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**CHALLENGES TO ANTIRETROVIRAL (ARV)
DRUG THERAPY IN RESOURCE-LIMITED
SETTINGS- *Progress and Challenges in the Nigerian
Initiative.***

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Figures- end of 2002

Parameter	Figure
Total population	123,000,000
Adult HIV prevalence rate	5.8%
Living with HIV/AIDS	3,500,000
•Adults (15-49)	3,200,000
•Women (15-49)	1,700,000
•Children (0-15)	270,000
AIDS Deaths	180,000
AIDS orphans	1,000,000

Onset of epidemic in Nigeria:

Initial response

- **First Case Reported in 1986**
- **Initial response not robust and hampered by denial**
- **HIV/AIDS considered a problem of the health sector and even then a minor segment**
- **Very limited funding and political support**
- **Insufficient capacity and understanding to effectively respond to challenges imposed by the epidemic**

Current national response

- **Political Commitment now present at the highest level**
- **Establishment of new multisectoral structures (PCA, NACA, SACA, LACA)**
- **New Plan with greater ownership (HEAP)**
- **Broader funding base**
- **Democracy has brought on more partners**
- **Better understanding of the epidemic and what works**

Key interventions planned and currently implemented

- Massive Awareness Raising Campaigns
- Enhancing institutional and community capacities to respond to epidemic
- **Commencement of largest Anti-Retroviral Therapy programme in Africa**
- Improving surveillance, monitoring and evaluation
- Redesign of supporting policies
- Commencement of VCCT, MTCT, Vaccine, HBC initiatives etc.

Background

The Federal government of Nigeria in February 2002 commenced a nationwide provision of HAART using combination of generic forms of NVP, d4T and 3TC at a reduced cost of US\$10 per month, targeting 10,000 adults, and 5000 children. Use of these and other ARVs are also on-going at some other private and public sites. Many challenges exist in the implementation of this programme.

Objective

To assess the challenges in the antiretroviral (ARV) drug therapy in Nigeria.

Study design

- Retrospective study of 11 clinical centers
 - six of 25 public
 - five private
- Questionnaire
 - knowledge of HIV/AIDS by clinicians and care-givers
 - separate one for clinicians on knowledge of ARV combinations, when to start, side effects, and disease markers.
- Patients randomly selected
 - interviewed on problems and challenges in drug supply, adverse reactions, compliance and quality of life.

Medications and follow-up

- Antiretroviral combinations included
 - 2 NRTI (d4T, 3TC, ddI, ZDV) +
 - 1 PI (IDV, NFV, SQV) or
 - 1 NNRTI (EFV, NVP)
- Medical follow-up every month
- CD4 count 3-monthly, viral load 6 monthly

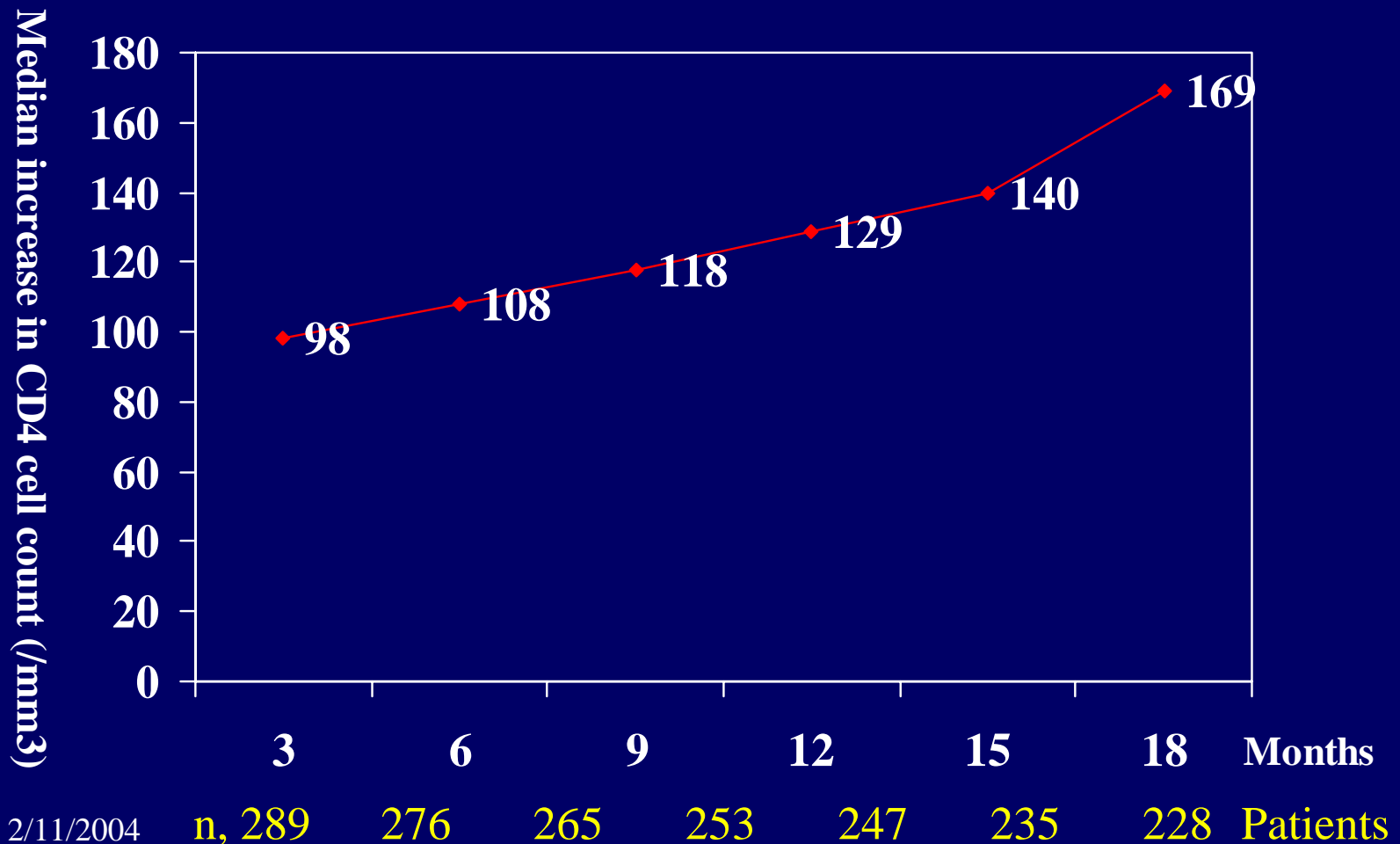
Baseline Characteristics of Patients n, 315

Age (yrs)	
•Mean	31±19
•Range	22-59
Gender (n,%)	
•Males	246 (78%)
•Females	69 (22%)
HIV Types (n,%)	
•I	236 (75%)
•II	22 (7%)
•I & II	57 (18%)

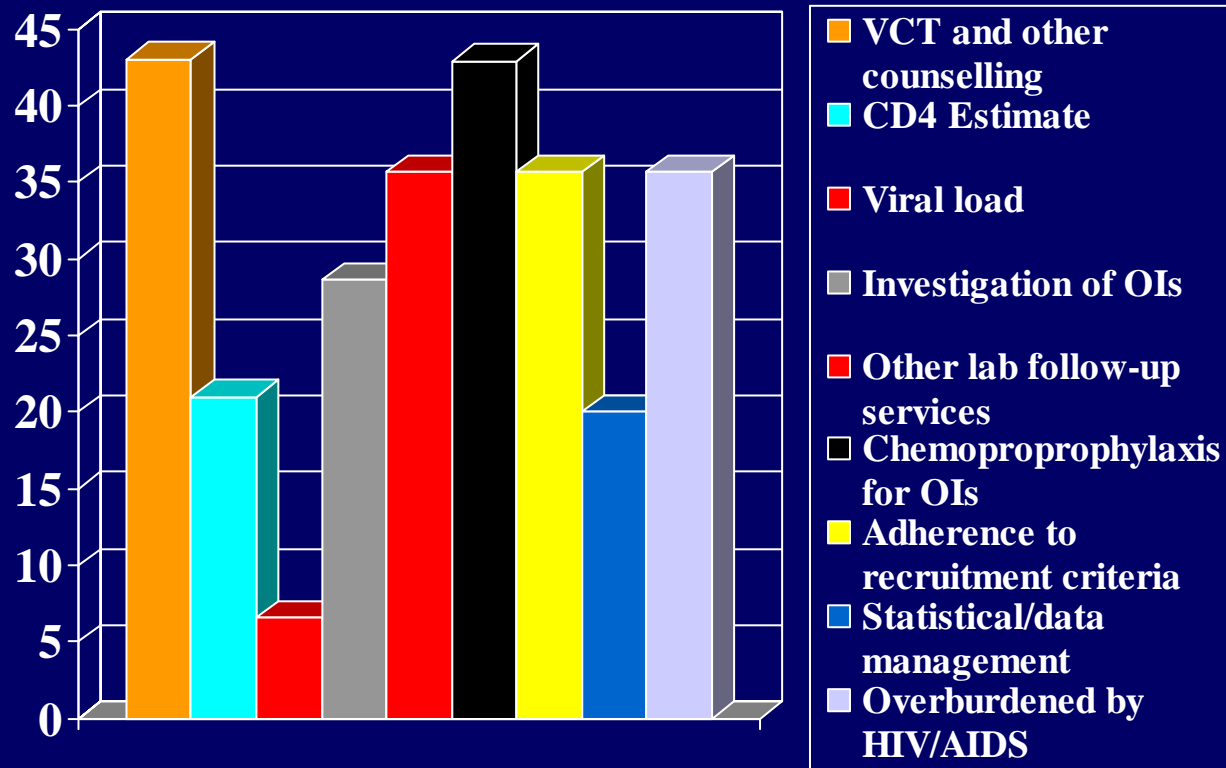
Baseline Characteristics of Patients, n 315

CD4 (cells/ml)	
•Mean	157±95
•Range	69-350
Clinical Status (CDC class 1993)	
•A	18 (5.8%)
•B	119 (37.9%)
•C	178 (56.3%)

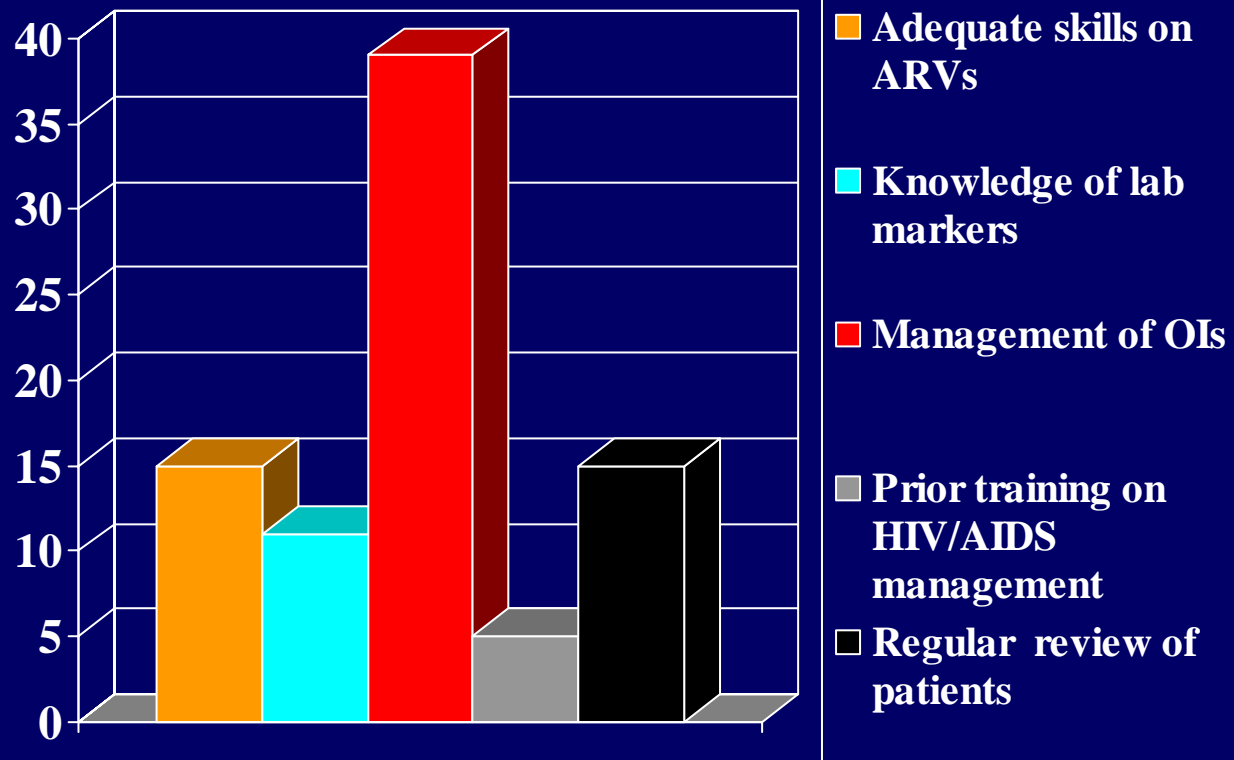
Median increase in CD4 count from baseline



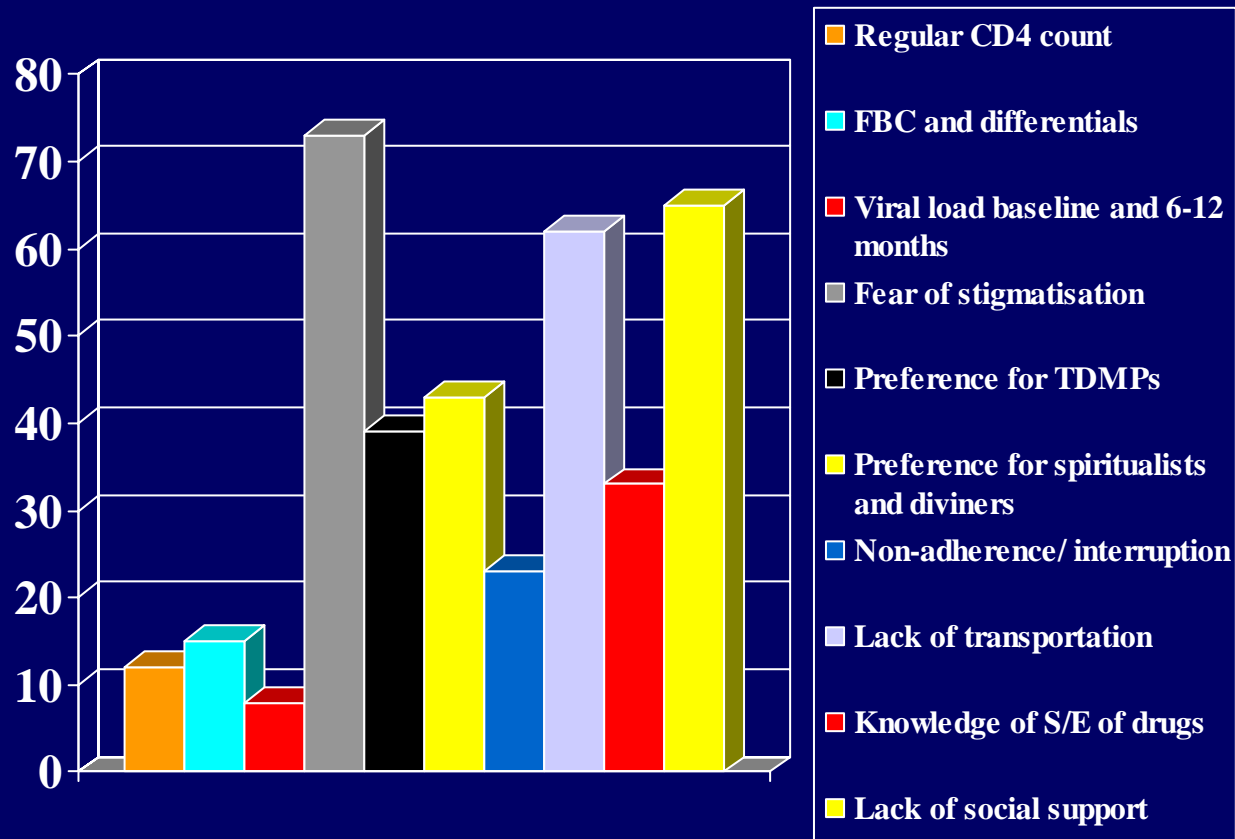
Facility Challenges



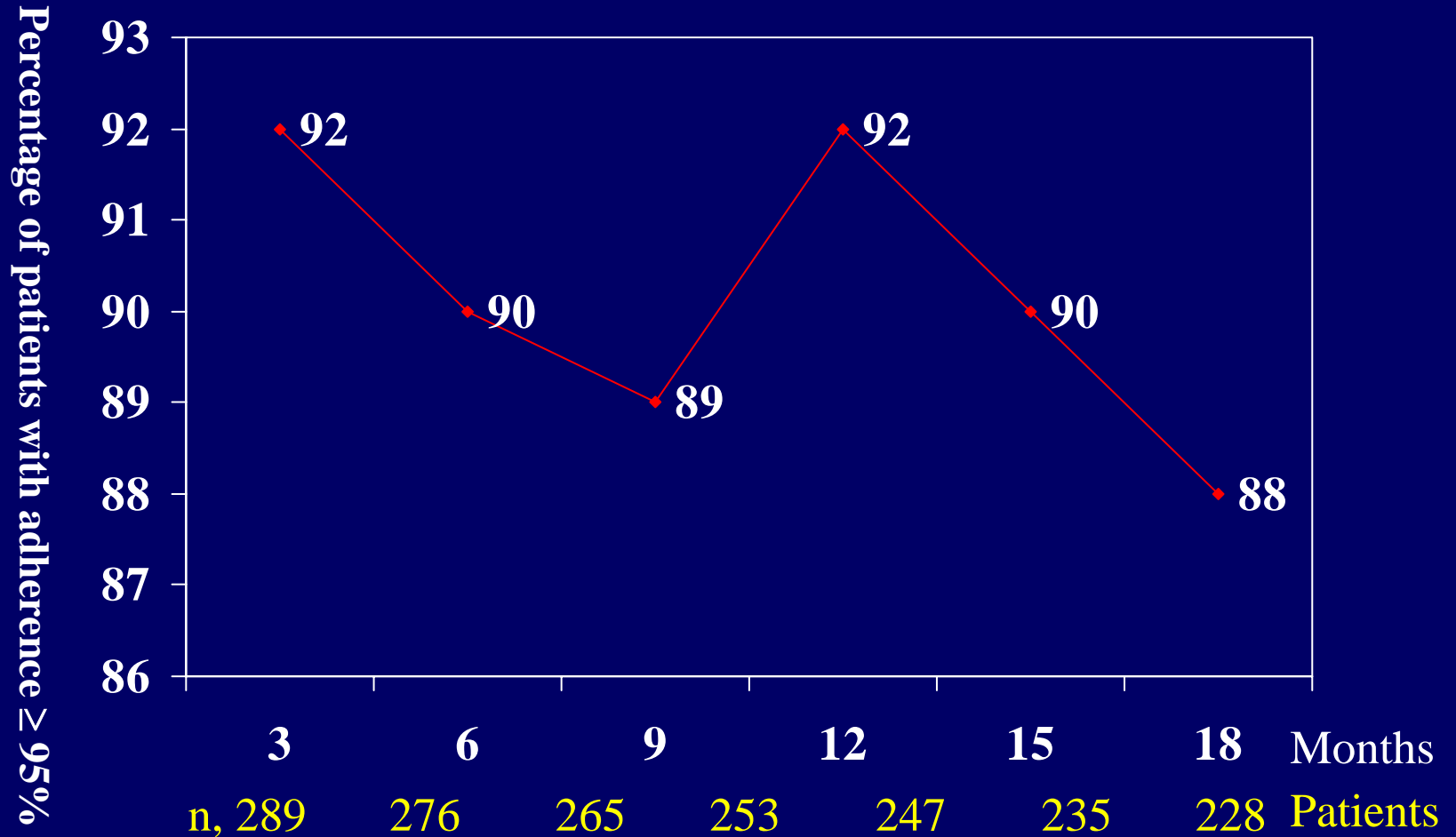
Clinicians' Challenges



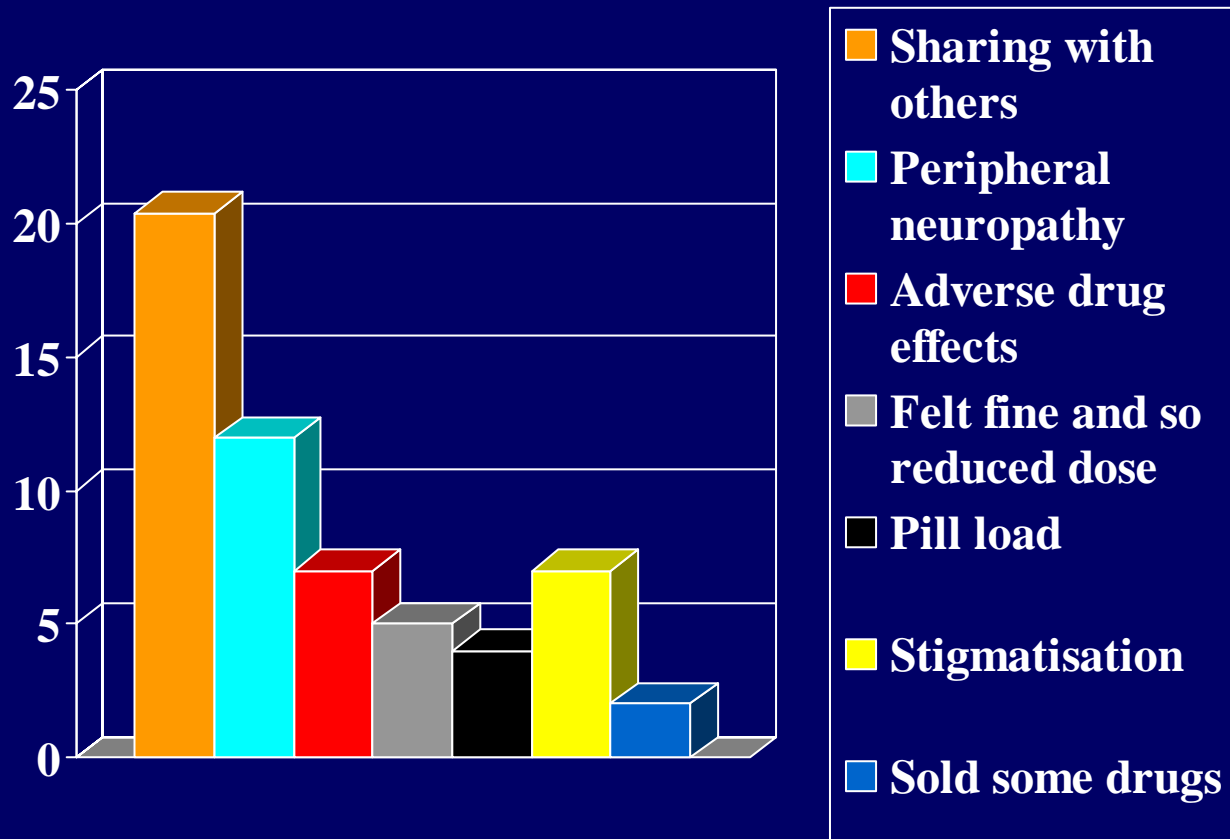
Patients' Challenges



Adherence



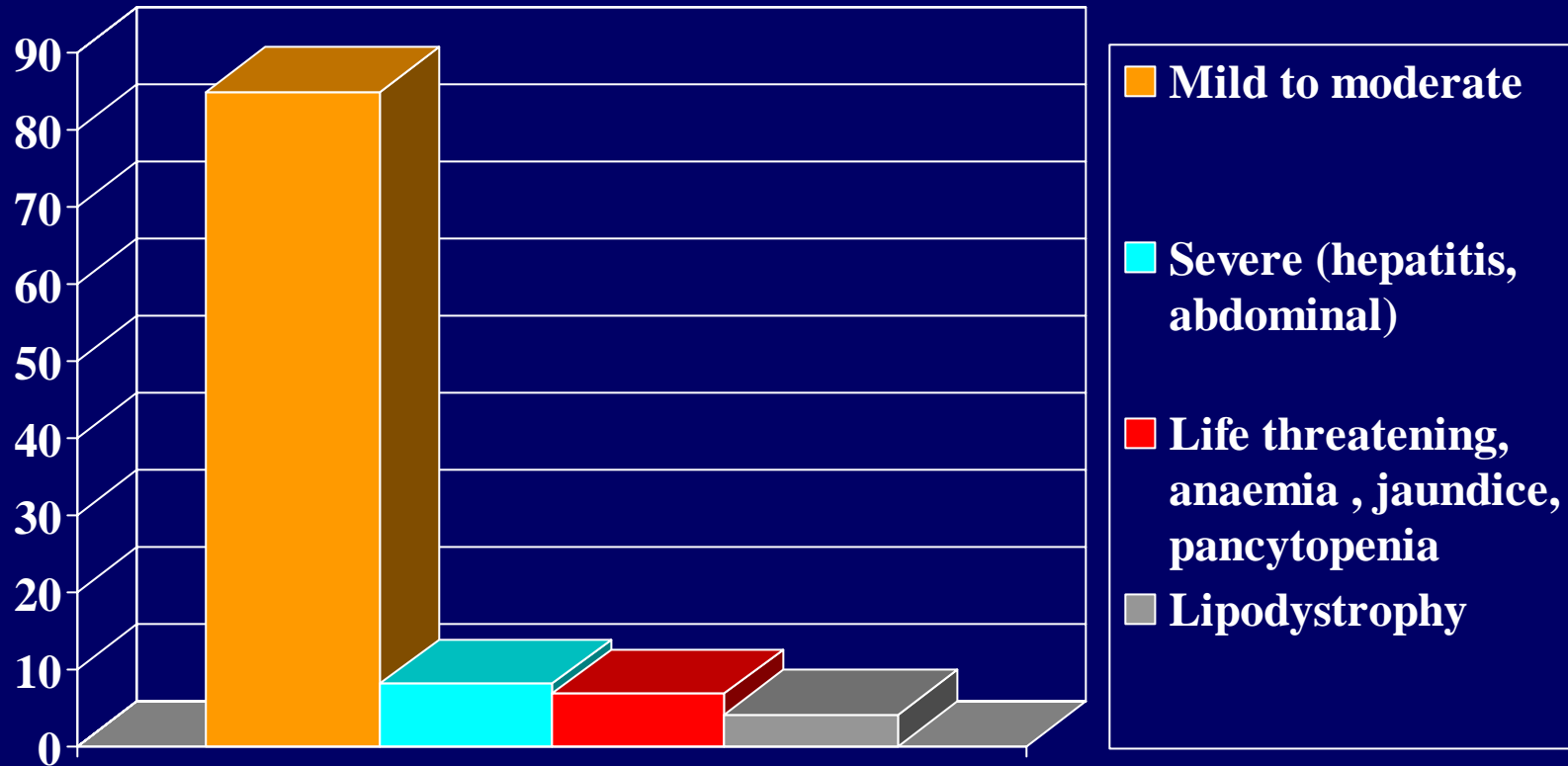
Reasons of non-adherence



Treatment interruption

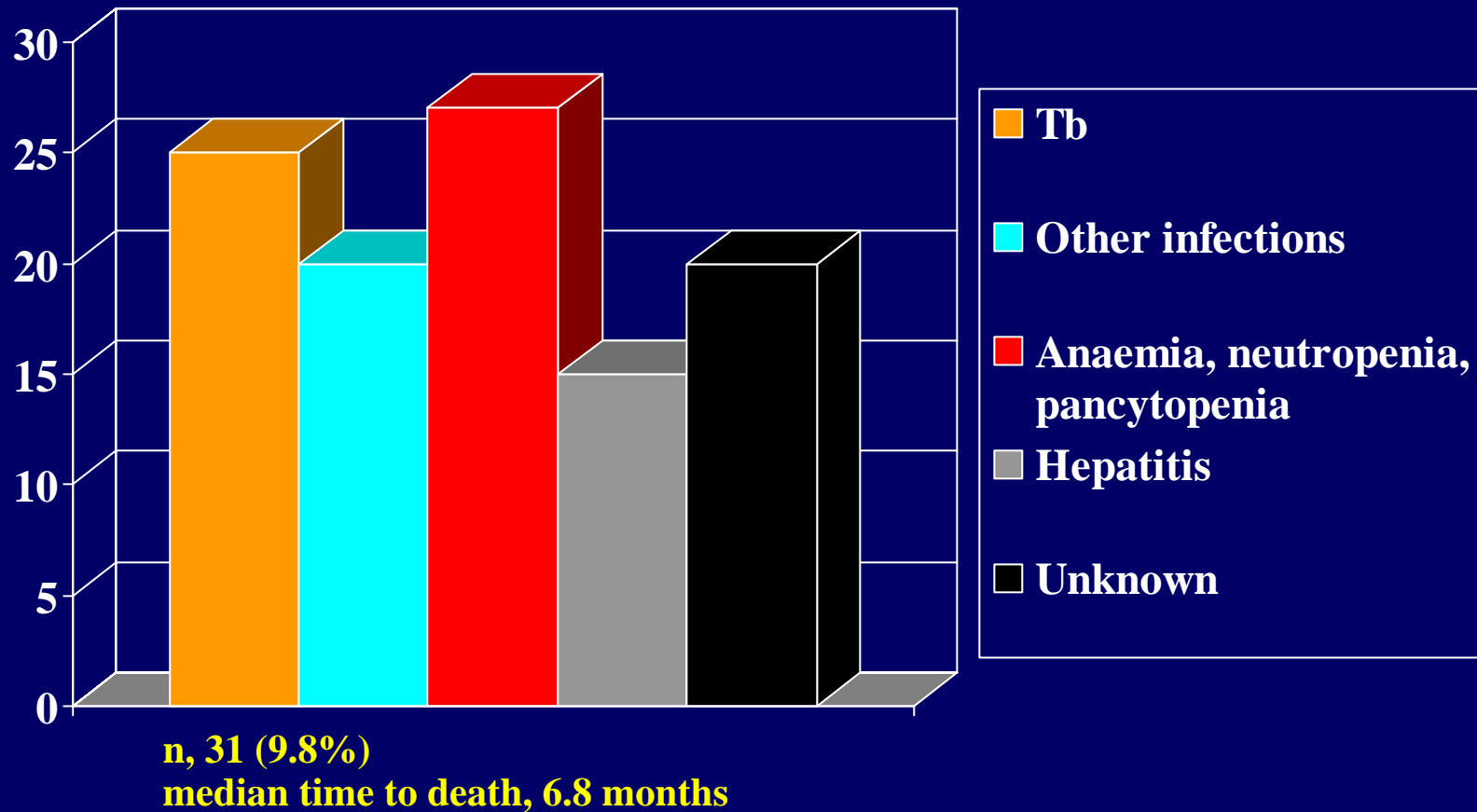
- Therapy was interrupted in 21 patients
 - median time: 1.6 months (IQR: 0.5-3.2)
- Reasons
 - Feeling very well!
 - Side effects
 - Pill burden
 - Cost of drugs
 - Centres ran out of drugs and so patients could not buy to take

Main adverse effects



32% lead to treatment interruptions

Mortality rate



Recommendations I

- Training of clinicians and others on use of ARVs
- A sustainable supply of adequate high quality drugs.
- Adequate resources to ensure the provision of drugs on a long term basis.
- Establishment of reference laboratories for monitoring drug toxicities and viral loads.
- Establishment of commodity management systems to prevent stock outs.
- A management information system to track programme, patients and commodity.

Recommendations II

- Indirect cost should be covered for patients and care givers
- Increased community based programmes
- Cheaper monitoring tools needed
- More research-
 - Drug resistance
 - Improvement of compliance and adherence
- Decentralisation from public health sector
- Second line drugs should be considered in public hospitals
- More international collaborations needed

Conclusion

- Provision of HAART in Nigeria faces many challenges in spite of apparent clinical improvement by patients.
- There is need for capacity building, improved laboratory skills, cheaper monitoring tools, and resistance testing to avert treatment failure.
- Sustained advocacy on the political class is necessary to guarantee provision of related services.

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