Current challenges in HIV care from a Brazilian cohort perspective

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Outline

- Current features of the Brazilian HIV epidemic
- Current challenges in HIV care in Brazil
- Research at USP Medical School HIV clinic
- Potential for interinstitutional collaboration
HIV/AIDS IN BRAZIL
(Nov 2012 - estimate)

718,000 people living with HIV

1st autochthonous AIDS case - 1983
686,478 AIDS cases

Dept. STD/AIDS/VH, Min. Health, 2013
HIV/AIDS IN BRAZIL (Nov 2012 - estimate)

- < 1% general population
- > 5% ≥ 1 populational subgroup

Concentrated epidemic

HIV prevalence = 0.4%
- (15 – 49)
- 0.31% (♀)
- 0.52% (♂)

HIV infection in Brazil: prevalence studies

- Total, 15-49 (2012): 0.5%
- Homens, 15-49 (2012): 0.6%
- Mulheres, 15-49 (2012): 0.4%
- PUD, 18+ (2011): 5.9%
- PU crack, 18+ (2013): 5.0%
- Gays e outros HSH, 18+ (2010): 10.5%
- PS, 18+ (2009): 4.9%
Distribution of AIDS cases, Brazil

✓ territorial spread

Distribution of AIDS cases in Brazil

2005-2011
Distribution of AIDS cases among MSM, Brazil

2010-2012
Brazilian National ART Program

universal access to medication
distributed free of charge - SUS

Guidelines:
- launched in 1991 – zidovudine (AZT)
- progressively incorporated new ARVs
- 1997 - combined therapy (HAART)
- local production of generic ARVs
- 2008 – compulsory license - efavirenz
- 2013 – “test and treat” strategy
- 2014 – expected TDF/3TC/EFZ pill
Current challenges - 1

- regional discrepancies – local epidemics
- late diagnosis
- uptake and retention in care
AIDS incidence in Brazil
(Dec 2012 - estimate)
Clinical outcomes

- Reduced mortality (AIDS-related deaths)

[Graph showing trends in mortality rates per 100 PY from 1986-1991 to 2007-2009, with lines for AIDS, Non-AIDS, and Unknown categories]

Grinsztejn B, 2013
AIDS mortality in Brazil

Gráfico 14 - Taxa de mortalidade (padronizada) por aids segundo região de residência e ano do óbito. Brasil, 2003 a 2012
Late entry into HIV care

Table 1. Clinical and immunological status of HIV-infected adults (≥15 years of age) upon entry into HIV care at public health care facilities in Brazil.

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<thead>
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</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
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<tr>
<td>Timely</td>
<td>13,093</td>
<td>53.5</td>
<td>15,971</td>
<td>56.5</td>
<td>18,043</td>
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<tr>
<td>Late</td>
<td>11,394</td>
<td>46.5</td>
<td>12,311</td>
<td>43.5</td>
<td>13,898</td>
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<td>CD4(^+) T cell count and AIDS-defining illnesses</td>
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<tr>
<td>Timely</td>
<td></td>
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<tr>
<td>&gt;350 cells/mm(^3)</td>
<td>9,511</td>
<td>38.8</td>
<td>11,798</td>
<td>41.7</td>
<td>13,354</td>
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<tr>
<td>&gt;200 and ≤350 cells/mm(^3)</td>
<td>3,582</td>
<td>14.6</td>
<td>4,173</td>
<td>14.8</td>
<td>4,689</td>
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<tr>
<td>without any AIDS-defining illness</td>
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<td></td>
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<tr>
<td>Late</td>
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<tr>
<td>&gt;200 cells/mm(^3) with</td>
<td>777</td>
<td>3.2</td>
<td>938</td>
<td>3.3</td>
<td>919</td>
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<tr>
<td>AIDS-defining illness</td>
<td></td>
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<tr>
<td>&gt;100 and ≤200 cells/mm(^3)</td>
<td>2,717</td>
<td>11.1</td>
<td>3,134</td>
<td>11.1</td>
<td>3,563</td>
</tr>
<tr>
<td>≤100 cells/mm(^3)</td>
<td>3,740</td>
<td>15.3</td>
<td>4,507</td>
<td>15.9</td>
<td>5,961</td>
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<tr>
<td>Death soon after entry into HIV care(^*)</td>
<td>4,160</td>
<td>17.0</td>
<td>3,732</td>
<td>13.2</td>
<td>3,455</td>
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<tr>
<td>Total</td>
<td>24,487</td>
<td>100</td>
<td>28,282</td>
<td>100</td>
<td>31,941</td>
</tr>
</tbody>
</table>

\(^*\)within the first 20 days after entry.

\(^{**}\)p<0.0001 for the temporal trend of the prevalence of late entry (chi-square test).
HIV/AIDS care cascade - Brazil
USP Medical School HIV/AIDS clinic

- Founded in 1994

Training and research centre
HIV care centre - HIV testing site, outpatient clinic, day hospital, ARV distribution unit

- 2700 adults living with HIV
- 1/3 women
- under ART

- Multiprofessional and multidisciplinary comprehensive care
  - physicians, nurses, nursing assistants, pharmacist, dentist, psychologists, social workers
  - administrative staff
Current challenges - 2

- ART sustainability
- More vulnerable populations
  - MSM
  - young women
- adherence to ART
Number of people on ART

Figura 4: Número de pacientes em TARV. Brasil, 1999-2012

Dept. STD/AIDS/VH, Min. Health, 2013
Vulnerable populations

- Sexuality of HIV-positive adolescents – Paiva V, Cien Saúde Coletiva, 2011
- Women’s care needs – Segurado AC, AIDS Patient Care STDs, 2003
- HIV shedding in women – Melo K, Menopause, 2012
- Gender differences in clinical manifestations – Braga PE, Cad Saúde Pública, 2007
- Gender differences in survival – Braga PE, AIDS Patient Care STDs, 2007
Current challenges - 3

- coinfections – HCV, HPV, other
- comorbidities – mental health
- HIV drug resistance
- chronic AIDS – lipodystrophy, metabolic abnormalities and cardiovascular risk
Coinfections

- **HPV**


- **HHV-8**
  - Prevalence and risk factors – Pierrotti LC, *Sex Transm Dis*, 2005

- **Hepatitis C**
  - Prevalence and risk factors – Segurado AC, *AIDS Patient Care STDs*, 2004
HIV drug resistance


- **Blips – intermittent low level viremia** - Ibrahim KY, *AIDS Patient Care STDs*, 2012
Comorbidities

- **Mental health**
  - Depression in women – Mello VA, *Arch Womens Ment Health*, 2010

- **Lipodystrophy**
  - Self-perception of body changes – Santos CP, *AIDS*, 2005
HIV, nutrition and physical activity

- Obesity – Jaime PC, Rev Saude Publica, 2006

- Intervention studies
  - Fish oil supplement - Oliveira JM, Int J STD AIDS, 2014
  - Nutritional counselling - Almeida LB, AIDS Care, 2011
Current challenges - 4

- **Stigma and discrimination**
  - need to address more vulnerable populations
  - targeted prevention and care initiatives
  - need to face structural dimensions of vulnerability to HIV acquisition and disease development
  - recent retrenchment in human rights-based response in Brazil

Malta C, 2013; Reis RK, 2013
Sexual and reproductive health

- Parenthood – Segurado AC, Reprod Health Matters, 2007

- Gender and reproductive rights – Paiva V, AIDS Patient Care STDs, 2007
Important strategies

- scaling up HIV testing
- scaling up early ART – test and treat
- use of combined HIV prevention technologies – behavioral, structural and biomedical approaches
- integrating HIV care and other health care programs
HIV integration

- Tuberculosis care
- Sexual and reproductive health care
- Antenatal and child care
- Primary care
- Non-communicable diseases
Opportunities for HIV research

- Basic
- Epidemiological
- Operational
- Clinical

HIV
Opportunities for HIV research

- Immunology and Virology laboratories, FMUSP
- HIV adult clinic cohort
- Outreach activities – primary and secondary care
- National databases – SINAM, SICLOM, SISCEL
- Collaboration – Ministry of Health, São Paulo State and Municipal HIV/AIDS Programmes