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Pre HAART Drug Resistance Surveillance

Trinidad and Tobago
HIV and AIDS Coordinating Unit
Ministry of Health
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Goals and Objectives of HIV Drug Resistance Intervention



- **Goal:** To sustain the decreased morbidity and mortality seen by antiretroviral therapy in Trinidad and Tobago
- **Objective:**
 - To maintain 86% of clinic patients on first line therapy for a period greater than five years
 - To maintain clinic population on third line therapy less than 1% of all people on HAART
 - To keep baseline drug resistance less than 5% of all new cases





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Importance for HIV DR Baseline testing

- Public Health approach vs individualistic approach
 - Affects first line therapy
 - Affects follow up
 - Affects resource allocation eg baseline testing for all new patients





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Populations: New patients

- Entering populations eg returning residents , migrants, immigrants
- Internal populations:
 - Adults
 - Foreign access of medication before free ARV available nationally
 - ARVs access programs- compliance , intolerance
 - Mothers exposed to mono and dual therapy PMTCT etc
 - “ping ponging” of Patients between clinics and “presenting” as new
 - Pediatric populations
 - Mothers exposed to Nevirapine



Late presenters to hospital
from largely low risk
population testing.

HIV Risk

Gen Pop: 1.3 million

21,636 HIV cases
HIV prevalence **1.5%**

Vulnerable Pop'n

Youth at risk, prisoners
substance abusers

MARPS

IDU

CSW

MSM

20%

Testing
Condoms
Sexual
fidelity

Unchanging **1400** cases
annually for 6 years



2010: **846** new admissions
to HIV Treatment



Delayed, no presentation
from Testing to Treatment
and Care

Influencing sizes and
behaviours of HIV epidemic





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Population Adults

- 1400 new patients per year
- 2/3 diagnosed in hospital (TB included)
- 1/3 community
 - 9 STI - 2.3%
 - 33 Local Health Centre Community sites – 1%
 - PMTCT (accessed through all 109 sites) – 0.7%
- 40-60% late presenters
- Gender and access to testing = equal at treatment sites
- 554 (39%) 2010 did not present to clinic in same year





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Adults HIV positive Data 2010

Institution	Adult/ Child	HIV/AIDS Patients in Treatment & Care	HIV/AIDS Patients in Care	HIV/AIDS Patients on ART	% HIV Patient s on ART	% of total patient s	Clinic Age
Medical Research Foundation^	Adults	4959	1878	3081	62.1	72.3	*mtct (1998) 2002
San Fernando Hospital	Adults	1004	187	817	81.4	19.2	2002
Tobago Health Promotion Clinic	Adults	347	17	330	95.1	7.7	*mtct 2003
Sangre Grande Hospital	Adults	60	27	33	55.0	0.77	2008
Adult Total		6370	2109	4261	66.9	100	





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Institution	Av. New patients / year#	HIV/AIDS Patients on ART	% of total patients	New patients on ARV/ year #	Clinic Age	12 month Survival data
Medical Research Foundation^	640 (45.1%)	3081	72.3	391	*mtct (1998) 2002	324
San Fernando Hospital	312 (22.2%)	817	19.2	81	2002	70
Tobago Health Promotion Clinic*	12 (0.85%)	330	38	38	*mtct 2003	37
Sangre Grande Hospital	60 (4.25)	33	0.77	9	2008	4
Tobago hospital clinic	26 (1.8%)	---	---	12	2009	12
Adult Total	1050#(25 - 39%)	4261	100	531	---	447





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Proposed sampling methodology

- High risk group – referred to treatment centres (survey) as important assumption
 - MSM
 - CSW
 - Migrants***
- two islands with sampling done as per each island





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Proposed sampling methodology

- Proportional baseline testing
 - Sample of new patients
 - Patients moving between sites to be excluded
 - Consecutive patients till proportional sample size reached regardless of CD4
 - Additional sampling in smaller island
 - Given sample size may have to increase sampling period or improve linkage to care

Limitations / Challenges

- ?? Loss to follow up of positive cases (25 - 39 %) .
This group may be high risk group
- Physician compliance





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- Critical questionnaire questions
 - Demographics inclusive of risk group MSM, CSW, PMTCT and regime
 - Migrant or mobile population
 - Returning residents
 - Presenting CD4 and viral load
 - Clinic
- Questions
 - Stratified sample M:F
 - High CD4 count vs any cd4 count ? Effect on results
- Intervention
 - results at one area / group as opposed to all areas with baseline resistance



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