Do changes in notifications over time reflect trends in incidence?

Philippe Glaziou
Harare, November 2010
Is TB incidence declining in Botswana?

TB notifications, all forms

TB notifications, smear pos

HIV prevalence, general population (%)
Determinants of TB notifications

• Case finding effort
• Coverage of reporting (when did the private sector start to report?)
• TB case definitions
• Quality of case notification data (duplicated reporting, reports not transmitted or incomplete,…)

and,

• Incidence
Changes in case notification
(Mansoer et al, Bull WHO 2009; 87: 186)
Changes in HIV prevalence in Kenya

(Mansoer et al, Bull WHO 2009; 87: 186)
Changes in case finding effort
(Mansoer et al, Bull WHO 2009; 87: 186)
Trends in estimated incidence
(Mansoer et al, Bull WHO 2009; 87: 186)
Determineants of changes in TB incidence (cont)

B. Child mortality

Central Europe: 5yr+ delay in TB control
Albania, Bulgaria, Czech, Hungary, Poland, Romania

Graph showing the average number of TB cases and the average GDP per capita from 1980 to 2006.
TB in migrants

Increasing % of migrants among new TB cases in Western Europe

* 24 countries (excluding Andorra, Bulgaria, Cyprus, Greece, Luxembourg, Monaco, Poland, Romania, San Marino, Spain)

Seek possible explanations for inflection points and changes in direction

- Severe economic crisis
- Improved health systems and control?
- Problems with reporting?
- Better reporting?

Graph: Russian Federation notifications (all) 1990-2007
What changes in incidence are plausible?
Is TB incidence declining in Botswana?

TB notifications, all forms

TB notifications, smear pos

HIV prevalence, general population (%)
HIV response in Botswana

- HIV+ adults, not needing ART
- HIV+ adults in need, not on ART
- Adults on ART

Mid-2010
Trends in Botswana

Is the decline in TB notifications all forms due to:

• decline in TB burden (impact of ART)?

• decline in over-reporting of non bacteriologically confirmed cases (improved reporting)?