**DEERWALK INSTITUTE OF TECHNOLOGY**

(Affiliated to Tribhuvan University)

**Sifal, Kathmandu**

**A proposal**

**on**

**HIV Adherence and its effects on HIV patients**

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**Background**

The word 'adherence' is used to describe taking drugs(as medication) exactly as prescribed - at the right times, in the right doses and following special dietary restrictions. Specifically, the term adherence is used in the treatment of HIV(Human Immuno Virus) patients where the use of drugs in right dose in right time and right interval is highly concerned. Medication for HIV patient is so delicate that it should be taken in frequent interval of time and if it does not happen then it has adverse affect where the drugs fall below therapeutic levels and HIV is given a chance to replicate at a rate at which it can mutate and develop resistance to the drugs. The medication therapy generally used for the HIV patient is Highly Active Antiretroviral Therapy (HAART) which is the combination regimens of different antiretroviral medications. In the recent year, study has shown a significant control over the viral replication in a given individual patient. HAART is related to significant reductions in morbidity and mortality; however, these complicated therapies require high levels of adherence by the patient.

At 95% adherence (eighteen missed / late doses per year if you are on a once daily regimen) only 81% of patients achieve target viral suppression … and at 85% adherence (one dose missed per week on a once daily regimen) only 50% of patients achieve target viral suppression. Fall much below that and you have virtually no chance of ever achieving target viral suppression.

There are different factors that effects the HIV adherence of the HIV patient and these factors are general health status(diseases other than HIV), medication history, employment status, family and social support, mental status, behavioral factor(sexual risky or syringe sharing habits), medication(number of pills intake i.e. both low pills or high pills). So, side effects(of drugs after therapy), timing and frequency of doses(pills intake), food restrictions(in conjunction with pills), baseline viral load and CD4 cell count (clinical report during HAART initiation), existing comorbidities(other disease like tuberculosis, diabetes, etc ) can be the key variable or factors both for qualitative and quantitative analysis(to study HIV adherence). Different clinical reports from hospital (of the patient), reports prepared by government organization, different NGO/INGO can be used for review.

**Objective**

* Effects of pills(intake of high/less number of pills then required) on baseline viral load, CD4 cell count, and therapeutic level.
* Relation of therapeutic level with employment status and family support.
* Relation between therapeutic level and the dietary restriction

**Methodology**

Stratified sampling with proportional allocation method will be used for determining the sample size. Based on the total number of HIV patients in Nepal and proportion of HIV victims in Kathmandu valley, the sample size is determined. As the means of transmission of the disease is different, different groups(strata) are classified as:

* Victims of HIV Aids transmitted due to use of syringe
* Sexual transmission
* From HIV mother to a child

As an approach for collection of the data, interview method, observation method(study of clinical report), and scheduled method will be used. The set of questions to be responded by the victims are prepared as following:

|  |
| --- |
| Name:\_\_\_\_\_\_\_  Address:\_\_\_\_\_\_\_  Date:\_\_\_\_\_\_\_  Fill the questions as per the instructions:  1. Who do you live with?  2. How long has it been that you have HIV?  3. How it was transmitted to you?  4. Do you use syringe ? (only if the victim is not a child)  5. Are you taking your pills regularly?  6. How did you feel when you first happen to know that you have HIV positive?(for mental status)  7. Do you face any problem these days to deal with neighbors?  8. Are your neighbor helpful?  9. Are you family member helpful?  10. Do you often feel depressed?  11. Do you have a job?(if yes, asked the response of other employee in the office and if no ask question ).  12. How do you spend your day? |

Data that are collected from the clinical report, respondent are tabulated as below and further mathematical operations are carried out to find the required relation.

Table 1: to find relation between dose and therapeutic level:

|  |  |  |
| --- | --- | --- |
| S.N. | Number of pills left to be taken | CD4 cell count |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Table 2: Qualitative analysis to find relation between therapeutic level with mental status and family support:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.N. | Family Support | Employment | Therapeutic level | Dietary restrictions |
| 1 | Yes | Yes | Normal | Follow |
| 2 | No | Yes | abnormal | Not-follow |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Statistical tolls like excel or SPSS will be used both for quantitative as well as qualitative analysis. Different graphs will be plotted to show the relation between different factors as described above.

**Expected Result**

* CDC count for the patient who takes dose regularly is normal.
* Patients with great family support and employment have higher chance of therapeutic level being normal.

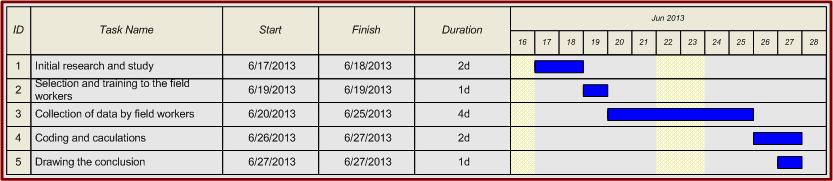
**Work Plan**

**1. Manpower**

* Consultant (one)
* Office staff (two)
* Field workers (five)
* Computer operator (one)

**2. Time line**

The estimated time period for the survey is estimated to be about 15 days. The estimated time schedule for the survey is represented as:



**3.Cost Budget**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.N.** | **Particular** | **Days** | **Rate** | **Quantity** | **Amount** |
| 1 | Salary for field workers | 25 | 200 | 1 | 5000 |
| 2 | Salary for computer operator | 2 | 500 | 1 | 1000 |
| 3 | Advertisement for consultant | 1 | 5000 | 1 | 5000 |
| 4 | Stationary | - | 1500 | 1 | 1500 |
| 5 | Fooding for field workers | 25 | 150 | 1 | 3750 |
| 6 | Miscellaneous | **-** | 2000 | **-** | 2000 |
| 7 | Total | **-** | **-** | **-** | 18250 |

The total cost for the survey is estimated to be of Rs. 18,250.