

The role of Cancer Registry in the evaluation of Cervix Cancer control

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BACKGROUND

Information on the occurrence of cancer is essential for the evaluation of control programs. Surveillance is a strategic component for planning, monitoring and evaluation of these programs. One of the indicators proposed by the Global Alliance for Control of Non-Communicable Diseases is to know the incidence of cancer by type. The goal is to increase surveillance of morbidity and mortality. Cancer control actions to cervix cancer prevention in Brazil have started since the 40s. On 1997, the National Program of Cervical Cancer Control (PNCCU) was implemented. The improvement of primary care services by the increasing of capacity built and the expansion of reference centers allowed identify women who had never undergone the examination. Almost two decades later it is already possible evaluate its impact on the incidence.

METHODS

Brazilian PBCR are established in 27 cities and in 11 of these has at least eight years of continuous data. The incidence of cervix cancer was analyzed from PBCR of Aracaju, Curitiba, Fortaleza, Goiânia, Jaú, João Pessoa, Palmas, Porto Alegre, Recife, Salvador e São Paulo.

All Incidence rates were age-adjusted by the World Standard Population. To describe incidence time trends, it was carried out joinpoint regression analysis using the software Joinpoint Regression Program, Version 3.5.4.

The AAPC of cervix cancer incidence rates were obtained.

RESULTS

Joinpoint analysis was used to obtain trends of cervix cancer. The APC showed declining trends for the majority of the cities with a high evidence of the effectiveness of control actions.

Table 1. Trends of age-adjusted cervix uteri cancer incidence rates, by PBCR

| Cervix uteri | Incidence | | | | | | AAPC | CI |
|--------------------------|-----------|-------|--------------|-----------|------|--------------|-------|--------------|
| | Year | APC | CI | Year | APC | CI | | |
| Females | | | | | | | | |
| Aracaju (1996-2006) | 1996-2006 | 3.0* | (1.2;4.8) | | | | 3.0* | (1.2;4.8) |
| Curitiba (1998-2006) | 1998-2000 | -26.3 | (-50.5;9.7) | 2001-2006 | -2.9 | (-9.3;3.8) | -9.4* | (-16.3;-2.0) |
| Fortaleza (1990-2006) | 1990-2006 | -4.7* | (-6;-3.3) | | | | -4.7* | (-6;-3.3) |
| Goiânia (1988-2008) | 1988-1998 | -4.7* | (-6.8;-2.5) | 1999-2002 | 8.6 | (-5.9;25.3) | -4.9* | (-7.7;-1.9) |
| Jaú (2000-2009) | 2000-2009 | -3.1 | (-10.9;5.4) | | | | -3.1 | (-10.9;5.4) |
| João Pessoa (1999-2006) | 1999-2006 | 6.1* | (1.6;10.8) | | | | 6.1* | (1.6;10.8) |
| Palmas (2000-2009) | 2000-2009 | -7.3 | (-16.5;3) | | | | -7.3 | (-16.5;3) |
| Porto Alegre (1993-2005) | 1993-2005 | -1.1 | (-3.5;1.3) | | | | -1.1 | (-3.5;1.3) |
| Recife (1996-2005) | 1996-2005 | -2.7 | (-5.8;0.5) | | | | -2.7 | (-5.8;0.5) |
| Salvador (1997-2004) | 1997-2000 | -14.8 | (-31.8;6.5) | 2001-2004 | 2.6 | (-10.9;18.1) | -5.3 | (-12.3;2.3) |
| São Paulo (1997-2008) | 1997-2008 | -7.4* | (-10.3;-4.4) | | | | -7.4* | (-10.3;-4.4) |

APC, Annual Percent Change; CI, Confidence Interval

AAPC, Average Annual Percent Change – calculated for the entire period of the available information of PBCR;

* APC or AAPC statistically significant (p>0,05)

--- Rates with zero values, was not possible to perform the calculation;

Sources: Brazilian Population Based Cancer Registries - PBCR

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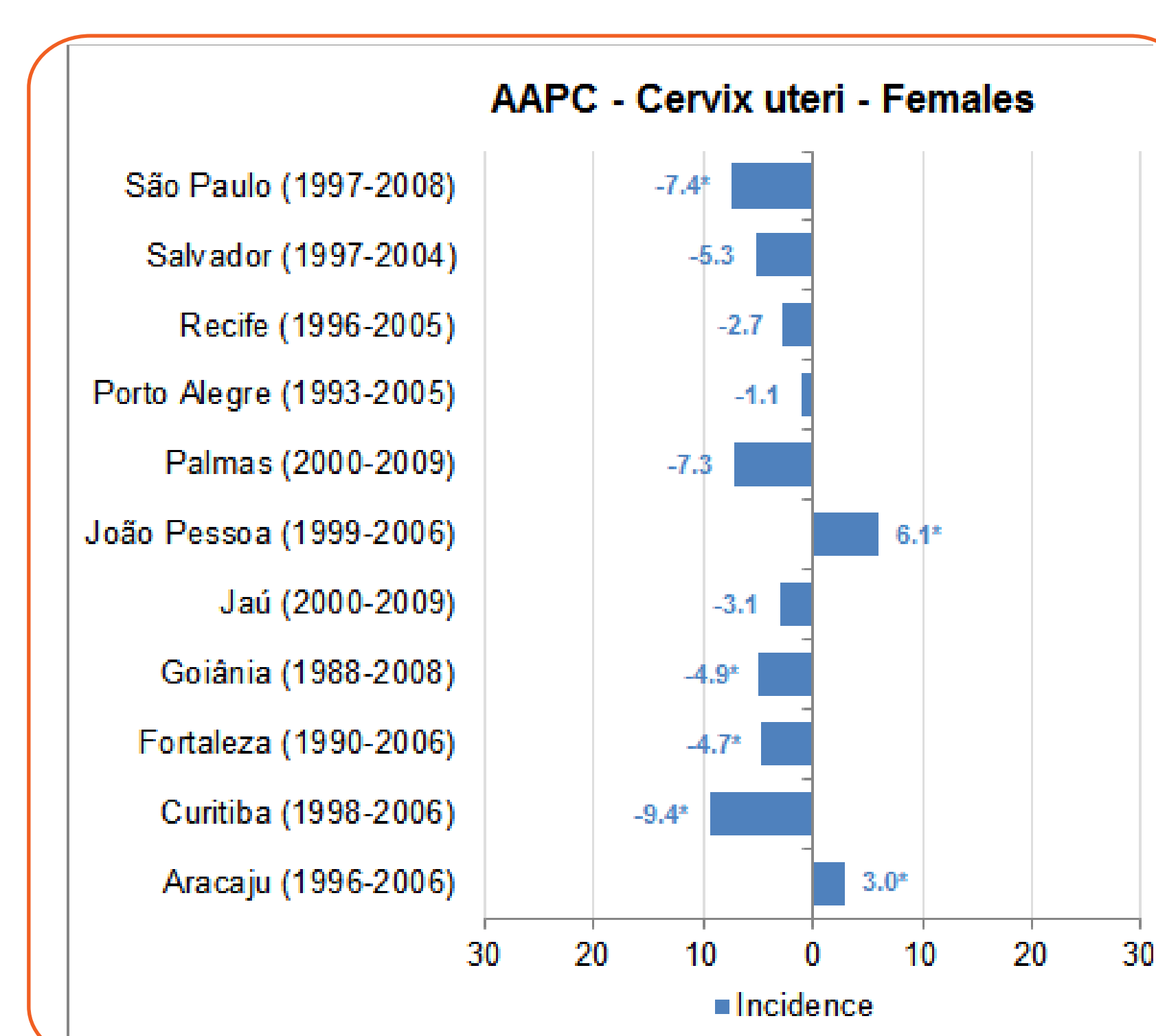


Figure 1. The AAPC of age-adjusted cervix uteri cancer incidence rates, by PBCR

AAPC, Average Annual Percent Change

* AAPC statistically significant (p>0,05)

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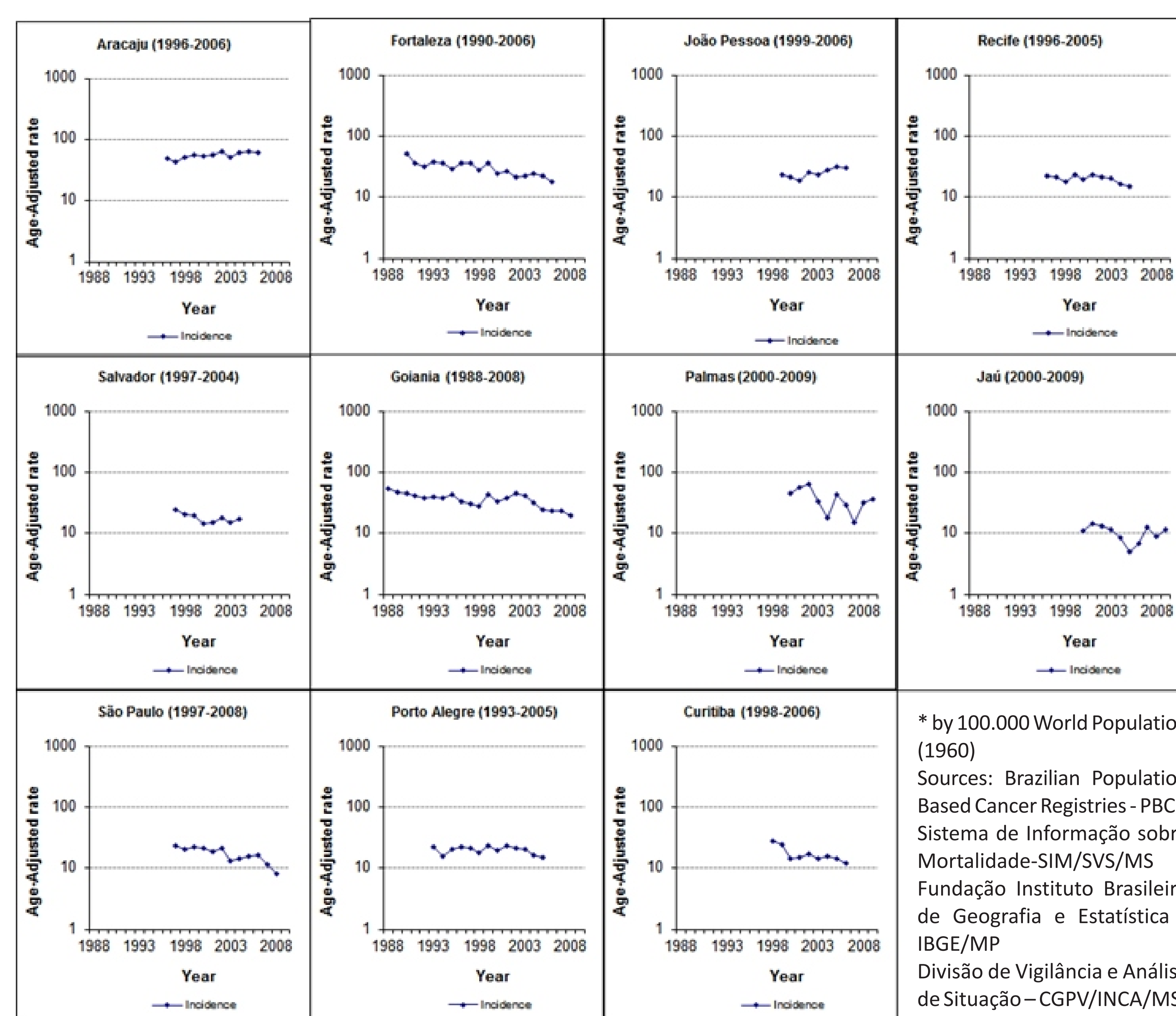


Figure 2. Trends of age-adjusted* cervix cancer incidence rates, by PBCR

CONCLUSION/DISCUSSION

The data from population-based cancer registries (PBCR) are vital for evaluation and outcome of interventions. In Brazil, the cancer surveillance has the PBCR as one of its pillars. PBCR has a key role in cancer surveillance and is crucial to strengthen them. Better information contributes to better planning the cancer control actions and to monitor and evaluate its performance. This information should be used to contribute with public policies to improve health conditions of the population.