within a year of Purchase.
- Capital inputs/ goods- items that have a useful life of longer than one year.

#### **Costing procedures:**

##### **I. Capital Costs-buildings**

- Dil Chora Hospital:
  - . Founded in 1962



- . Served for 42 years
- . Financial cost- (only 100birr book value)
- . Economic cost-equivalent market value/rent

**II. Capital costs- equipment**

- Current price- purchasing section
  - Accounting records
- Accepted useful life- those who use them
  - For others 10 years taken
- Annual value - dividing the replacement value by the useful /annualizing factor.

**III. The value of off-budget recurrent costs:**

- Calculated by listing the quantities consumed:
  - . In the study year
  - . Crosschecking with the price of supplier  
(Pharmaceutical & medical supplies team, MOH)

**IV/ Shared Costs**

- Allocated indirectly by the proportion of outputs.

**After all the data have been collected and the basic calculations of cost data made:**

- Results have been double-checked
- To make that they are reasonable.

**The total health care system perspective cost of providing:**

- VCT- 157.4-birr/ client- 27 times (5.8 birr)
- Rx of opportunistic Infection- 205. 3-11.6 times (17.6 birr)

**All patients treated for opportunistic Infection:**

- Undergo 2-3 tests
- Incurred 130.5 birr /patient from indirect cost
- Making the Rx cost /Patient-335.8 birr(19 times)

**The average per patient/ client financial cost:**

- VCT - 61.6 birr
- Rx- 232 birr
- On average - 55.8 birr /VCT clients
- 214.4 birr /Pt. Rx  
Subsidized by the provider.

**The in-patient Rx of opportunistic infections - costly:**

- During study period-ALH- 6.37 days.
- For confirmed AIDS cases- 13.27 days
- Admission of one AIDS case- barred two patients.
- If half be AIDS cases- above the capacity

**A. Health care workers death (10 years)**

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- Obtained from personnel administration
- 16 health workers death record found
- 12(75%) males -4(25%) females
- Age at death:  
Ranged - 24 to 41 years  
Mean -31.18 years (std. 4.69)
- **Professional category:**  
13 (81.25%) - health assistants  
1(6.25) - lab.tech, physician and En. Health.
- **Total years of service before death:**  
Ranged - 8 to 19 years  
Mean - 12.56 years.

### **-Studies of HIV prevalence among health care workers in Africa Suggests that:**

- Nurses & doctors are at least as likely to become infected as Other people.

### **Assuming this is true elsewhere a country with:**

- 5% HIV prevalence- each year -0.5% -1%
- 30% HIV " - " " - 3 to 7%

### **Taking these evidences:**

AIDS Could be cause for majority of health care workers death.

### **Strengths & weaknesses**

#### **Strength:**

- The first in its kind in the area
- Could generate new ideas for study

#### **Weaknesses:**

- Secondary source data
- Smallness of sample size (HW attitude)
- Lack of previous similar study

### **Conclusions:**

#### **Taking in to consideration the sited limitations:**

1. Majority of HIV/AIDS clients-Urban
2. Majority of HIV test +ves & patients treated- 15 to 50 years- 91.3% and 88.8%
3. Joblessness, illiteracy, HMSP, HTB and chronic diarrhea, divorced /widowed after marital relationship were predictors of positive HIV test results.
- 4/ Health care system subsidized greater proportion of costs of HIV /AIDS services.
- 5/ The in patient treatment costs of opportunistic infections of

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HIV/AIDS is costly. Admission of 1 patient-barred admission of 2 on average.

6/ Health care workers are dying prematurely before the investment in education pays- off.

### **Recommendations:**

1. Health planers to assure IEC is targeted to the most in needy (Illiterate, jobless & rural community.)
2. Properly targeting subsidy and look for other possible ways of Caring for AIDS cases like home-based care.
3. Ensuring the safety of health care workers and documenting Causes of death for future.
5. Further study covering wider area & more samples is crucial.

### **ACKNOWLEDGMENTS**

\_ My Advisors:

Dr. Alemayehu Worku & Dr. Damen H/Mariam  
EPHA  
Staff of DCH  
DD Admin. Council HO  
Dill Chora Hospital staff  
All the participants of the study.

**IMPACT AND BEHAVIORAL ASSESSMENT OF HIV/AIDS IN THE ADDIS ABABA POLICE FORCE**

## BACKGROUND

- HIV/AIDS global situation
  - The magnitude of the problem
  - The impact of the problem
    - Eg-demographic, household, food security, health service, education, macroeconomic, security/law/governance
- HIV/AIDS in Ethiopia
  - Magnitude in the country
  - Magnitude in Addis Ababa
  - Impact of the problem
- Why impact studies?
  - 3rd decade of the pandemic  $\approx$  3rd wave of the problem, i.e. impact
  - Helpful in quantifying or understanding the outcomes of HIV/AIDS, so important to think strategically

## OBJECTIVE

- GENERAL
  - To reveal the HIV/AIDS impacts and related behavioral factors in the Addis Ababa Police Force
- SPECIFIC
  - 1. To determine the contribution of HIV/AIDS in the police force human resource loss.
  - 2. To show the direct financial burden of HIV/AIDS on the police force medical service
  - 3. To determine the knowledge and practice of the police force regarding HIV/AIDS risk behavior
  - 4. To determine the vulnerability extent of the police force to HIV/AIDS

## METHODOLOGY

- STUDY AREA
  - Addis Ababa
  - Previous vs. recent administrative structure
  - Police force of the region
    - 5,381 officers
    - Generalized specialized hospital
    - 10 departments & 230 beds
    - Around 400 patients daily at OPD
- Two parts
  - 1. Retrospective historical cohort /Part 1/
  - 2. Cross sectional study /Part 2/

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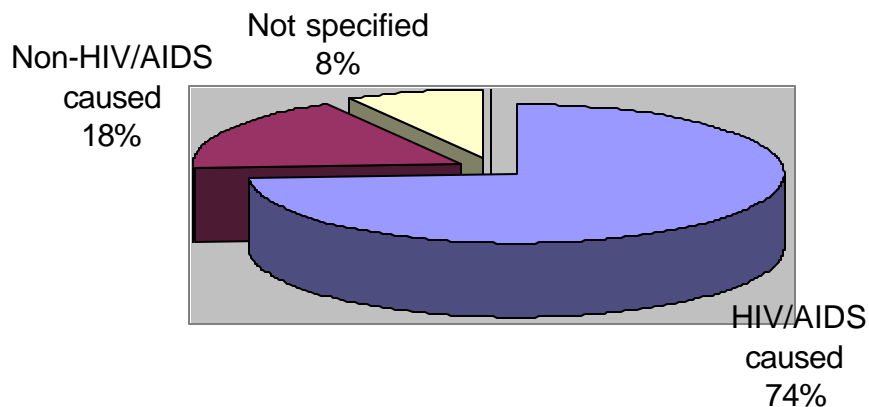
- Part 1 (RHC)
  - Had two groups
    - Group 1 –Death dropout officers
    - Group 2 – OPD attending officers
- Group 1
  - Source population - Addis Ababa police force
  - Study population – all deaths in 1993 – 1995
  - Name of dead officers were retrieved
  - Q- 1 was 2 pp & 13 questions, all structured
  - Medical records reviewed according to Q-1
  - Data collection was by four physicians
- Group 2
  - Source population – officers who attend police hospital OPD in 1995
  - HIV prevalence among OPD patients proxy estimate used, p=26%
  - 25% non response rate used
  - 370 consecutive officers seen in Sene 1995 at medical OPD taken as a study population
  - Q-2 was 3pp & 15 structured questions
  - Main content of Q-2
    - Clinical profile of patient, OPD visit frequency & service cost, admission stay and cost
  - Triangulation used to maximize information
  - Cost determined by the Hospital rate
  - Four physicians collected data after training
- Part 2 – Cross Sectional Study
  - Source population – all AA working officers
  - Multiple sexual partner among Air Force Officers from BSS was used as Proxy prevalence estimator
  - 10% non response rate considered
  - Finite population correction used
  - Sample frame of source population prepared by ID numbers from regional police commission
  - 406 officers selected randomly using Epi info 6
  - A14 pp questionnaire adapted from BSS used
  - Q prepared in English then Amharic then pretested
  - Study officers grouped in their working sub-municipality
  - 12 data collectors used after training
  - Self administered questionnaire with an envelope used
- Independent variables
  - Sero-status of HIV
  - Clinical diagnosis of HIV/AIDS
  - Socio demographic variables
- Dependent variables

- Cause of death
- Cost of service
- Frequency of OPD visits
- Duration of inpatient stay
- Multiple sexual partners
- Risky sexual behavior
- Knowledge, attitude and practice about HIV/AIDS
- Perception of vulnerability to HIV/AIDS
- Data Analysis
  - Data entry, cleaning and most analysis done by EPI info 6
  - Some analysis by SPSS-10
  - Descriptive statistics, non-parametric tests and odds ratio used.

## RESULT

- Officers Death Dropouts
  - Out of 170 deaths 85 (50%) analyzed
  - 51 were tested for HIV, of which 50(98%) were sero-positive
  - No HIV serology result documented for 34
    - 19 (56%) – Probable HIV infection
    - 15 (44%) – No sign of HIV infection
  - Mean age of death 35 years
  - Cause of death in 63(74%) officers was HIV/AIDS related

Fig 1: Cause of death among studied officers



- HIV/AIDS BURDEN IN THE POLICE HOSPITAL
  - Of 370 officers, 355 (95.9%) analyzed
    - 39 (11%) = HIV positive
    - 14 (3.9%) = HIV negative
    - 18 (5.1%) = Probable HIV infected

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- 284 (80%) =No sign of HIV
- HIV negative officers came frequently to the OPD, followed by HIV positive ones.
  - Table – Number of OPD visits in a year among different group of officers.

Group of officers	n	OPD visits/yr		p value
		mean	median	
HIV positive	39	4.08	3.0	0.013
HIV negative	14	3.93	4.0	
Probable HIV	18	3.28	2.5	
No sign of HIV	284	2.51	2.0	
Total	355	2.78	2.0	

– H  
I

HIV negatives were the most expensive to treat at OPD.

- Table –Median cost per OPD visit of different groups of officers.

Groups	N	Average cost (birr)	p
		Median	
HIV positive	38	27.93	0.10
HIV negative	13	35.02	
Probable HIV infection	18	28.13	
No sign of HIV	257	24.94	
Total	326	25.51	

- HIV negative people were the most expensive to treat in wards, and stayed longest.

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- Table - Median duration of stay and cost per admission among admitted officers.

Groups	n	Inpatient days	p	Inpatient cost (birr)	p
HIV positive	6	14.50	0.14	548.65	0.22
HIV negative	3	24.00		664.20	
Probable HIV	3	14.00		460.17	
No sign of HIV	8	6.00		261.48	
Total	20	8.50		355.00	

- **BEHAVIORAL SURVEILLANCE**
  - Of 406 officers, 364(89.7%) responded
  - Multiple sexual partners = 100 (27.5%)
  - Risky sex in the last 12 months =107 (33.4%)
  - Sexual debut after being an officer = 94(29.4%)
  - ‘Always condom use in the last 12 months’ was highest among officers with their commercial sexual partner = 20 (62.5%)
    - Lowest was among officers with one regular sexual partner =30 (13.4%)
  - ‘I trust my partner’ is the commonest reason for not to use condom in the last sex both in regular and non-regular partners.
  - Poor STD knowledge and practice.
  - 61% officers feel death and absenteeism increased in their force gradually.
  - 56.5% consider HIV as major cause for the above problem.
  - 31.3% officers consider their force suffering HIV/AIDS worse than the community
  - Only 14% of officers consider themselves as to have moderate/high risk to have HIV.

**PROGRESS**

- Proposal development = Sep- Oct/03
- Fund securing = Nov/03
- Questionnaire development = Dec/03



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- Communicating police officers = Dec/03
- Data collection = Jan – Feb/04
- Data entry, analysis, write up = March/04
- Write up, finalizing & refining= April/04

### CHALLENGES

- “Unstable” project titles
- Prolonged data collection
  - AA administrative changes
  - The very nature of officers’ work
  - Self administered questionnaire
- Social desirability bias
  - Sensitive issue
  - Qs filled at work sites
  - Data collection after laying off
- Poor medical recordings

### Discussion

**Question:** Normally there is a criterion to select a group to assess behavior related to HIV in a country where the prevalence is low, high risk groups like commercial sex workers, and IV drug users, while in a country with the prevalence is high general population are the focus. What was your justification to select police force as a target population? And what do you mean when you say police force. Does it include only those police with rank?

**Answer:** Since we are in the third decade and facing the third wave of the problem (impact), and there was an interest from the funding organization to assess the impact of HIV infection in different Government sectors. That is why three graduate students took three Government sectors (health, education and police) to assess the impact of HIV/AIDS. That police force was selected otherwise there was no special criteria used to select police force. All polices with and without rank was included in the study, if it creates such confusion I will operationally define it.

**Question:** why wasn't the indirect cost of HIV/AIDS included on the patient side (Cost of transport, cost of time lost by the patient and the family member to take care of the ill) in your cost analysis?

**Answer:** my intention was not to see the cost from the patient side rather the extra cost on the provider (health sectors) side so I have not included the expenses but only the income from the patient side and expenses from the provider side to show the impact

**Question:** There were 20% non-response rate and you didn't mention reasons for non-response or even the profile of (age, sex, profession) the non-respondents, who were the non-respondents?

**Answer:** As it has been shown in previous studies most non respondents were health workers especially physician in general and specialist physician in particular.

**Question:** You recommended that all night markets should be stopped; do you think it is feasible? Don't you think it needs policy change?

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**Answer:** I only considered it from its risk side, I do agree that it is not easy and it needs policy change. I will consider revising and put a feasible alternative intervention

**Question:** Is it possible to draw conclusion and forward recommendations using only 85 records out of 170 deaths?

**Answer:** the police office record indicated a loss of 170 members; however it was possible to trace only 85 records from the hospital. Thus I do have two alternatives to fill this discrepancy, one is I will try to get some information from other source about their death. And second I will discuss and explain the cases by projecting the result to the worst and best case scenario and put it as a limitation of the study I most probably use the second alternative

**Question:** you said you get conflicting results regarding attitudes towards the curability of Tb in your quantitative and qualitative and quantitative part which one do you think is the wrights?

**Answer:** since both have its own strength and limitation it is difficult to judge which one is Wright.

**Question:** For which variable did you take 50% prevalence?

**Answer:** I took 50% of attitude of stigma toward TB.

**Question:** You have used secondary data on sensitive issue of HIV/AIDS, have you thought consent from hospital administration and do you have plans to give feedback for the hospital administration, and have sought whether or not all the clients whose records were reviewed were asked their consent to be tested for HIV, and have asked the consents of all individual participated in the study?

**Answer:** Yes permission was asked from the hospital administration and they are going to get a copy of the results. And all individual participants for primary data collection was asked their consents before participating in the study, by attaching written consent form with each self administered questioner.

**Question:** What do you mean probable HIV? How was it defined?

**Answer:** Probable HIV means any record of suspecting HIV/AIDS or any report of diagnosis of opportunistic infection on the medical record and it was operationally defined.

**Question:** You reported that 90% of the respondents said that Tb is transmitted by cold And Tb is highly correlated with HIV, do they also HIV also transmitted by cold. You also said that the coloration was exaggerated what did you expected before the study?

**Answer:** Public understand that Tb comes from cold and Tb expose to HIV.I said the way they collate the two diseases was exaggerated because discussants in the focus group discussion indicated that HIV has made Tb more contagious.

**Question:** Why did you assume there was a 50% extra marital sexual affair? What was you base?

**Answer:** A study in other African country revealed 90%extra marital affair, since there was no study done in the area I took 50% prevalence to get maximum sample size.

**Question:** Is it possible to retrieve cost from secondary data? How did you do it?

**Answer:** It was possible; it was assessed by assessing the cost of the resource utilized by HIV/AIDS clients though out HIV related activities in the hospital starting

from OPD to the ward and all other departments of the hospital, but non HIV cost was not assessed. And it should be dealt separately. In general the impact analysis in Dire Dawa hospital can at least give clue to the impact by comparing to the standard.

**Question:** Which component of your study show the cohort part when was the follow up period?

**Answer:** Since it was historical cohort I followed the record from 1995 though the time of death.

**Comments**

The presentations were generally good and better than yesterday. Hence the presentation skill course delivered yesterday has made a big difference in the presentation, but still time allocation needs to be corrected to give more emphasis on the result parts.

The three dimensional figures are difficult to understand in presentations so it should not be used in the future presentations.

**By Wakgari Deressa, MPH.  
PhD Candidate  
Dept of Community Health  
16 April 2004**

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## **INTRODUCTION**

### **GOAL OF POSTGRADUATE TRAINING IN PUBLIC HEALTH**

Train health professionals responsible for:-

- ❖ Policy development and analysis.
- ❖ Health services management at national and regional levels.
- ❖ Teaching in graduate and undergraduate public health training programs.
- ❖ Working in specialized public health activities.
- ❖ Designing and implementing independent research activities.

### **POSTGRADUATE RESEARCH**

- ❖ Thesis researches are the major activities undertaken at the Department.
- ❖ Deal with major public health problems.
- ❖ Acquire knowledge and skill in scientific research that influence and direct policy, planning and implementation of health interventions.

### **ACHIEVEMENTS**

- ❖ Over 200 MPH graduates so far
- ❖ 200 MPH theses
- ❖ Over 100 district health profiles
- ❖ 115 peer reviewed articles
- ❖ Laid down a firm background for public health
- ❖ Higher level positions at Government and NGOs
- ❖ Inauguration of PhD training program

### **COMMON CHALLENGES**

Summarized as follows:

1. Research Infrastructure
2. Budget and Administrative Costs
3. Scientific Information and Communication
4. Equipment and supplies
5. Academic staff (Supervision)
6. Research Proposal and Implementation
7. Research Areas and Dissemination

#### **1. Research Infrastructure**

- ❖ Good research depends on appropriate work environment and the necessary physical infrastructure for research.

- ❖ Determines productivity, quality and relevance of research
- ❖ Inadequate offices.
- ❖ Inadequate teaching and seminar halls.
- ❖ Inadequate library.
- ❖ Shortage of computer pool (Space and computers)
- ❖ Lack of access to program software

## **2. Budget and Administrative Costs**

- ❖ Key areas of deficiency in the Department.
- ❖ Difficulty in securing research funds
- ❖ May be inadequate even if available.

Two areas of budget merit particular attention

- ❖ Budget for research consumables
- ❖ Budget for important necessities:
  - *Electronic communication*
  - *Literature retrieval facilities*
  - *Current & relevant journals*
  - *Field research/personnel*
- ❖ Administration (mgt) problems (centralized, protracted, etc.)

## **3. Scientific Information and Communication**

- ❖ Constitutes one of the most important priorities in research.
- ❖ One of the greatest constraints at the Department.
- ❖ Lack of current and relevant journals; Some journals are available freely
- ❖ Inadequate reference materials (books).

### **Lack of resources to subscribe to major journals.**

- ❖ Electronic communication is almost non-existent:
- ❖ E-mail and Internet (Inconsistent)
- ❖ Medline and CD ROM
  - Lack of good knowledge on software operations.
  - Lack of access to training opportunities.
- ❖ Limited opening hours for computers and library.

## **4. Equipment and Supplies**

- ❖ Insufficient computers.
- ❖ Shortage of appropriate accessories.
- ❖ Insufficient stationeries.
- ❖ Lack of reliable (functional) teaching aids (LCD, etc.)
- ❖ Inadequate office furniture

## **5. Academic Staff**

- ❖ One of the critical areas in training and research activities.
- ❖ Inadequate in number.

- ❖ Inadequate research advisors.
- ❖ Inadequate specialty mix and low capacity.
- ❖ High workload on the available staff.
- ❖ Difficulty in recruitment (underpaid, salary unattractive).
- ❖ Poor working facility particularly offices.
- ❖ High demand from different stakeholders for consultation.
- ❖ Unprecedented demand for public health training.
- ❖ Incommensurable with the available human and material resources.

#### **6. Research Proposal and Implementation**

- ❖ Topic identification
  - Mostly donor driven
  - Not need-based
- ❖ Proposal development
  - *Lack of relevant literature*
  - *Long process for ethical clearance*
  - *Extreme delays in the release of fund*

#### **Data collection**

- ❖ Study areas may be remote/inaccessible/insecure
- ❖ Unavailability of appropriate data collectors and supervisors
- ❖ Lack of training hall
- ❖ Limited time for data collection
- ❖ Different payment rates (NGOs)
- ❖ **Data entry and analysis**
  - *Shortage of computers*
  - *Lack of adequate knowledge in operating various computer Software*
  - *Costs of data entry*
- ❖ **Write-up**
  - Limited time
  - Lack of exposure
- ❖ Thesis defense
  - Poor presentation style
  - Poor time management
  - Lack of self-confidence
  - Inaudible
  - Poor rehearsal

#### **7. Research Areas and Dissemination of Findings**

- ❖ Duplication of research topics mainly on:
- ❖ HIV/AIDS
- ❖ Reproductive health (FP)
- ❖ Mostly cross-sectional methodology (less replicable)

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- ❖ Lack of multidisciplinary research
- ❖ Inadequate dissemination of findings.
- ❖ Publication is uncommon.
- ❖ A weakness of researchers
- ❖ Dissemination forums available (EJHD, EMJ, EHSB, EGPI, etc.)
- ❖ Annual conferences available (EPHA, EMA, EGPA, ENA, etc)
- ❖ Low utilization of thesis outputs. (*NOTE: Postgraduate research is mainly influenced by the student self-strengths.*)

### OPPORTUNITIES

- ❖ Policy support
  - Expansion of graduate training
- ❖ Increased demand for public health training
- ❖ Increased support from different stakeholders

UNFPA

John's Hopkins University

The Carter Center, etc.

- ❖ High inter-sectoral collaboration.
- ❖ Transformation to “*School of Public Health*”

### Discussion

Experience from teachers and students

One graduate student shared that after he started data collection and proceeded for two days there was a sudden outbreak of an inter ethnic war in the area, the worst thing was that they were in the middle of the war while carrying out their routine data collection activity and the data collectors were from the two fighting groups. They were saved by the miracle of God from the war but the graduate student has to come to the department to apply about the condition and get another fund to conduct his study in different area. This has created a lot of delay in the accomplishment of his thesis work and loss of resources in addition to the risk he faced to his life.

Another graduate student shared that he has to change his thesis topic several times, he submitted his proposal late and he has to wait for a long time to get ethical clearance from the research institute where he has to do his thesis work. Even after he secured the ethical clearance his target populations were very mobile and busy because of the nature of their work and his research involve clinical assessments that needs more time thus he could not finish his data collection on time. He almost gave up that he could make it for this year, but he could not convince himself to delay for a year so he had passed a very frustrating time lastly with a lot of efforts by running data collection and entry in parallel he could finally caught up with his colleague. Another student also shared the difficulty he faced in managing time during his data collection, he planned that one data collector would collect data from 10 respondents. However, in practice one data collector could collect data only from three respondents. This has created a problem in both data collection and budget.

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Another graduate student shared his past experience in another research work. Once he traveled for one and half day to the study area, the aim of the research was to assess measles vaccination coverage. The official in the area were informed via telephone about the research and coincidentally the day he reached there was the day of measles vaccination campaign and the official in the area were happy to see him and they asked him for an official letter which he did not brought with him. He was almost to return (travel for three days from and to the study area) to bring the official letter, however, the official in the area allow him to proceed after a lot of discussion and negotiation. He indicated the importance having all the important things and of official letter before departing to the research area. One consultant also shared that he faced rejection to supervise a research team in a remote area of Gambela because one native said he is the one trained and in charge for the issue and no one should come from some where else to supervise the team. He also faced transportation problems while the car assigned for that purpose was being used for personal purposes by someone else.

### **Comments**

One student from DCH commented since the problems faced during data collection are out of our hands, we cannot do much about it. But a lot of difference can be made by timely and enough training to well verse the students with computer software like EPI INFO, SPSS, and Power Point so that they can enter, analyze and present their results without any problem.

A student from pediatrics department added that all residents' needs computer skill to process their data but they were not included in the course and stressed that there should be inter departmental arrangement to include other residents in the computer course for the future.

One consultant from the pediatrics department also commented that most challenges presented here are also faced by residents from all departments thus such meeting should also invite residents from other department to share their experience and find solution together.

Identification of the problem is half way to its solution and EPHA is willing to support the DHC in trying to solve the problem raised as a challenge. Researches are donor driven, that is true every fund has its own purposes behind it, using it for its assigned purposes will secure fund for the future use. To help researchers to use donor fund to satisfy their own interest as well as the funding agency EPHA has conducted gap identification research that will be finalized in the near future. We hope it will facilitate research topic identification and properly using the fund.

**The Effect of Living Arrangements and Parental Attachment on Sexual Risk behaviors and Psychosocial Problems of Adolescents in Dessie Preparatory School, Ethiopia**  
**By: Solomon Shiferaw (M.D.)**  
**Advisors: Dr. Mesganaw Fantahun (M.D., M.P.H.)**



Dr. Abeba Bekele (M.D., M.P.H.)

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**Back ground:**

- Traditionally not considered as a health priority.
- Nonetheless, in some areas such as mental and sexual health, adolescents suffer disproportionately.
- Following the opening of preparatory and technical schools in Ethiopia --rural students needed to **move to the nearby towns** for the duration of their training.

**Study hypotheses:**

1. **Adolescents living away from home and families** could be **more likely to have sexual risk behaviors** as a result of possible economic constraint and loose family supervision and guidance.
2. **Adolescents coming from rural areas** might also be **more prone to psychosocial problems** as they are likely to lack the usual family support and faced with relatively new environment that needs some degree of psychological adjustment

**GENERAL OBJECTIVE:**

- To assess differential vulnerabilities of Dessie preparatory school adolescents to sexual risk behaviors and psychosocial problems in reference to their living arrangement and parental Attachment.

**SPECIFIC OBJECTIVES:**

- To assess key risk and protective factors for early and unsafe sexual practices among preparatory school students.
- To determine and compare levels of psychosocial problems between students who live with their parents and those living away from parents
- To compare the levels of sexual risk behaviors between students living with their parents and those living away from parents.
- Assess the extent of communication between adolescents and their peers, and families about sexuality and HIV/AIDS.

**Methodology**

- Design: Comparative cross-sectional +4 FGD + 16 PPI
- Study population: Adolescents in Hote preparatory school enrolled in the year 2002/2003.

**Sample size:**

- Key variable= the “proportion of adolescents who are sexually experienced”.
- The formula for two-sample proportions was used:
- Total sample size = **654** (n1 = 218 and n2 = 436)
- To allow for possible non-response during the actual survey, we increased the sample size by 10% to get a final sample size of **720**. [**240 for n1 and 480 for n2**].

**Independent variables**

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- Living arrangement (relationship with guardians) at the time of the survey.
- Socio-demographic factors like age, gender, residence, religious affiliation and attachment, level of parental education, academic achievement etc.
- Perceived family connectedness.
- Perceived parental monitoring.
- Communication with parents and peers about sexuality.
- Sexual and reproductive health knowledge.
- Social norms and gender roles.
- Khat and alcohol use.
- Depressive symptoms/sad feelings

**Outcome variables**

- Whether students had ever had sex.
- Feeling so sad and hopeless almost everyday for two weeks or more in a row that they stopped doing some usual activities.
- Suicide attempt in the past 12 months

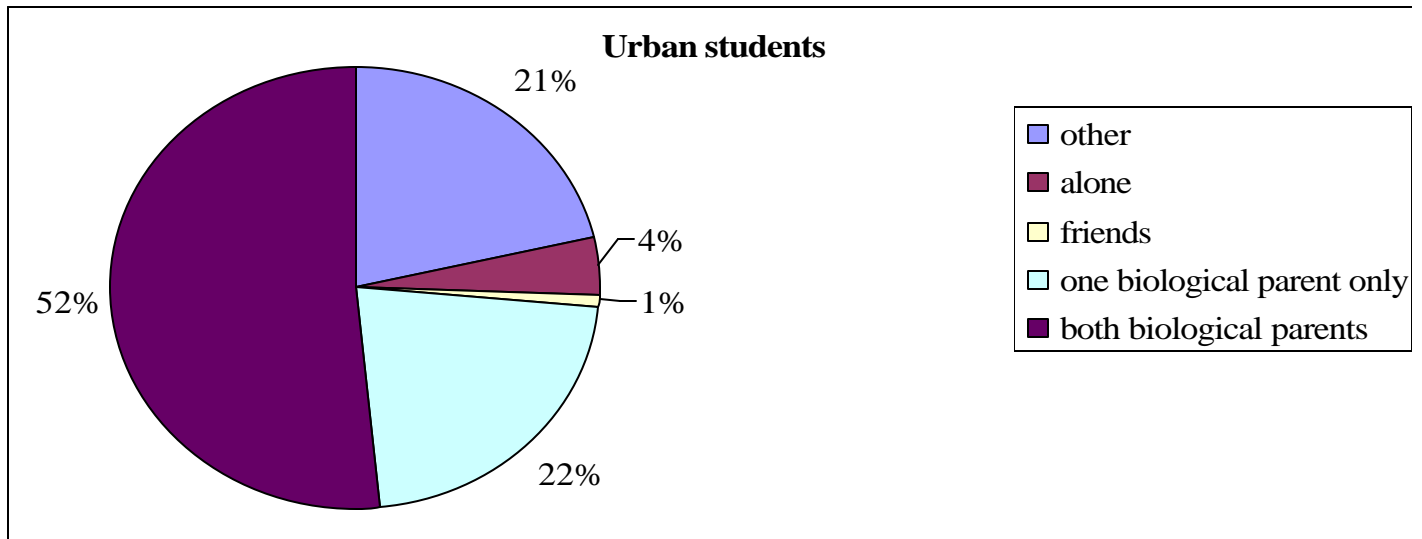
**Operational defns: (PTT)**

- Family connectedness was measured using responses to 10 statements on a five point Likert scale ranging from 1(strongly disagree) to 5(strongly agree), five questions for each parent.
- Parental monitoring was assessed by 2 questions that asked adolescents whether their parents knew where they were and who they were with when not at school and away from home. ( $\alpha = 0.76$ ).

**Main findings of the study;**

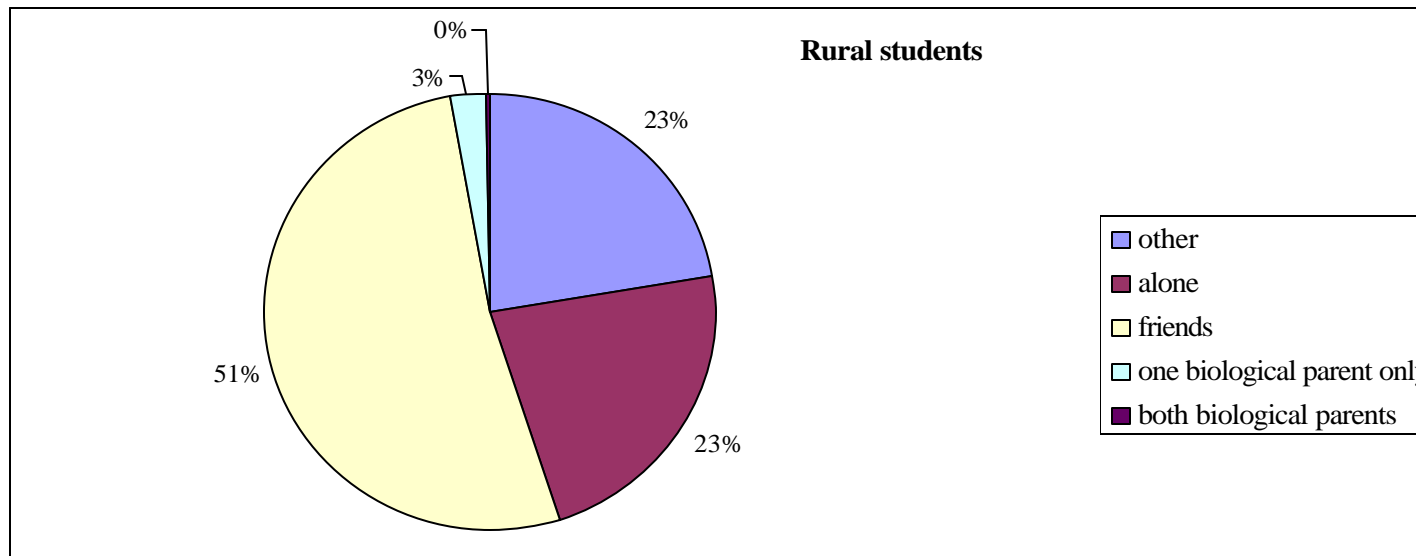
667(93% overall response rate).

**Living arrangement of adolescents according to residence**



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Correlates of sexual activity

<i>Characteristics</i>	<i>Sexual intercourse</i>		<i>Crude OR[95%CI]</i>	<i>Adjusted OR[95%CI]</i>
	<i>Yes (n, %)</i>	<i>no (n, %)</i>		
<b>Total</b>	<b>172[25.8]</b>	495[74.2]		
<b>Living arrangement</b>				
Both biological parents(r)	<b>22[13.8]</b>	138[86.3]	1.00	1.00
One biological parent	13[16.9]	64[83.1]	1.27[0.60, 2.69]	1.24[0.54, 2.88]
Friends	<b>76[40.2]</b>	113[59.8]	4.22[2.49, 7.20]*	<b>2.77[1.47, 5.24]*</b>
Alone	27[28.7]	67[71.3]	2.53[1.34, 4.76]*	1.43[0.70, 2.92]
Other	34[23.1]	113[76.9]	1.89[1.04, 3.41]*	1.52[0.78, 2.95]

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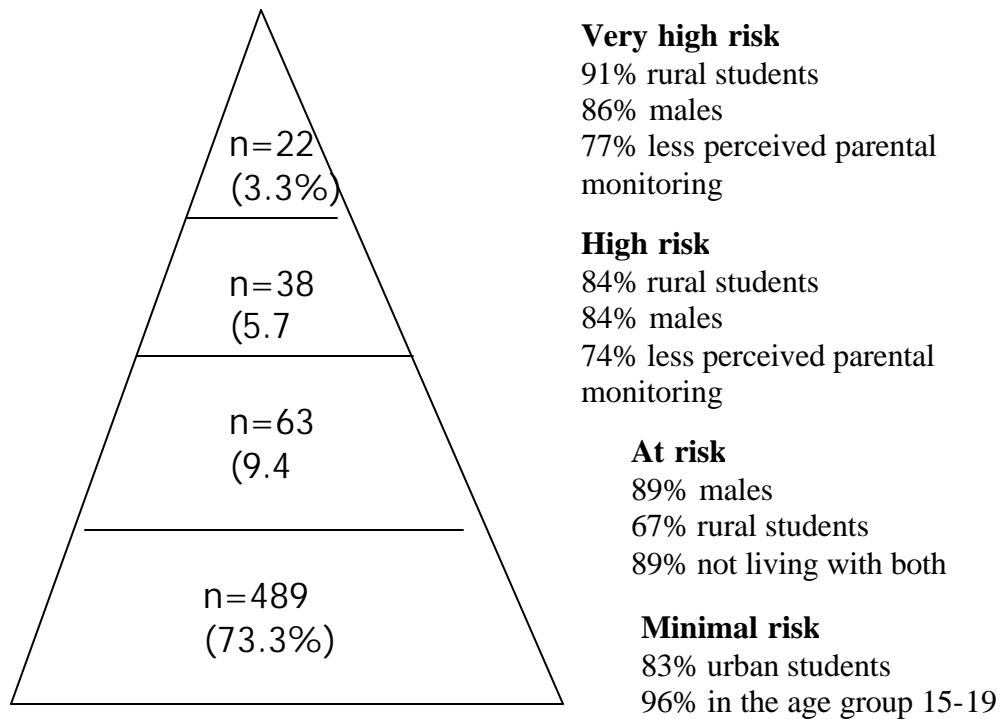
<b>Family connectedness</b>				0.96[0.94,0.99]
<b>Sex</b>				
Male	<b>154[30.1]</b>	358[69.9]	3.27[1.93, 5.54]*	1.28[0.69, 2.37]
Female(r)	<b>18[11.6]</b>	137[88.4]		1.00
<b>Age</b>				
15-19(r)	<b>145[23.3]</b>	477[76.7]	4.93[2.64, 9.22]*	1.00
20-25	<b>27[60]</b>	18[40]		4.37[2.11, 9.04]*
<b>Parental monitoring</b>				
Less	<b>137[31.9]</b>	292[68.2]	2.72[1.80, 4.11]*	1.70[1.06, 2.73]*
More(r)	<b>35[14.7]</b>	203[85.3]		1.00
<b>Parental education</b>				
Illiterate	69[31.9]	147[68.1]	1.59[1.11, 2.28]*	1.06[0.68, 1.67]
Literate(r)	103[22.8]	348[77.2]		1.00

Correlates of sexual activity (Cont'd)

<b>Peer pressure to have sex</b>				
Yes	<b>103[40.4]</b>	152[59.6]	3.37[2.35, 4.83]*	<b>1.82[1.20, 2.77]*</b>
No	<b>69[16.7]</b>	343[83.3]		1.00

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<b>How many of your friends have had sex</b>				
None of them(r)	<b>99[47.1]</b>	111[52.9]	1.00	1.00
Few of them	<b>59[24]</b>	187[76]	4.44[2.40, 8.22]*	<u>3.20[1.64, 6.25]*</u>
Most of them	<b>14[66]</b>	197[93.4]	12.55[6.85, 23.0]*	<u>7.21[3.68, 14.13]*</u>



**Figure4. Schematic presentation of the pyramid nature of sexual risk categories (n=612)**

<i>Variable</i>	<i>Ever felt sad or hopeless</i>		<i>Crude OR[95%CI]</i>	<i>Adjusted OR[95%CI]</i>
	<i>yes</i>	<i>no</i>		
<b>Sex</b>				
Male(r)	<b>128[25]</b>	384[75]	1.60[1.09, 2.36]	1.00
Female	<b>54[34.8]</b>	101[65.2]		<u>1.96[1.18, 3.23]*</u>

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<b>Living arrangement</b>				
Both biological parents(r)	<b>28[17.5]</b>	132[82.5]	1.00	1.00
One biological parent only	18[23.4]	59[76.6]	1.44[0.74, 2.80]	1.19[0.45, 3.15]
Friends	<b>58[30.7]</b>	131[69.3]	2.09[1.25, 3.48]*	<b><u>3.16[1.66, 5.00]*</u></b>
Alone	30[31.9]	64[68.1]	3.48]*	<b><u>2.15[1.04, 4.46]*</u></b>
Relatives	48[32.7]	99[67.3]	2.21[1.22, 4.01]*	<b><u>2.52[1.28, 4.95]*</u></b>
			2.29[1.34, 3.90]*	
<b>Grade in E.G.S.L.C.Ea.</b>				
1.8-2.5	24[8.7]	251[91.3]	1.78[1.08, 2.91]*	<b><u>1.82[0.99, 3.33]</u></b>
2.6-3.0	6[4.2]	138[95.8]	2.91]*	<b><u>1.93[1.01, 3.71]*</u></b>
3.1-4.0(r)	-	11[100]	1.89[1.10, 3.25]*	<b><u>1.00</u></b>
			1.00	
<b>Family connectedness</b>				<b><u>0.96[0.94, 0.99]*</u></b>

**Correlates of feeling sad or hopeless (Ctd)**

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<b>Grade in E.G.S.L.C.Ea.</b>				
1.8-2.5	24[8.7]	251[91.3]	1.78[1.08, 2.91]*	<u>1.82[0.99, 3.33]</u>
2.6-3.0	6[4.2]	138[95.8]	1.89[1.10, 3.25]*	<u>1.93[1.01, 3.71]*</u>
3.1-4.0(r)	-	11[100]	1.00	1.00
<b>Family connectedness</b>				<u>0.96[0.94, 0.99]*</u>

**Correlates of attempting suicide in the past 12 moth (cont)**

<b>Anyone in the family tried to kill themselves</b>				
Yes	16[16.5]	81[83.5]	4.70[2.38, 9.27]*	<u>2.59[1.09, 6.15]*</u>
No(r)	23[4.0]	547[96.0]		1.00
<b>Any of your friends tried to kill themselves</b>				
Yes	19[15.6]	103[84.4]	4.84[2.50, 9.39]*	<u>4.32[1.88, 9.94]*</u>
No(r)	20[3.7]	525[96.3]		1.00
<b>Ever had sex</b>				
Yes	21[12.1]	151[87.8]	3.69[1.91, 7.10]*	<u>3.00[1.27, 7.11]*</u>
No(r)	18[3.6]	477[96.4]		1.00

**Correlates of attempting suicide in the past 12 month (Cont)**

Characteristics	Attempted suicide		Crude OR[95%CI]	Adjusted OR[95%CI]
	Yes (n, %)	no (n, %)		
<b>Sex</b>				
Male(r)	28[5.5]	487[94.5]	1.32[0.64, 2.72]	1.00
Female	11[7.1]	144[92.9]		<u>2.60[1.05, 6.48]*</u>

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<b>Living arrangement</b>				
Both biological parents(r)	6[3.8]	154[96.3]	1.00	1.00
One biological parent	3[3.9]	74[96.1]	1.04[0.25, 4.28]	0.68[0.11, 4.15]
Friends	12[6.3]	177[93.7]	1.74[0.64, 4.75]	0.79[0.23, 2.64]
Alone	7[7.4]	87[92.6]	2.07[0.67, 6.34]	1.04[0.28, 3.91]
Other	11[7.5]	136[92.5]	2.08[0.75, 5.76]	1.65[0.49, 5.59]
<b>Ever have any of the following in the past 3 months:</b>				
<b>Being bored with life and the world around you</b>				
<b>Yes</b>	29[8.5]	312[91.5]	2.94[1.41, 6.13]*	2.59[1.04, 6.39]*
<b>No(r)</b>	10[3.1]	316[96.9]		1.00

**FGD results**

- Largely consistent with questionnaire findings.

**Conclusion**

- Parent-teen connectedness, parental monitoring and living arrangement are significant predictors of sexual activity.
- Students with better family connectedness are likely to use condom consistently.
- Communication on sexuality issues is not associated with safe sexual behavior.
- Males, rural students and those who have a living arrangement other than both biological parents are more susceptible to peer-pressure.
- High perceived parental monitoring is linked to less likelihood of having peers who are sexually experienced and consuming alcohol and *Khat*.
- Being a female, lower grade-point-average, having less family connectedness, and living with neither of the parents were found to be significant predictors of depressive symptoms.
- Having a better family connectedness is linked to less likelihood of having suicidal thought.
- Female gender, some depressive symptoms and history of suicide among families and friends were found to be important predictors of suicide attempt.
- Teens' sexual activity appears to be related suicide attempt regardless of gender, history of suicide among friends and family members.



- The overall research finding indicate that living with both biological parents and good parent-teen connectedness are related to better psychosocial health and being sexually abstinent
- Implications for effective parenting, programming and future researches are discussed.

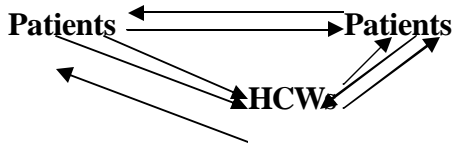
**Assessment of the Safety of Injections and Related Medical Practices in  
Health Institutions at Sidama Zone, SNNPRS**  
**By Yoseph W|Gebriel.**  
*Advisors: Fikru Tesfaye (MD, MPH)*

Mesfin Addise (MD, MPH)

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### Background

- Blood born pathogens constitute a variety of infectious agents that can be transmitted via blood and sometimes other body fluids and tissue (WHO 1991)
- Unsafe injections: are injections that harm the recipient, exposes the provider to any avoidable risk, and that results in waste that is dangerous for other people (WHO, 2003)



- \* 12 billion injections annually worldwide
- \* 50% - 90% unsafe injections
- \* HBV, HCV, and HIV account for 1.3 million early deaths, and 26 million YLL.
- Risks of Client/patient
  - \* Injection preference to other
  - \* Direct reuse |poor sterilization
- HCWs
  - Knowledge: misconception
  - Unsafe waste collection caused 5% to 28% of NSI
  - Two handed recapping

### Objectives

**General objective:** To assess the risk of transmission of blood born pathogens (HIV, HBV, HCV), through needles and other sharp objects in the health care setting, at the SNNPRS

#### ■ Specific objectives:

- To assess the safety of injection, dressing, delivery and related practices, which involve the use of sharps and needles;
- To assess the safety of injection, dressing, delivery and related practices;
- To examine the preference of routes of drugs for the treatment and their awareness about the risks of unsafe injection among patients;
- To determine the knowledge, and practice of HCWs with regards to the safety of injections and other medical procedures;
- To assess the availability and functionality of surgical (minor) equipment and supplies, including disposable needles sharps, and sterilizers.

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- To assess the method of disposal of contaminated syringes, needles and other medical sharp objects such as blades.

### Methodology

#### Study population and sampling

*HI:* Government, NGO, and Private

*HCWs:* GP, HO, Nurses, HA, Lab. tec, and Cleaners

*Clients:* Exit after service

#### Measurement

*Observation:* Injection safety assessment tool “C”

Structured checklist for delivery and dressing service

\* TST control indicator

*Interview:*

*Interviewers:* Nurses

*Operational definition of terms:*

*Unsafe injections:*

- Reuse of syringes or needles after boiling or with out sterilization
- Injections given in a dirty environment where there is potential for contamination
- Injections given in a place where there is no sharp collection box around.
- Any needle left on the septum of multiple dose vial
- Any two handed recapping of needles
- Any syringe, needle or sharp collection in an open, and non puncture proof or liquid proof container
- Conditions where the needle, syringe and sharp collection boxes were over filled or torn and needles seen through the hole;
- Any observable dirty needles and sharps in place where they expose HCWs to needle stick or sharp injuries.
- Any syringe needle sterilization and for which the TST spot indicator turned to mottled yellow or brown.
- Disposals other than protected incineration [open inciner + burial in a pit.

Ethical considerations:

Consent

Tactfully and carefully interfere reuse

### Results and discussion

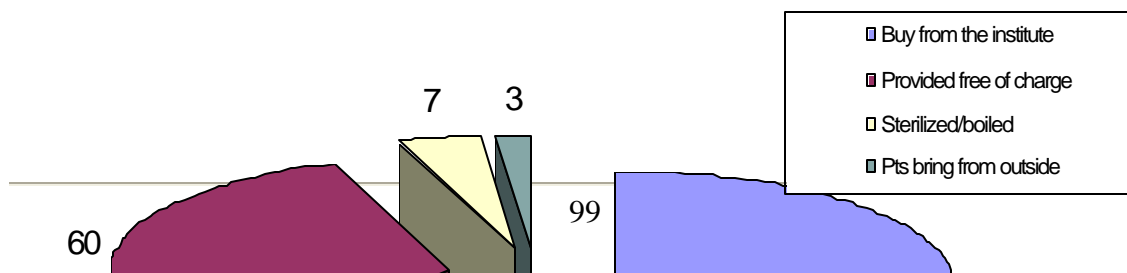


Fig.1 Sources of syringes and needles. Sidama, 2003.

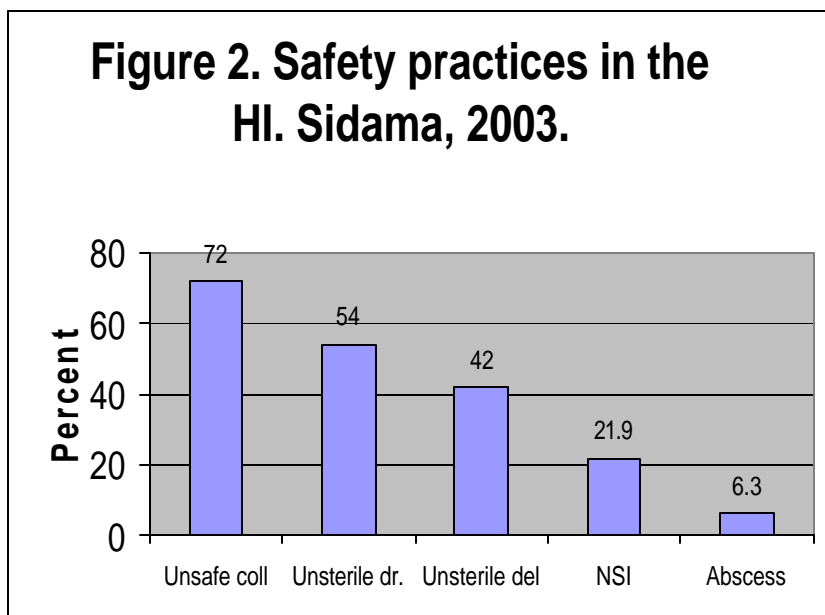


Table 2. Needle and other sharps disposal methods, Sidama, 2003.

Owner of the HI	No	Percent
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Governm.	Prote. Incinerat	8	30.8
	Open dumping	11	42.3
	Others	7	26.9
NGO	Prote. Incinerat	7	63.6
	Open dumping	1	9.1
	Others	3	27.3
Private	Prote. Incinerat	2	22.2
	Open dumping	2	22.2
	Others	5	55.6

- In 14 (35%) of the HI needles syringes and other sharps were disposed exposing for injury.
  - Cameron (1998), Chad (1997)=No disposal facility
  - Ethiopia (Tsfaye et.al, 2003.)=35% safe.

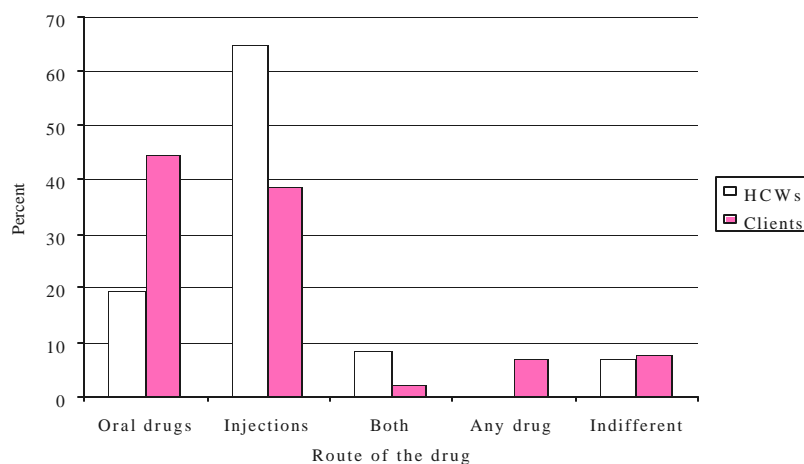


Figure 3. Preference of routs of drugs. Sidama, 2003

- Only 15 (7%) HCWs mentioned simultaneously HBV, HCV, and HIV
- Based on the parameters set, 131 (73.6%) injections= unsafe.

- SSA 31% to > 90% in Burkina Faso.

### **Conclusion and recommendations**

- Considerable proportions of injections were unsafe.
- The poor sterilization of delivery and dressing sets and the unhygienic environment put patients at risk.

### **Strengths and limitations of the study**

- Strengths
  - Used multiple methods of data collection; compliment each other.
  - The observation method helped to uncover practices that people do not know they had; verifiable evidence.
- Limitations
  - Possibility of observation bias
- Limitations
  - Possibility of observation bias
  - Subjectivity of observation results.
  - Clients/pt for the interview was recruited when they exit from HI.
  - Subjectivity of observation results.
  - Clients/pt for the interview was recruited when they exit from HI.

### **Discussion**

**Question:** In your presentation you said most patients preferred oral drugs how did you justify it in terms of client satisfaction? Have you considered the possible confounding effect of pain during the injection and using nurses as data collectors?

**Answer:** As the interview was an exit interview patients might have been convinced or confronted by the health worker about injection. And we can not rule out the confounding effect of pain and using health workers, however our finding is consistent with study in North Ethiopia I think it reflect the feeling of the patients

**Question:** you recommended effective parental attachment do you think it is feasible recommendation?

**Answer:** it was recommended effective parenting not effective parental attachment think it is feasible

**Question:** Have you defined what mean by safe sex to consider other as unsafe and why did you mix sexual activity and alcohol consumption in your risk pyramid?

**Answer:** I haven't defined safe sex because it was not my outcome variable. I considered sexual activity and alcohol together to measure risk behavior but not to look for sexual behavior and mixing them didn't affected my classification

**Question:** Who are the two groups of adolescents in your study? And on what bases did you divide your study population?

**Answer:** The two groups are those who come from out side of Dessie to attend preparatory school and those preparatory students who are permanent resident of Dissie. I divided the two groups on the basis of their permanent residences

**Question:** For what purposes did adolescents used condom? And what about use of other contraceptive?

**Answer:** I didn't ask for what purposes they used condom and about the use of other contraceptive.

**Question:** what was your ground to say that 40% of the delivery was unsafe?

**Answer:** I considered the average number of the delivery in the institutions and the number of institutions with functional

**Knowledge and Attitude Towards Mother-to-child Transmission of HIV and  
Its Prevention Among Question: Post-natal Mothers  
Tikur Anbessa and Zewditu Memorial Hospitals, Addis Ababa  
BY: Solomie Jebessa**

## INTRODUCTION

### Global (*UNAIDS, December 2002*):-

- 42 million PLWHA
- Women = 19.2 million
- Children = 3.2 million
- In sub-Saharan Africa = 29,400,000 PLWHA (by the end of 2002)

### In Ethiopia (*UNAIDS, December 2002*):-

- 2.2 million PLWHA
- 1.1 million are women
- 200,000 are <15 yrs of age

### MTCT of HIV

- 600,000 newborns are infected each year (>1600 NB/day)
  - 90% in Sub-Saharan Africa (*World Federation of Scientists, 2001 and Mofenson et al 2002*)
- Rate of transmission:
  - 12–30% in US and America
  - 25–52% in Africa and Haiti (*Ram Yogev and Ellen Gould Chadwik, AIDS, Nelson, 17th edition*)
- Routes:
  - Intra-uterine = 30-40%
  - Intra-partum = 60-70%
  - Post-partum = 14-29%

### WHO's three-pronged approach

1. Prevention of new infection
  2. Prevention of unwanted pregnancy
  3. Prevention of transmission of HIV from infected mother to her baby (*James McIntyre, Glenda Gray, BMJ 2002*)
- A well-functioning appropriate and accessible VCT service is a prerequisite for MTCT prevention (*Mofenson et al 2002*)
  - Mothers should be aware of HIV/AIDS and its route of transmission, and should be motivated to know their sero-status
  - In Ethiopia, so far there is no study done

## OBJECTIVES

1. To assess knowledge of mothers about MTCT of HIV
2. To assess their knowledge and attitudes towards VCT



3. To assess their attitude towards breast-feeding in the face of risk of HIV transmission

## **METHODOLOGY**

- A cross-sectional study was conducted on mothers who delivered at TAH & ZMH starting from mid-January to the end of March using pre-tested questionnaires
- Those mothers who were enrolled in NIGAT project, those with stillbirths, pre-terms <34 wks and those who delivered malformed neonates were excluded from the study
- The sample size (n=384) was calculated using the formula for simple random sampling, using 95% confidence limit, 50% knowledge and 5% marginal error
- Data was collected in the labour and maternity wards of the respective hospitals by two trained staff nurses

## **RESULTS AND DISCUSSION**

- A total of 384 mothers were interviewed during this study
  - Most of them (78.4%) were from A.A, and the rest were from different areas of the country
  - Socio-demographic characteristics of the study participants are displayed in the following tables:

**Table 1. Age distribution of mothers in the study**

<b>Age of mothers (yrs) [Mean±SD = 25.4± 5.08]</b>	<b>Frequency</b>	<b>Percent</b>
16 – 20	86	22.4
21 – 25	119	31.0
26 – 30	129	33.6
31 – 35	36	9.4
36 – 40	14	3.6
Total	384	100

- The majority are Christians, 325(84.6%), and the rest, 59(15.4%) are Moslems.
- Most of them were Amharas, 171(44.9%), 101(26.5%) of them were Oromos, 66(17.1%) of them were Gurages, 27(7.1%) were Tigres, the rest 16(4.2%) were from different ethnic groups and three of them did not mention their ethnicity.
- Most of them are married 345(89.8%), 33(8.6%) are single, 5(1.3%) are divorced and one is widowed.

**Table 2. Parity of mothers in the study**

<b>Parity of mothers</b>	<b>Frequency</b>	<b>Percent</b>
Primiparas	211	55.0
Multiparas (2-5)	165	43.0
Grand Multiparas (>5)	8	2.0
Total	384	100.0

**Table 3. Occupation of mothers in the study**

<b>Occupation of Mothers</b>	<b>Frequency</b>	<b>Percent</b>
House wife	269	70.1
Government employee	53	13.8
Private	33	8.6
Merchant	14	3.9
Others	15	3.6
Total	384	100.0

**INFORMATION REGARDING HIV/AIDS**

- All the 384 respondents have reported to hear about the disease HIV/AIDS

**Table 4. Distribution of mothers with respect to their knowledge of routes of transmission of HIV**

<b>Transmission routes mentioned</b>	<b>Frequency</b>	<b>Percent</b>
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All four routes	195	50.8
Three routes	121	31.5
Two routes	47	12.2
One route	16	4.2
No response	5	1.3
Total	384	100.0

- In Thailand, over 90% of each age & sex group answered correctly about the major conduits of HIV transmission (*Wassan IM. EM et al, 2003*)
- In four Kenyan districts , among 233 health workers interviewed, 100% in Kwale and Garissa; 98% in Isiolo and 83% in Turkana knew that mothers can transmit HIV to their children (*Ngare. D, et al, 2003*)
- On a study done in Ethiopia, Tigray, in Oct-Nov, 1992 among 60 patients with STD and those in reproductive age groups (15-45 yrs) and 1/3 of them were women, awareness of the existence of HIV/AIDS was found in 98.3%; but only 8.3% know vertical transmission of HIV (*Daniel Zemenfes. EMJ, Jan 1996*)
- In another study done in Bahirdar, in April 1994 among a total of 1115 out of school young people about methods of HIV transmission; 92.5% mentioned sexual route but only 21.7% mentioned MTCT of HIV (*Mesganaw Fantahun and Fekadu Chala, EMJ , Oct 1994*)
- Three hundred forty-five (**89.8%**) of mothers know that HIV can be transmitted from infected mother to her baby and of this, **70.4%** of them gave for possible percentage of transmission that they thought is correct (see next table)
- In Kwale, Isiolo, Garissa and Turkana districts of Kenya, a representative sample of approximately 100 men and women 45%, 84%, 83% and 3% respectively knew that HIV could transmitted from the mother to her child (*Ngare. D, et al, 2003*)

**Table 5. Distribution of mothers' knowledge on the range of percentage of MTCT of HIV**

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<b>Knowledge on the range of % of MTCT of HIV</b>	<b>Frequency</b>	<b>Percent</b>
Yes	243	70.4
Below 25%	21	8.7
25-50%	117	48.1
Above 50%	105	43.2
No	102	29.6
Total	345	

- In a study done in Rome, Italy, knowledge of HIV infected mothers about the risk of transmission of HIV to their baby
  - 13.8% of them thought that it is transmitted 100%
  - 44.1% of them thought the chance of transmission is 50-80% and
  - 10-50% of them thought that the risk is 5%

*Visconti E, Celentano LP, Marinai S, Scoppettulo G, Tamborrini E, 2001*
- Regarding the period of HIV transmission, all mothers mentioned at least one period of transmission; while only 55.4% of them mentioned all periods of transmission – that is during pregnancy, labour & delivery, and breast feeding.

**Table 6. Periods of HIV transmission responded by mothers in the study**

<b>Time HIV is transmitted from a mother to her baby</b>	<b>Frequency</b>	<b>Percent</b>
During pregnancy	28	8.1
During labour	17	4.9
During BF	19	5.5
All the above	191	55.4
During pregnancy & labour	13	3.8
During pregnancy & BF	48	13.9
During labour & BF	29	8.4
Total	345	100.0

- As to the period for the highest rate of HIV transmission, 147 (42.6%) mothers answered that it occurs during labour and delivery

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- Among the mothers who knew MTCT of HIV, 51% of them know one or more factors which increase its risk of transmission
- Most of the mothers (76.8%) know that MTCT is preventable, 15.7% of them said it is not preventable, and 7.5% of them said they don't know
- In Kenya, 45% and 47% in Turkana, 32.8% and 9% in Kwale and 36%, 19.5% in Isiolo thought that MTCT could be prevented by not breastfeeding and by taking medication respectively (*Ngare. D, et al, 2003*)

**Table 7. Distribution of mothers' knowledge about preventive methods of MTCT**

<b>Preventive methods</b>	<b>Frequency</b>	<b>Percent</b>
One preventive method	155	44.9
Two preventive methods	68	19.7
Three preventive methods	36	10.4
Do not know preventive methods	86	24.9
Total	345	100.0

- In Kwale, Isiolo, Garissa and Turkana districts of Kenya, knowledge on the prevention of MTCT ranged between 70 and 94 % (*Ngare. D, et al, 2003*)

**KNOWLEDGE ABOUT VCT**

- Three hundred and seventeen (82.6%) of the mothers know what voluntary counselling and testing (VCT) mean.

**Table 8. Mothers' opinion about VCT**

<b>Mothers' opinion</b>	<b>Frequency</b>	<b>Percent</b>
Every mother should have VCT to prevent MTCT of HIV.	295	76.8
If a mother suspects herself of having the disease she can have VCT.	31	8.1
Being tested or not doesn't make a difference on MTCT of HIV.	5	1.3
Mothers should not be tested.	1	0.3
No response	52	13.5
Total	384	100.0

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- Three hundred and sixteen (82.3%) mothers agreed to have VCT, but 27(7%) mothers didn't want and, 41(10.7%) said that they couldn't decide at the time of interviewing
  - Those who accepted and rejected have described their reasons as shown below

**Table 9. Reasons of mothers why they wanted to have VCT**

<b>Why mothers wanted to have counselling</b>	<b>Frequency</b>	<b>Percent</b>
To know if I have AIDS	223	70.6
To prevent myself from AIDS	42	13.3
To prevent my family from AIDS	30	9.5
No response	8	2.5
Because I am afraid	5	1.6
Not to infect others if I have AIDS	4	1.3
To get life prolonging drugs if I have the disease	3	0.9
Because I want to be re-tested	1	0.3
<b>Total</b>	<b>316</b>	<b>100.0</b>

**Table 10. Reasons of mothers why they wanted not to have VCT**

<b>Why mothers wanted not to have counselling</b>	<b>Frequency</b>	<b>Percent</b>
Because I am afraid	12	44.4
I have good awareness of AIDS	4	14.8
I am already tested	3	11.1
I am confident of myself	3	11.1
Because I am healthy	2	7.4
Because God has power on AIDS	2	7.4
This is not a timely question	1	3.7
<b>Total</b>	<b>27</b>	<b>100.0</b>

- Most of the mothers (74.5%) wanted to have counselling and testing for HIV before they breast feed, 8.0% of them wanted to breast feed regardless of their being tested, and the rest, 17.5% did not respond
- Regarding their future plan, 231(60.2%) said that they will be tested before the next pregnancy, 9.4% didn't respond and, the rest gave different answers (See the following table)

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<b>Opinion about breast-feeding in the face of the risk of HIV transmission</b>	<b>Frequency</b>	<b>Percentage</b>
Mothers should be tested before deciding to breast feed	266	69.3
If a mother suspects of having disease, she should be tested	59	15.4
Mothers must breastfeed whether tested or not	21	5.5
It is better to abstain breastfeeding whether tested or not	2	0.5
No idea	36	9.4
Total	384	100.0

- 71.3% in Turkana, 84.8% in Kwale 57.3% in Garissa and 63.6% in Isiolo districts felt that HIV positive should not get pregnant at all; and 43% in Turkana, 42.4% in Kwale, 42.8% in Garissa and 44.8% in Isiolo thought that all babies should be breast fed irrespective of the mothers HIV status. (*Ngare. D, et al, 2003*)

<b>Your future plan to protect your next pregnancy from HIV</b>	<b>Frequency</b>	<b>Percent</b>
I will be tested	231	60.2
I haven't decided	59	15.4
I don't want to give birth more	41	10.7
No response	36	9.4
I don't want to be tested	4	1.0
To remain one to one and to get tested	7	1.9
To remain one to one	3	0.8
I am already tested while married	1	0.3
To depend on God	1	0.3
To keep myself from risky things	1	0.3
Total	384	100.0

**Knowledge of mothers on MTCT of HIV vs. socio-demographic variables (table 11)**

- Age of mothers
  - 16-20, OR = 1.00
  - 21-25, OR = 7.61 (2.35,31.89)
  - 31 & above, OR = 4.15 (1.11,23.09)
- Educational status of mothers
  - No formal education, OR = 1.00
  - Secondary & above, OR = 4.53 (1.86,11.14)

**Knowledge of mothers on PMTCT of HIV vs. socio-demographic variables (table 12)**

- Place of residence of mothers
  - Addis Ababa, OR = 1.00
  - Outside Addis Ababa, OR = 0.38 (0.19,0.77)
- Educational status of mothers
  - No formal education, OR = 1.00
  - Secondary (grades 7-12), OR = 3.75 (1.69,8.04)
  - Post secondary (12+), OR = 4.00 (1.00,23.01)
- Parity of mothers
  - Primipara, OR = 1.00
  - Grand multipara, OR = 0.04 (0.00,0.45)

**Knowledge of mothers on VCT vs. socio-demographic variables (see table 13)**

- Place of residence
  - Addis Ababa, OR = 1.00
  - Outside Addis Ababa, OR = 0.38 (0.21,0.70)
- Age of mothers
  - 16-20, OR = 1.00
  - 21-25, OR = 3.53 (1.60,8.03)
  - 26-30, OR = 2.36 (1.16,4.85)
- Martial status
  - Married, OR = 1.00
  - Single/Widowed/Divorced, OR = 0.43 (0.20,0.99)
- Educational status
  - No formal education , OR = 1.00
  - Secondary (grades 7-12) , OR = 5.69 (2.75,11.87)
  - Post secondary (12+) , OR = 7.44 (1.63,68.38)
- Parity of mothers
  - Primipara , OR = 1.00
  - Grand multipara , OR = 0.17 (0.03,0.95)

**CONCLUSION**

- All the study participants have reported to hear about HIV/AIDS and most of them know that HIV can be transmitted from infected mother to her baby
- More than half of them mentioned all periods of MTCT of HIV
- Nearly half of them know one or more factors which increase the risk of MTCT
- Most of the mothers know about PMTCT
- Majority of them know about VCT, have the opinion that VCT should be done to prevent MTCT of HIV, and agreed to have VCT in the future
- Nearly half of them know one or more factors which increase the risk of MTCT



## **RECOMMENDATIONS**

- Even if awareness about the presence of HIV/AIDS is universal, still about 10% of mothers do not have the knowledge of MTCT. So, mothers, specially in the countryside should be well taught in this regard
- Most of the mothers have good desire to have VCT. Thus, more centres need to be established to reach those in need
- Since there are no similar studies done in our country, researchers should be encouraged to do more in this area

## **ACKNOWLEDGEMENT**

- EPHA
- Advisors
- Colleuges
- Stydy participants

**The Cost of HIV/AIDS on Health Institutions: A Case Study of Three Public  
Hospitals in Addis Ababa**

By Melesse Tamiru

Advisor: Abdulhamid Bedri Kello (PhD)

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## **Introduction**

- All over the world around 42 million people are currently living with HIV/AIDS and More than 70% of them live in sub-Sahara Africa. Therefore the region is now home to 29.4 million people living with the virus (UNAIDS, 2002)
- Today it is estimated that about 2.2 million people in Ethiopia are infected with HIV/AIDS, including 2million adults and 200,000 children (MOH, 2002).
- The increased demand for health care from people with HIV related illnesses is heavily taxing the over stretched public health services of many developing countries.
- For instance in the mid 1990s, treatment for people with HIV consumed 66% of public health spending in Rwanda and over a quarter of health expenditure in Zimbabwe (UNAIDS, 2000).
- Similarly in Tanzania the costs for nursing and drugs for adults is around us \$ 290 and children \$ 195 inpatient treatment (Martha, 1992)
- Further more a study by the World Bank indicated that the average cost in sub Saharan Africa to provide basic care to reduce suffering and to treat opportunistic infections is about US\$300--500 per patient year (World Bank, 1997).

## **Study Area**

- Zewditu Memorial Hospital
- St. Paul Hospital
- Tikur Anbessa Hospital
- Medical wards and Medical outpatient departments were included for the study, since HIV/AIDS patients would mainly be treated in these types of departments.

## **Statement of the problem**

- HIV/AIDS involves several opportunistic infections that have to be treated. This is clearly an additional burden on the health care service system at a time when the nation has not been able to address its major and long-standing health problems.
- The cost of hospital care for an AIDS patient ranged from 425 to 3140 Birr (average of 1800 Birr) during the course of the illness (Kello, 1998).

## **Objectives of the study**

### **General Objective**

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- To determine the costs of hospital care for HIV/AIDS patients and non-HIV/AIDS patients.

### **Specific Objectives**

- To compare HIV/AIDS and non-HIV/AIDS patients groups. It is intended to determine:
  - The cost per inpatient day and per out patient visit.
  - The average length of stay and out patient visit.
  - The total average costs of the patient stay in the hospitals

### **Significance and Rationale of the study**

- Except a few studies that are mentioned, there have not been other studies that have looked at this issue in Ethiopia and no study in the country has put special emphasis on estimating the hospital costs of HIV/AIDS versus non-HIV/AIDS patients. Therefore, this study is an attempt to fill the gap.

### **Research methodology**

- Study Design
- This is an institution based cross sectional study
- Study population -HIV positive and negative from July2002 to June 2003.
- Sample size
- 20 percent from HIV positive and 20 percent from HIV negative patient medical records

### **Method of Data collection**

- The data on cost of HIV/AIDS and non HIV/AIDS patients were collected through
  - **Patient Record Review**
  - Instruments were developed to collect data on the type and amount of materials, medication and supplies used, investigations (x-ray and laboratory tastes), treatment procedures performed and length of stay of the patient.

### **Administrative Record Review**

- Data on a full year's hospital **capital and recurrent** cost for 2002-2003(1995 E.C.) were gathered. Data was collected using a checklist on the type, amount, cost and service year of the needed items.
- The equivalent annual costs were calculated assuming a useful life span of 30 years for buildings (as recommended in cost manuals such as Creese and Parker 1994), 10 years for equipment and vehicles and 5 years for furniture.

Two approaches were used

- A) Service based
- B) Unit cost based

#### **A) Service based**

##### **1. Inpatient**

**i) Using low priced public service basis**

- Total cost inpatient episode  $TC = (B) - \text{average bed days} + \text{total drug used } (D_i) + \text{treatment} + \text{consultation received } (T_i) + \text{investigation received } (I_i)$
- $TC = BP_1 + \sum_{i=1} D_i P_{2i} + T_i P_{3i} + I P_{4i}$
- $P_1 =$  price of bed per day low priced public hospital
- $P_{2i} =$  price of drug  $i$
- $(i = 1, 2, \dots, n)$  (drug1, drug2, drug3---drug  $n$ )
- 
- $P_{3i} =$  price of treatment and consultation  $i$
- $(i = 1, 2, \dots, n)$  (Consultation fee, treatment1, treatment2, ---treatment  $n$ )
- $P_{4i} =$  price of investigation  $i$
- $(i = 1, 2, \dots, n)$  (Chest x-ray, CT scan, ---stool exam, U/A---)

**Outpatient**

**i) Using low priced public service basis**

Total cost out patient visits  $TC = \text{total drug used } (D_i) + \text{treatment} + \text{consultation received } (T_i) + \text{investigation received } (I_i)$

$$TC = \sum_{i=1} D_i P_1 + T_i P_{2i} + I P_{3i}$$

$P_1 =$  price of drug  $i$   
 $(i = 1, 2, \dots, n)$  (drug1, drug2, drug3---drug  $n$ )

$P_{2i} =$  price of treatment and consultation  $i$   
 $(i = 1, 2, \dots, n)$  (Consultation fee, treatment1, treatment2, ---treatment  $n$ )

$P_{3i} =$  price of investigation  
 $(i = 1, 2, \dots, n)$  (Chest x-ray, CT scan, ---stool exam, U/A---)

Similarly, price of public expensive and private low and high prices sets were applied for both inpatient and outpatient.

**B) Unit cost based**

**Average Cost Estimation**

- The cost information was available only on an aggregate basis for the hospital as a whole and not by department.
- Therefore to estimate the average costs per in-patient day and out patient visits a combination of two different methodologies were used.

**1- Step-down Costing Methodology**

- Is used to allocate all the costs of running a hospital to departments providing the final output of the hospital: direct patient care in medical wards and medical outpatient departments (Drummond *et al.* 1987).

**2- Bottom-up Costing**

- To capture the direct treatment costs such as drugs and disposable medical supplies
- **Steps for actual unit cost calculations**
- **Overhead category (xi)**

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- X1= Total Furniture cost
- X2 =Total Equipment cost
- X3 =Total Building cost
- X4 =Annual Recurrent cost,

**Inpatients (T1)**

1. Total cost of xi x 0.9 (the rest attributable to out patient costs) 1

$$\text{Total cost } \sum_{i=1}^{xi} 0.9xi$$

2. Annual cost of Xi = Zi =  $\frac{0.9X1}{5} + \frac{0.9X2}{10} + \frac{0.9X3}{30} + 0.9X4$

3. Share of medical ward of Zi = Mi

$$Mi = Zi \times \frac{\text{Medical inpatient days}}{\text{Total inpatient days}}$$

4. Share of each medical inpatient day =  $\frac{Mi}{\text{Total inpatient days}} = Bi$

Therefore Bi - is the cost of each inpatient days in terms of bed days.

**Outpatients (T2)**

Total cost of Xi x 0.1 (the rest is a locatable to in patient costs)

2. Annual cost of Xi = Zi =  $\frac{0.1X1}{5} + \frac{0.1X2}{10} + \frac{0.1X3}{30} + 0.1X4$

3. Share of Medical out patient of Zi =  
2 repeat out patients are considered equal to 1 new outpatient =New equivalent visit

$$Mi = Zi \times \frac{\text{(New equivalent visits)}}{\text{Total new out patient equivalent}}$$

4. Share of each Medical out patient visits =  
Bi =  $\frac{Mi}{\text{Total new out patient equivalent}}$

Therefore Bi- is the cost of each out patient visits

The unit cost approach used the results of (T1+T2) and applied to cost of Service received directly for drugs consumed. Therefore,

- A. Inpatient total cost = (Alternative total cost calculations) = Bi+DiP2i\*
- B. Out patient total cost = Bi+DiP2i\*

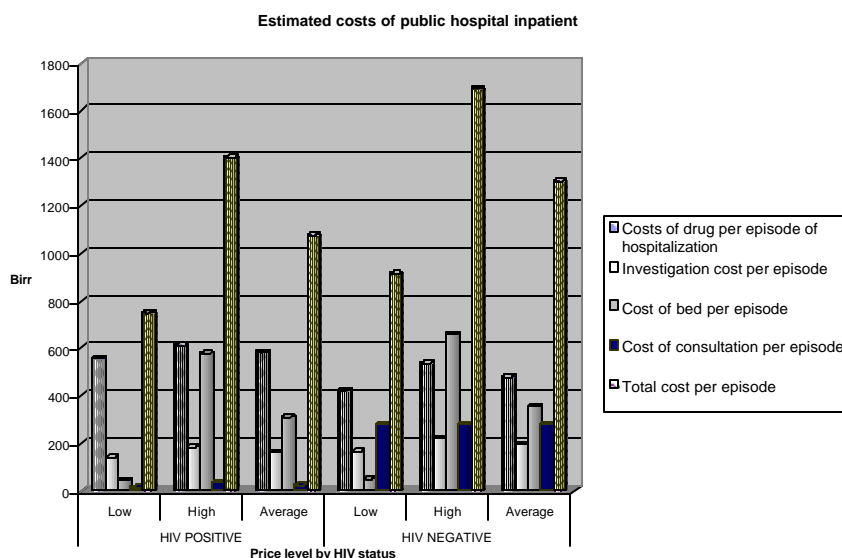
Two price sets were employed: public low and public high.

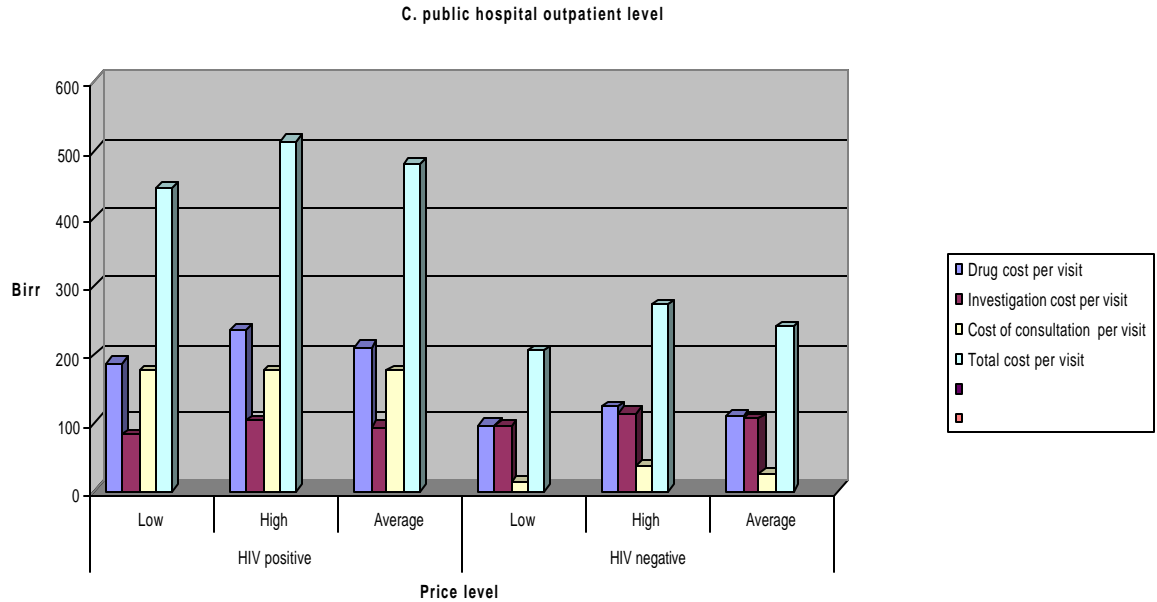
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## Data analysis

- Data were entered, cleared and analyzed using SPSS.
- Microsoft Excel was used for some mathematical calculations.
- Frequency tables were used for presenting the descriptive results
- t-test was used to compare the mean service cost of HIV/AIDS pts Vs non-HIVAIDS pts.

## Preliminary Findings





**Discussion**

**Question:** how do you justify taking a 20% of HIV positive patients and on what basis did you classify patients to be HIV positive and negative?

**Answer:** I just took 20% of screened patients and classify them according to their sero-status

**Question:** I haven't seen a general objective from where your specific objectives arise?

**Answer:** I do have a general objective I cut it out for the purpose of this presentation only

**Question:** How did you get access to the cards to use for your study? Hospitals keep the cards of HIV patients confidentially have sought permission?

**Answer:** After gaining ethical clearance from the ethical clearance committee permission was sought from region health bureau and the hospital directors.

**Comments**

Try to combine the variable to present them in the table it will also help to limit the number of table.

The study on the secondary data of HIV patients will be allowed for publication if only the hospitals have counseling facility and all patients were asked their consent for being tested.

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Before closing the days program Dr.Alemayehu Worku announced the program for next morning to be panel discussion on the overall summary and evaluation of the consultative workshop activities and to come up with recommendations for the way forward. For this purpose three students and two instructors' panelist were nominated and approved to prepare the discussion for next morning.



**Panel discussion on Summary of Presentation Skill Course  
By Aynalem H/michael**

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The course which was given by Dr. Gail Davey with the objective

- To show and feel more when presenting in English
- To set realistic goal for presentation
- To appropriately select and structure material for presentation
- To use visual aids for maximum effect
- To handle question after presentation

Since it was a skill course, after few minute introductions to the course by Dr Gail every student were given a chance to tell his name and to speck about the worst thing that happened during his thesis work in 30 second. The presentation was video recorded. The most commonly observed problems during the 30 second presentation were

- Hands in pocket
- Staring at the ceiling or downwards
- Loss of eye contact or poor eye contact
- Audibility problem
- Inability to use microphone and
- Speaking too fast

Following the presentations

The recorded videotape was displayed for self-comment and feedback from the facilitator and other participants.

In the afternoon, all EPHA sponsored students were given a chance to present the summary of their thesis work in 3 minute. In this presentations, the students has shown some improvements but still Problems were observed in

- Management of time
- Allocation of time for important parts
- Keeping eye contact
- Over crowded material
- Audibility

After presentation constrictive comments were given for each presenter.

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**Pane discussion on Summary of Progress reports of EPHA sponsored Students  
By Solomon Shiferaw, MD**

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15<sup>th</sup> April 2004 afternoon Four EPHA sponsored students had a 15 minute presentation of their thesis work. It was followed by discussion lasting for an hour Constructive feedback were given from the audience

On the 16<sup>th</sup> of April morning a 15 minute presentation of thesis work by another four EPHA sponsored students continued. It was followed by discussion lasting for an hour After tea break, Challenge common in post graduate was presented It quite comprehensive and pertinent

In the afternoon, Discussion on challenges in postgraduate continued where participants shared their own experiences while they were in the field work for data collection it was a very educating session

Thereafter the last four EPHA sponsored students presented their thesis work in 15 minutes. At the end feedback was given for each presenter

**Good aspects of the days' activities**

- Time schedule more or less strictly adhered to
- Audiences' participation was very much satisfactory
- Advisors comments were quite educating
- Students benefited from the presentations and feedback

**Potential areas for improvement**

On the side of the students:

- Appropriate managements of time
- Skills in presentation including power point particularly use of right color scheme, graphs, slid lay out

On the side of EPHA and DCH:

- Inviting other non EPHA sponsored students to exercise presentation of their thesis

**Panel Discussion on strength and limitation of the workshop activities and  
Recommendations  
By Solomon Emyu**

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**Strengths**

- Achieved the goal: by giving the opportunity of experiencing how to present, and how to improve
- Schedule were executed timely
- Discussion and interactions were lively and harmonious
- Entertainment moments (coffee breaks, and social evening) were successful
- Friendly and polite support from the organizers and facilitators

**Limitations**

- Late timing of the consultative meeting
- Lack of standard formats and clear instructions for students on how and what to prepare presentations (some of the issues seem casual and too flexible)
- Difficulty in managing the audiovisual materials

**Recommendations**

1. Such consultative meetings will be more beneficial
  - If given early in time
  - Giving opportunity for all students (by coordinating all sponsoring agents)
2. Standard formats what to present, how to present, and what to expect should be given early clearly to presenters
3. The DCH/EPHA work through contracting the protracted time in initiating thesis research, and data collection
4. Research activity should be taken as an opportunity to gradually closing the interdepartmental gaps between  
Clinical departments versus public health department  
Social science versus faculty of medicine
5. Developing skills in different areas should be worked on further
  - Encouraging communicating research findings
  - Research methods and using of soft wares

Additional from consultant

Observation

Presentations needs to be concise, brief and to the point

Slid summary notes should be given to the audience

Rehearsal should be done before the presents

1. Response was too defensive in this presentation, at this stage you should try to take as many feedbacks as possible and be open for contractive criticism at this stage of your research work. Because people here are critical for your improvement and it is not a fault finding session
2. To avoid duplication and redundancy respond to similar question together
3. Study design and methodology should be clear and detail

4. Staff and advisors presence in the presentation are vital for teaching and provision of feedback maximally. If time is a factor evening session can be arranged for presentation at best
5. Not only waiting comment from advisors but also exchanging written paper exchange between students can benefit students
6. For proper timing rehearsal practice
7. Short courses in practical statistics in SPSS “an orientation type is mandatory.