Universal Access to Antiretroviral Therapy:

The Brazilian Experience

“universal and free of charge access to antiretroviral drugs”
“treatment policy of AIDS”

Ministry of Health
National STD/AIDS Program

BRAZIL : Federative Republic

- POPULATION (2000): 169,500,000
- CUMULATIVE AIDS CASES NOTIFIDED (Dec/2000): 203,353
- CUMULATIVE PEDIATRIC AIDS CASES (Dec/2000): 7,086
- ESTIMATED NUMBER OF HIV+ INDIVIDUALS (1998): 536,000
- AIDS INCIDENCE RATE (1999): 14/100,000 in hab.

Major Program Aspects

- Universal access to antiretroviral (ARV) therapy throughout the Public Health System.
- Treatment criteria established by an Advisory Committee, revised at least once a year or as frequently as needed, in order to reflect scientific developments and availability of new drugs.
- National ARV logistic control system
  - Dispensary
  - Laboratories

Recommendations for beginning anti-retroviral therapy

- Symptomatic patient
- Asymptomatic patient with relevant findings in laboratory tests (CD4+ viral load)
- Pregnant HIV+ (reduction of vertical transmission)

Computerized System for the Logistical Control of Antiretroviral Drugs.

- National patient register
- Register linked to Aids drugs dispensing units
- Checking register and drugs dispensing according to MH criteria
- Computerization of drugs dispensing units
- Authenticate ARV requests via magnetic card
- Information to patients
- Daily data copying

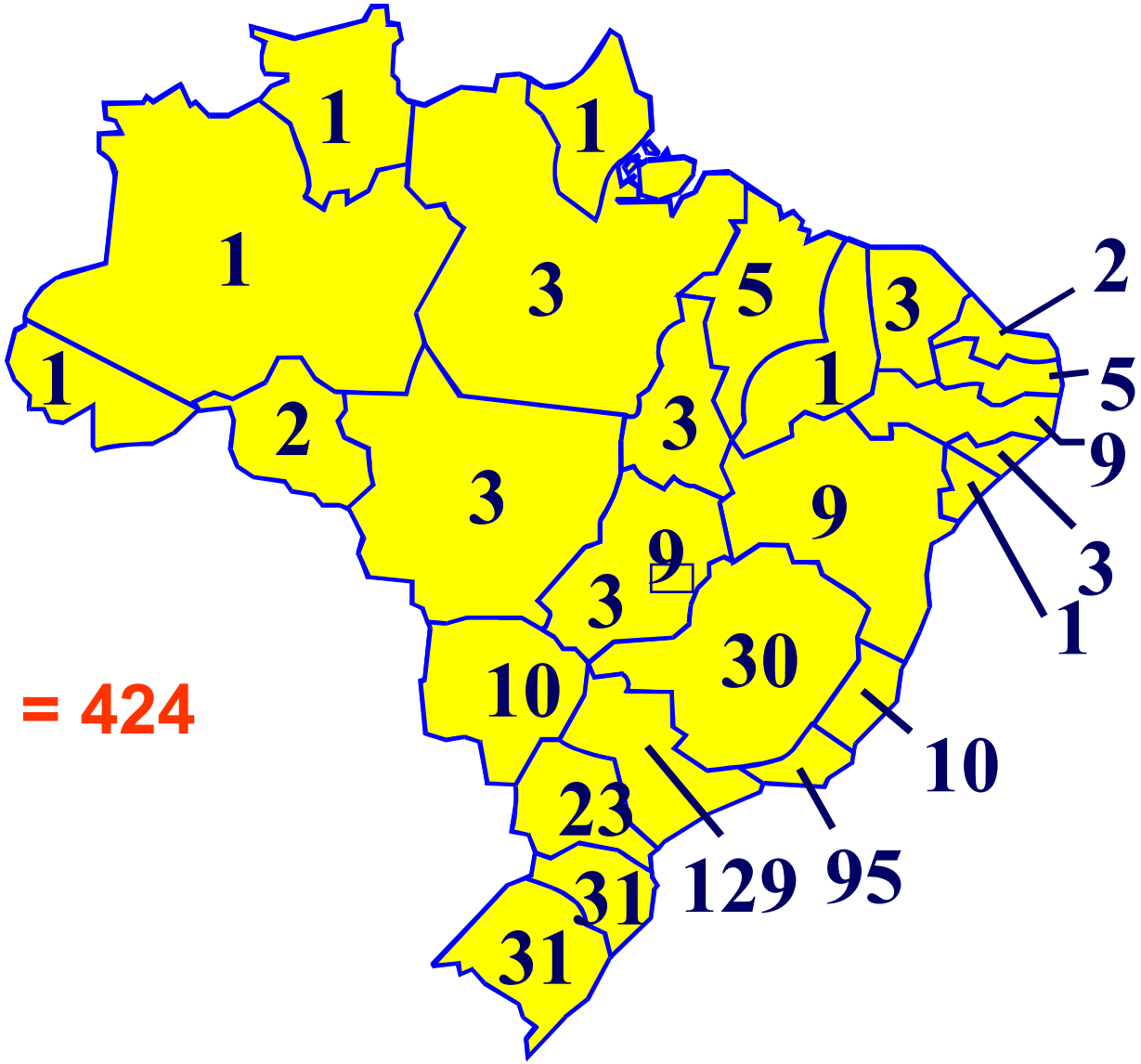
Computerized System for the Logistical Control of Drugs

Civil Rights

magnetic card

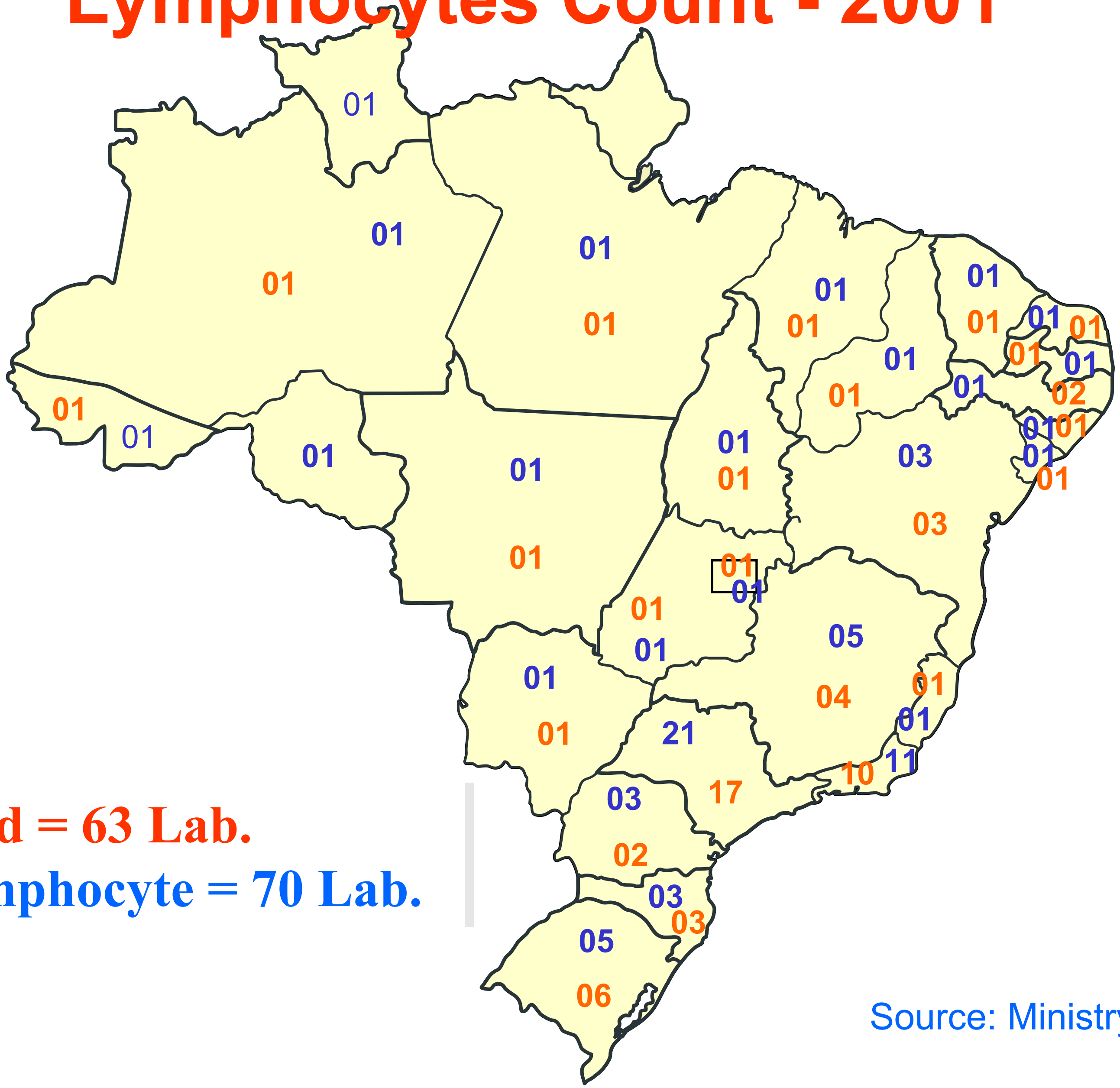
Quality of Life

Distribution of Dispensary Units of Antiretroviral Drugs in Brazil - February, 2001.



TOTAL = 424

Networks of HIV Viral Load and CD4+ Lymphocytes Count - 2001

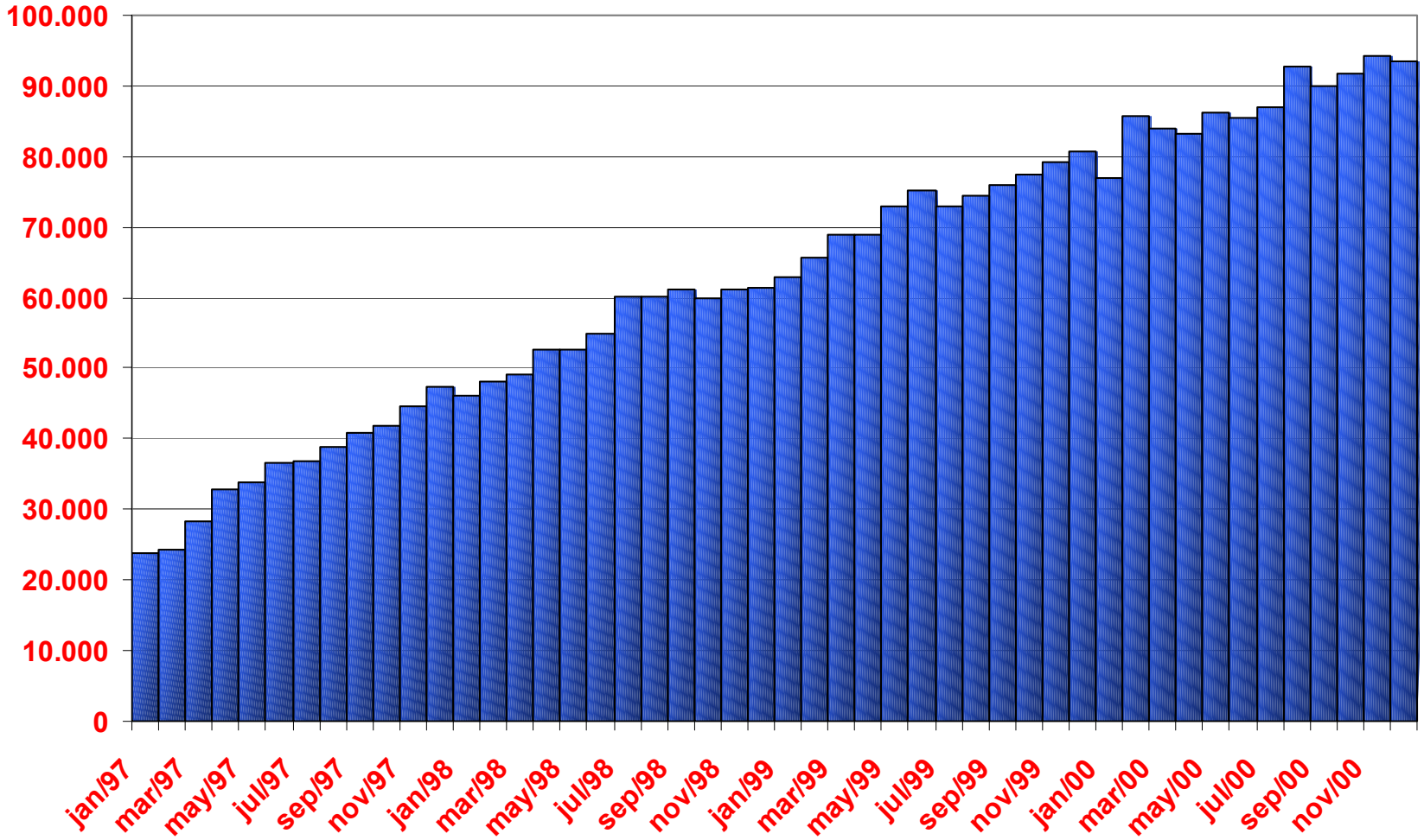


Viral Load = 63 Lab.

CD4+ Lymphocyte = 70 Lab.

Source: Ministry of Health

Number of HIV-infected patients on ARV treatment in the Brazilian Public Health System (Jan/97 - Dec/00)

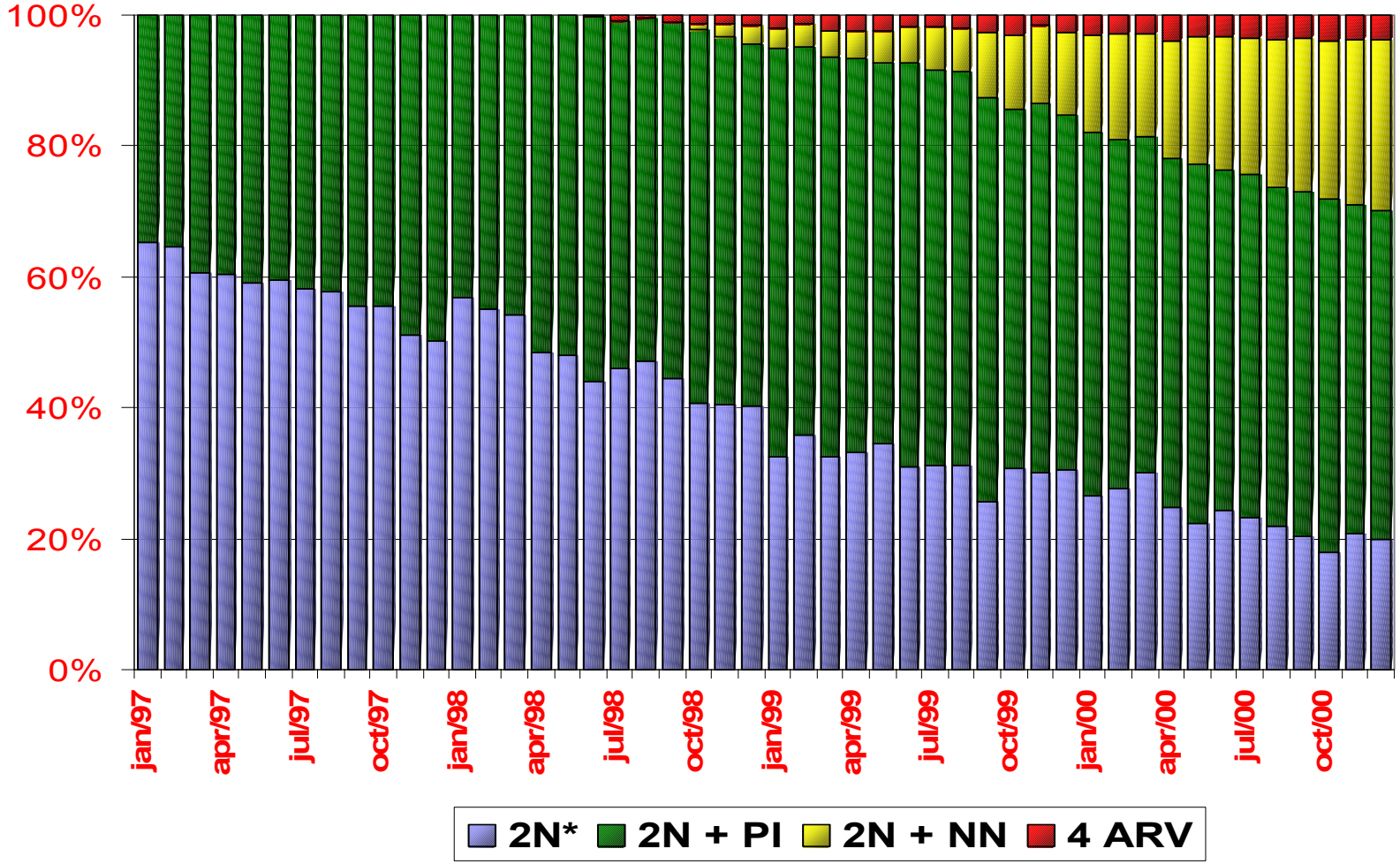


ARV distributed by Ministry of Health-Brazil (May/2001)

- ZIDOVUDINE (ZDV) 1993*
- DIDANOSINE (ddI) 1998*
- ZALCITABINE (ddC) 1997*
- LAMIVUDINE (3TC)1999*
- STAVUDINE (d4T) 1997*
- INDINAVIR 2000*
- RITONAVIR
- SAQUINAVIR
- NELFINAVIR
- AMPRENAVIR
- NEVIRAPINE 2000*
- DELAVIRDINE
- EFAVIRENZ

* Generics manufactured in Brazil/year production commenced

Types of antiretroviral therapy receveid by patients in Brazil, by % (Jan1997 - Dec2000)



Estimated data

Source: Ministry of Health

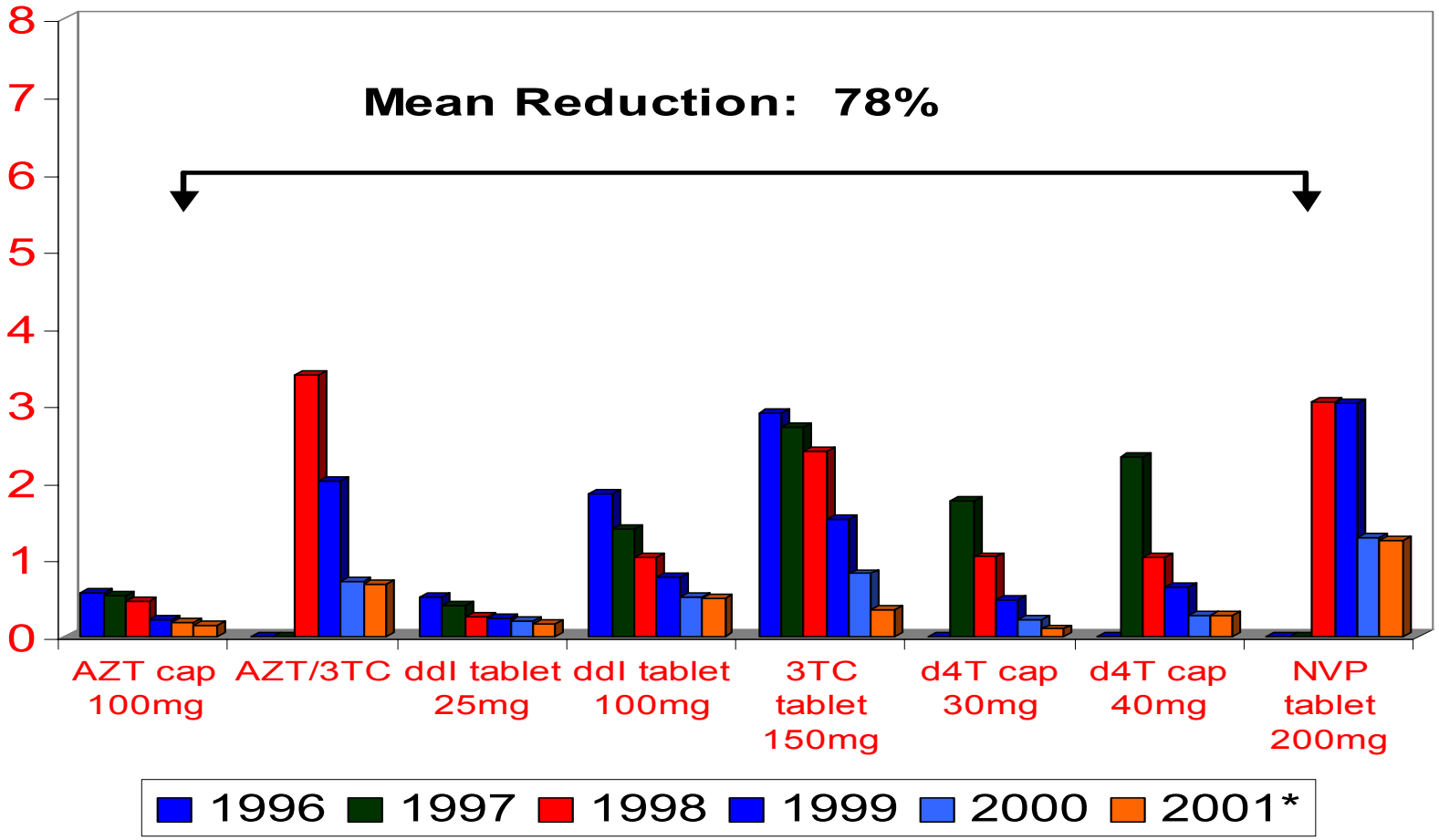
Impact of Antiretroviral Therapy (1995 - 2000)

- ✓ Reduced Mortality 40-70%
- ✓ Reduced Morbidity 60-80%

  Tb 360 in 1996 and 82 in 2000

- ✓ Reduced Hospitalization
  - 4x reduction
  - 234,000 avoided AIDS-related hospital admissons
- ✓ Cost Savings U$ 677 million from 1997/2000

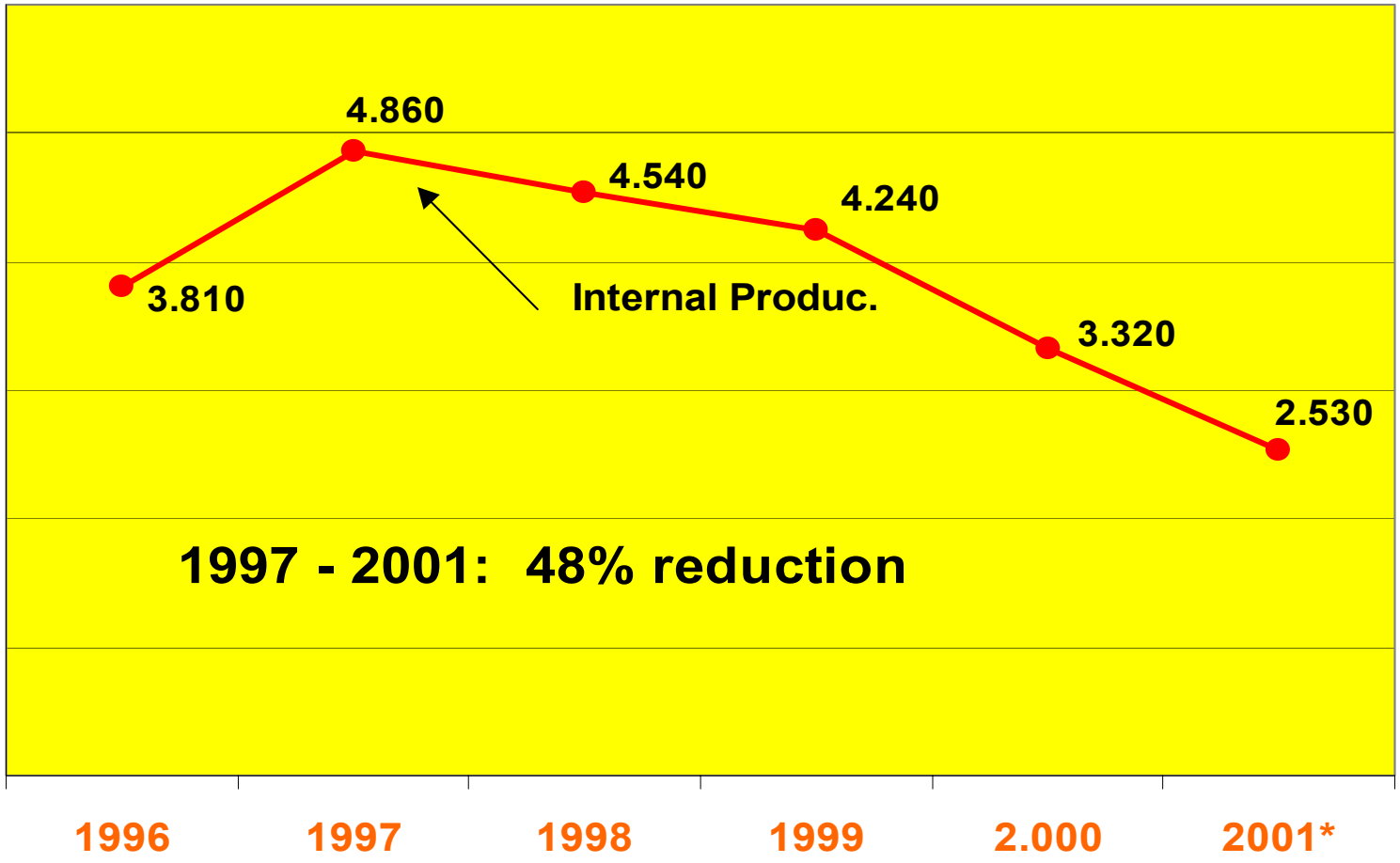
Price evolution (in US$) of ARV for adults use with domestic production. Brazil (1996 - 2001)



*Estimated data

Source: Ministry of Health/Brazil

Mean Cost (in US $) per Patient-year of Antiretroviral Therapy. Brazil (1996 -2001)



Source: Ministry of Health/Brazil

*Prelimanary data

Brazilian MH & Merck Agreement on ARV Price Reduction (March, 2001)

64,8 % Price Reduction on Indinavir

U$ 1.33/capsule U$ 0.47/capsule

59,0 % Price Reduction on Efavirenz

U$ 2.05/capsule U$ 0.84/capsule

Governamental Laboratories Manufacturing ARV in Brazil

Far-Manguinhos/FIOCRUZ/Ministry of Health (45% of Total ARV National Production)

FURP (SP)

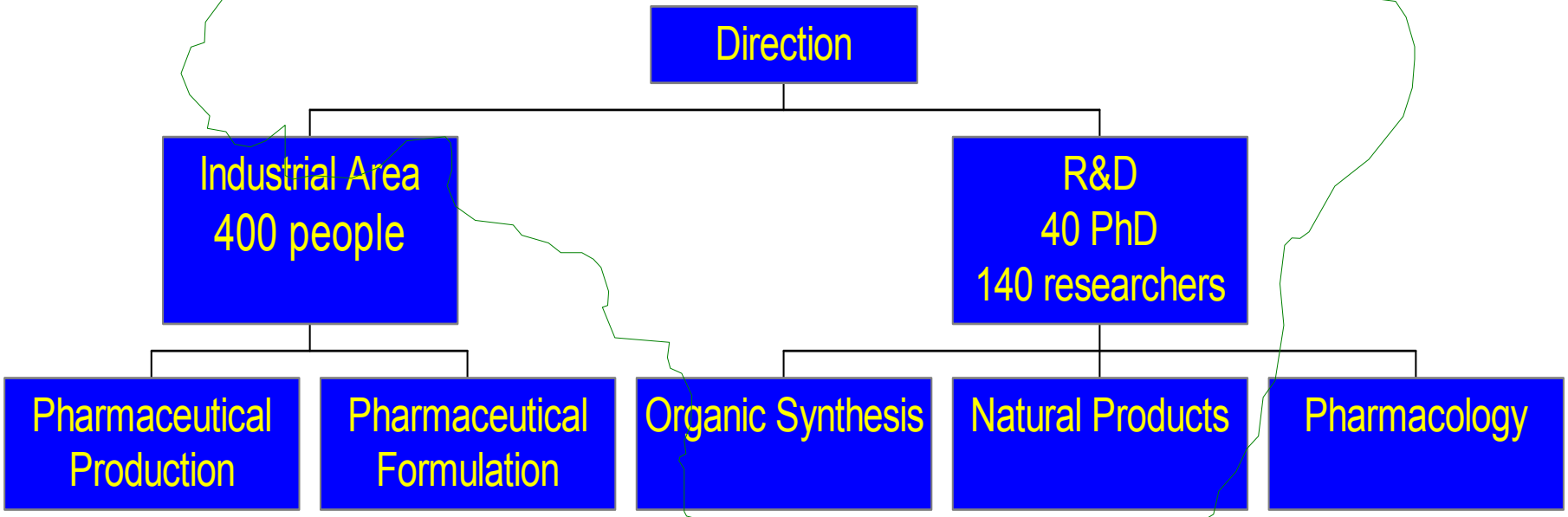
LAFEPE (PE)

FUNED (MG)

IQUEGO (GO)

IVB (RJ)

Far-Manguinhos



Far-Manguinhos strategy for pharmaceutical production in AIDS

- ↓ R&D of formulation using acquired drugs in the international market by lower price
- ↓ R&D of analytical methodology and standard reference
- ↓ Bio and pharmaceutical equivalence

	Industrial capacity PU	used capacity PU	AIDS PU
tablets	1,2 billion	1 billion	51 million
capsules	149 million	110 million	80 million
creams	18 million	14 million	-

New developments in Far-Manguinhos for 2002

- ↓Saquinavir
- ↓Ritonavir
- ↓Nevirapine for children

2 research groups in new drugs

- **Protease Inhibitors**
- **NNRTC inhibitors**

Far-Manguinhos R&D

Main areas

- **Natural Products**
- **Synthesis**
- **Pharmacology**

Far-Manguinhos R&D

Target areas

- Tuberculosis
- Trypanosomoses
- AIDS
- Malaria