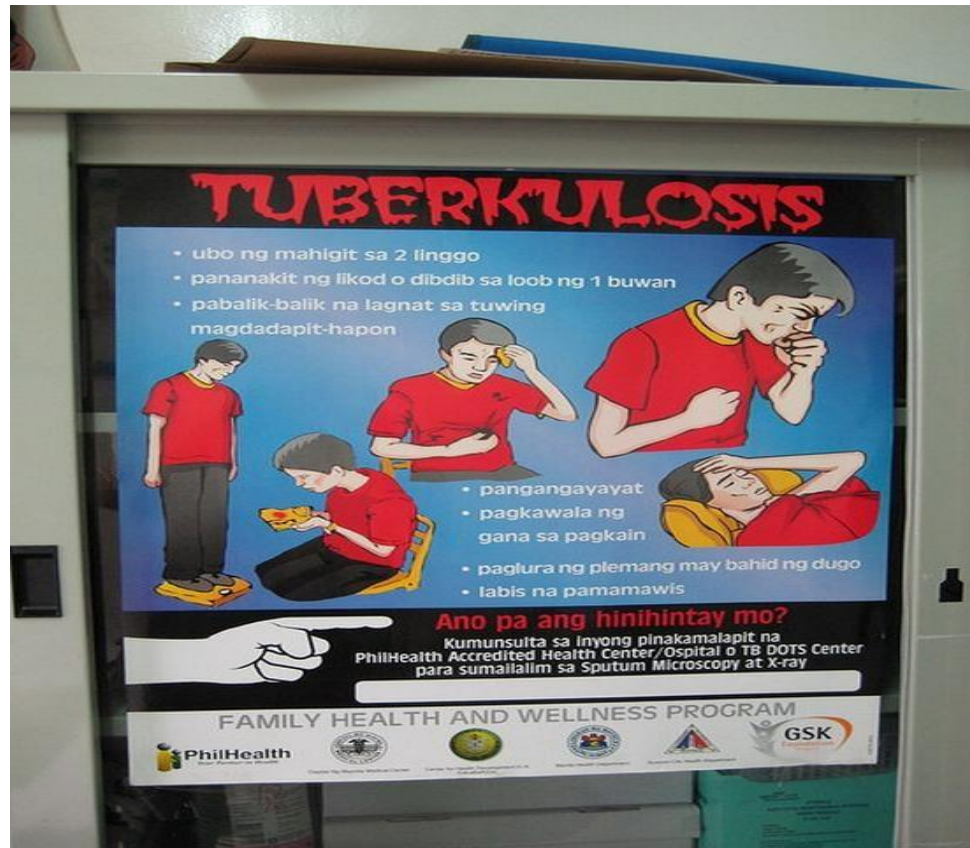


# An Epidemiological Overview of TB in Toronto

Toronto Public Health

4<sup>th</sup> Annual TB Update, March 24 2011



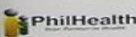

**TUBERKULOSIS**

- ubo ng mahigit sa 2 linggo
- pananakit ng likod o dibdib sa loob ng 1 buwan
- pabalik-balik na lagnat sa tuwing magdadapit-hapon

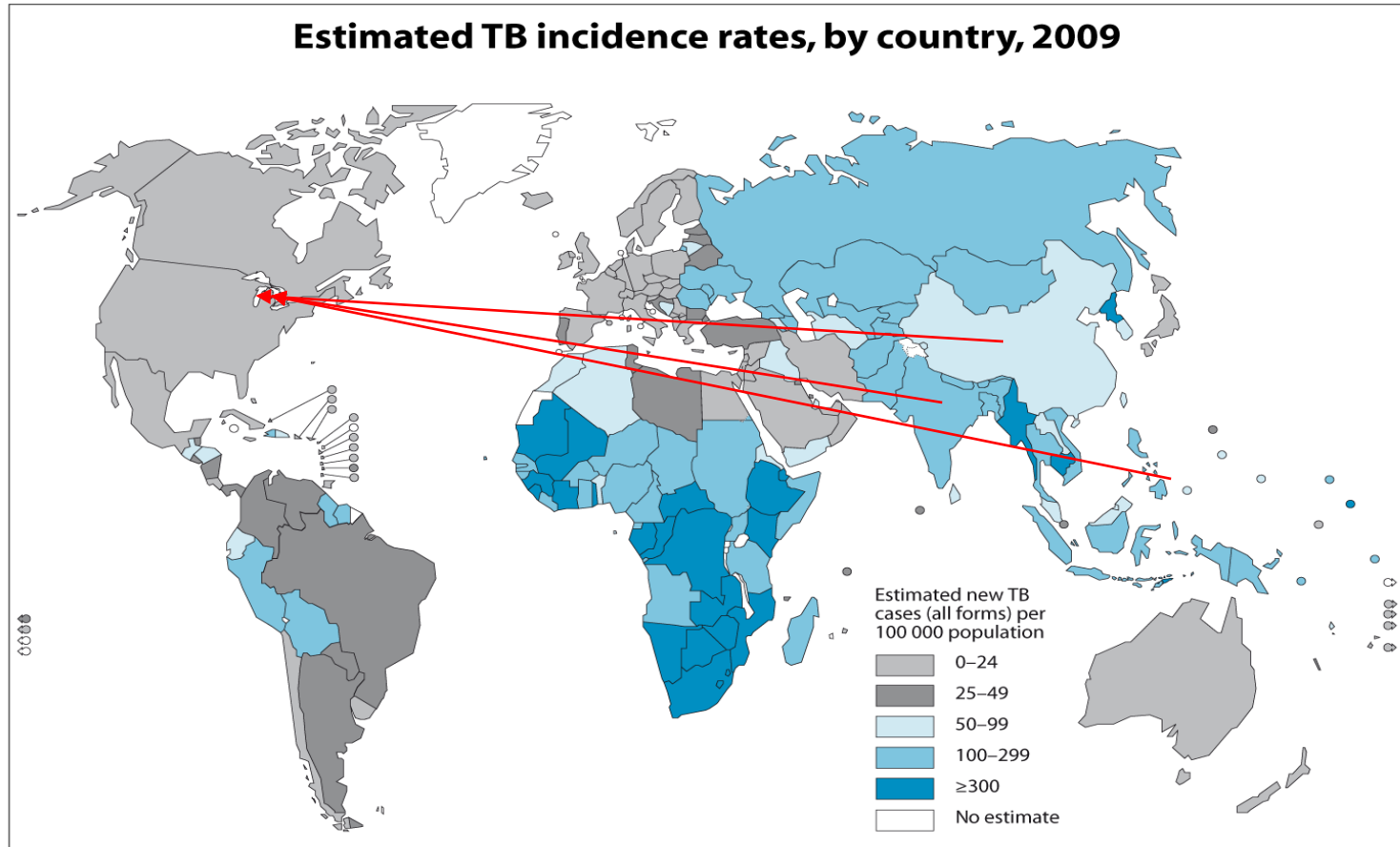
- pangangayayat
- pagkawala ng gana sa pagkain
- paglura ng plemang may bahid ng dugo
- labis na pamamawis

**Ano pa ang hinihintay mo?**  
Kumunsulta sa inyong pinakamalapit na PhilHealth Accredited Health Center/Ospital o TB DOTS Center para sumailalim sa Sputum Microscopy at X-ray

FAMILY HEALTH AND WELLNESS PROGRAM

# Global picture of TB



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Source: *Global Tuberculosis Control 2010*. WHO, 2010.



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- Overall, the incidence of TB in Canada has been very gradually decreasing.
- From **1,821** cases in 1999 (6.0 cases/100,000 population) to **1,599\*** cases in 2009 (4.7 cases /100,000).
- Who has TB in Canada?
  - 63% of cases in 2009 were foreign born
  - Highest rate still among Canadian-born Aboriginals
  - Six times the overall Canadian rate

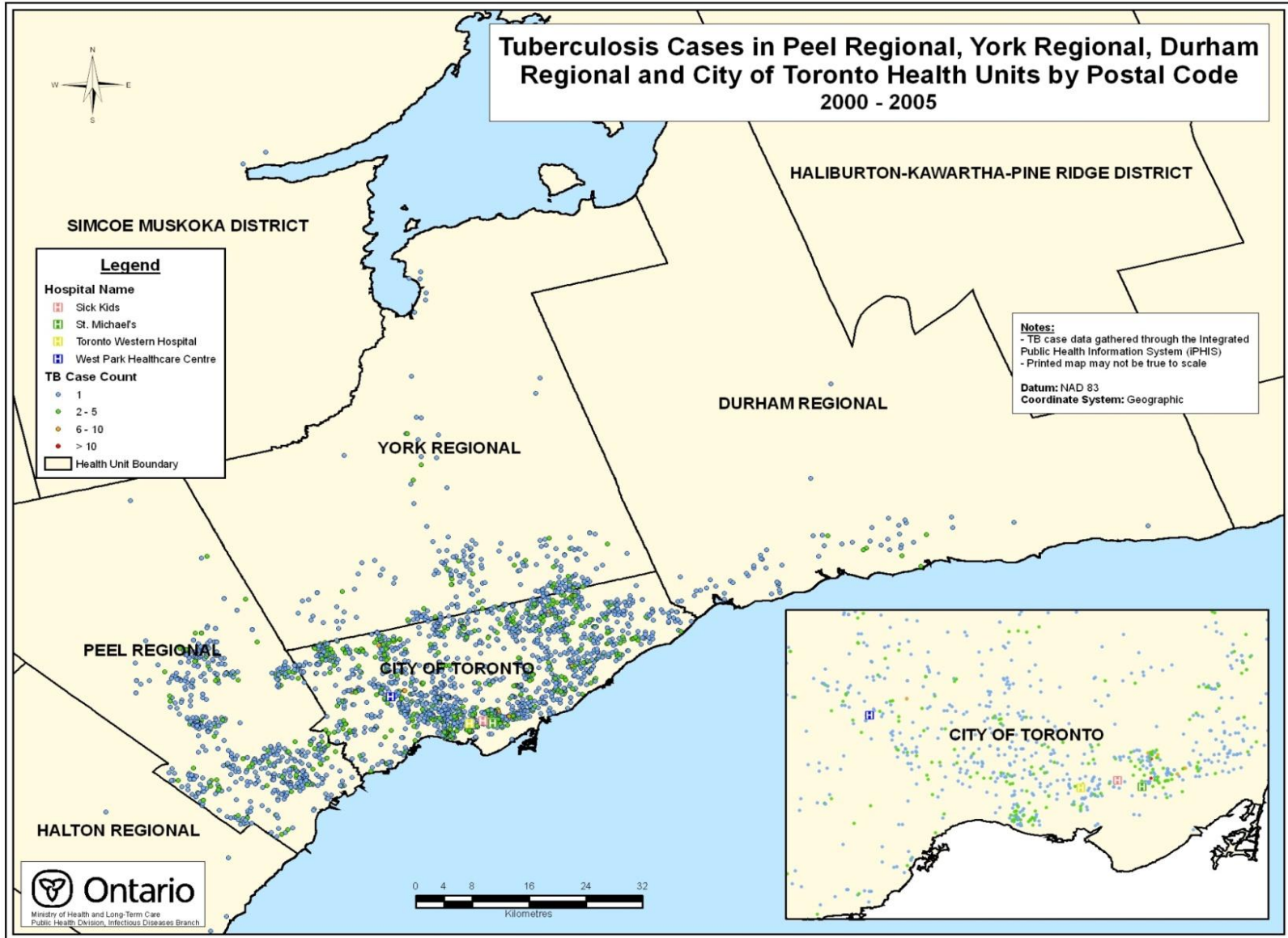
# Canadian Incidence by Year and Province: 1999-2009

Reported new active and re-treatment cases and incidence rate per 100,000 - Canada and provinces/territories: 1999-2009

Year of diagnosis		CANAD A	Province/territory												
			N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
* Cases and rates for 2009 are provisional until publication of the <i>Tuberculosis in Canada - 2009</i> Annual Report. These numbers will likely change.															
1999	Cases	<b>1821</b>	12	2	15	15	314	699	132	116	149	328	1	23	15
	Rate	<b>6</b>	2.3	1.5	1.6	2	4.3	6.1	11.6	11.4	5	8.2	3.2	56.6	55.9
2000	Cases	<b>1724</b>	10	2	3	10	318	700	98	104	133	286	3	10	47
	Rate	<b>5.6</b>	1.9	1.5	0.3	1.3	4.3	6	8.5	10.3	4.4	7.1	9.9	24.7	170.9
2001	Cases	<b>1773</b>	19	3	8	10	261	699	115	114	116	380	0	8	40
	Rate	<b>5.7</b>	3.6	2.2	0.9	1.3	3.5	5.9	10	11.4	3.8	9.3	0	19.6	142.2
2002	Cases	<b>1666</b>	9	1	9	11	288	716	98	89	128	286	0	4	27
	Rate	<b>5.3</b>	1.7	0.7	1	1.5	3.9	5.9	8.5	8.9	4.1	7	0	9.6	93.7
2003	Cases	<b>1631</b>	7	3	6	12	257	693	127	91	110	305	1	12	7
	Rate	<b>5.2</b>	1.3	2.2	0.6	1.6	3.4	5.7	10.9	9.1	3.5	7.4	3.2	28.2	23.9
2004	Cases	<b>1613</b>	7	1	8	10	219	700	144	70	109	299	4	10	32
	Rate	<b>5</b>	1.4	0.7	0.9	1.3	2.9	5.6	12.3	7	3.4	7.2	12.7	23.1	107.2
2005	Cases	<b>1641</b>	9	1	7	6	255	643	114	139	146	265	3	8	45
	Rate	<b>5.1</b>	1.7	0.7	0.7	0.8	3.4	5.1	9.7	14	4.4	6.3	9.4	18.4	148.4
2006	Cases	<b>1654</b>	12	0	10	2	228	673	134	87	131	320	3	6	48
	Rate	<b>5.1</b>	2.4	0	1.1	0.3	3	5.3	11.3	8.8	3.8	7.5	9.3	13.9	155.8
2007	Cases	<b>1578</b>	7	0	7	5	229	683	103	106	112	277	3	15	31
	Rate	<b>4.8</b>	1.4	0	0.7	0.7	3	5.3	8.6	10.6	3.2	6.4	9.2	34.4	99.1
2008	Cases	<b>1644</b>	8	0	4	6	240	603	141	95	167	300	8	13	59
	Rate	<b>4.9</b>	1.6	0	0.4	0.8	3.1	4.7	11.7	9.4	4.6	6.8	24.1	29.7	186.6
2009*	Cases	<b>1599</b>	22	1	7	10	195	580	156	93	177	286	4	12	56
	Rate	<b>4.7</b>	4.3	0.7	0.7	1.3	2.5	4.4	12.8	9	4.8	6.4	11.9	27.6	174

- Slightly different epidemiology from overall Canadian picture..
- about 85% of Ontario cases were foreign-born
- TB rate among Aboriginals in Ontario only 3.7/100,000... much higher in other jurisdictions.
- Largely concentrated in GTA: about 75% of Ontario's cases are in 4 health units

# TB in Ontario concentrated in the GTA



# TB in Toronto 2009

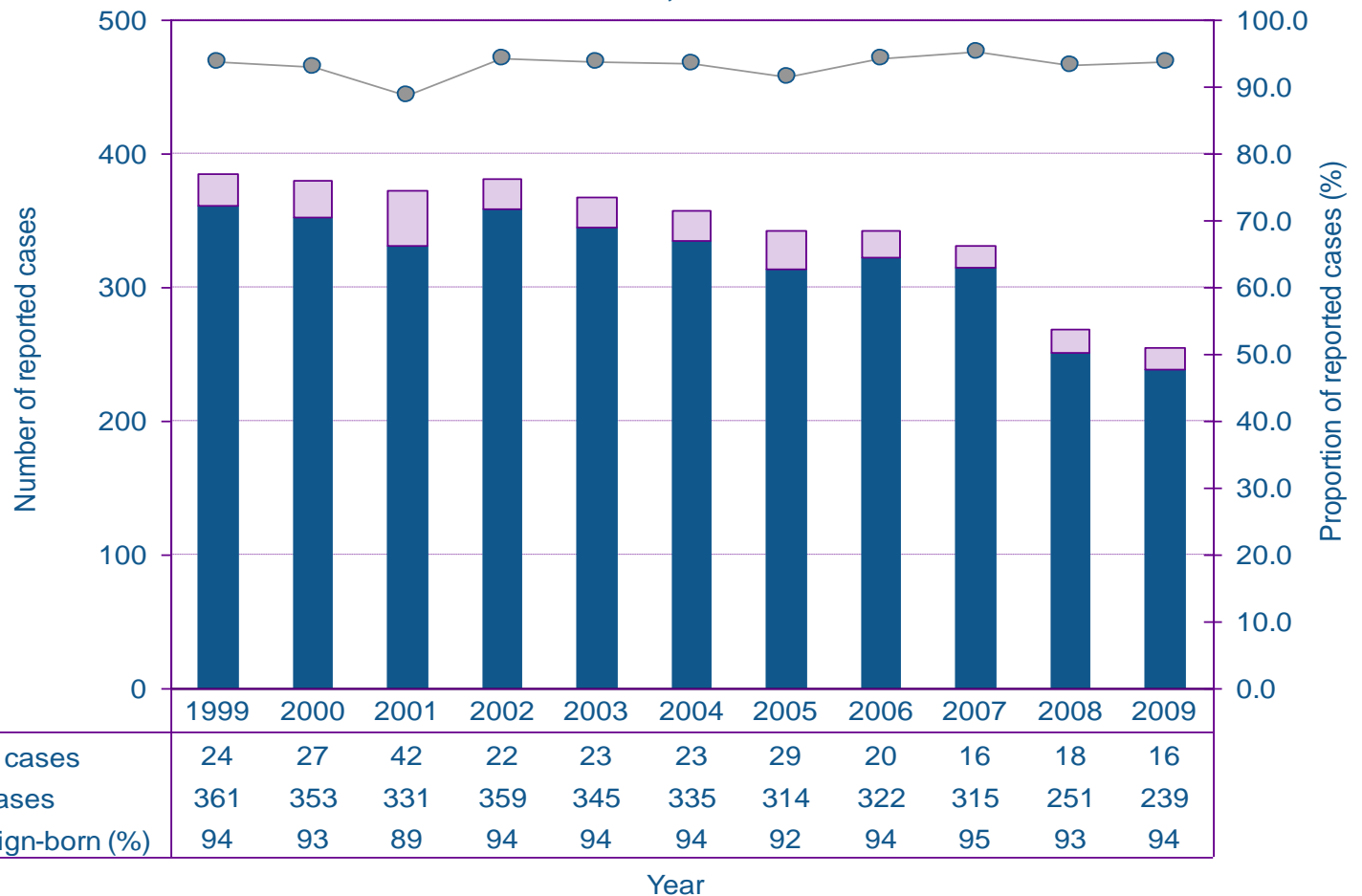
**Figure 4.16: Incidence of tuberculosis by year.  
Toronto, the rest of Ontario and Canada, 1999 - 2009**



NA: Canadian rates for 2009 are not available.

# Cases in Toronto are largely born outside of Canada

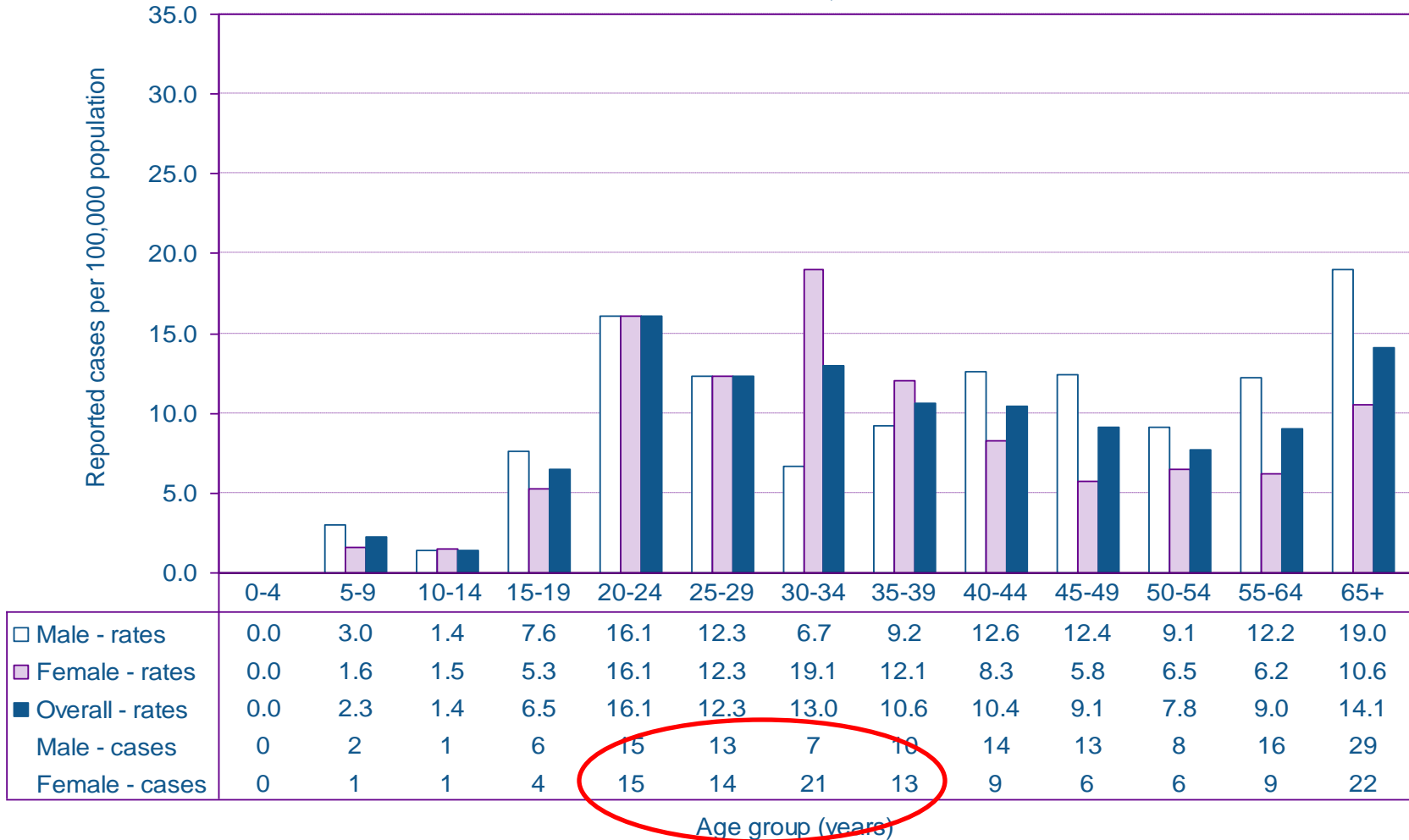
**Figure 4.19: Reported cases of tuberculosis by origin\* and year. Toronto, 1999 - 2009**



\*Numbers may not add up to total cases for any given year because the origin was unknown or missing for some cases.

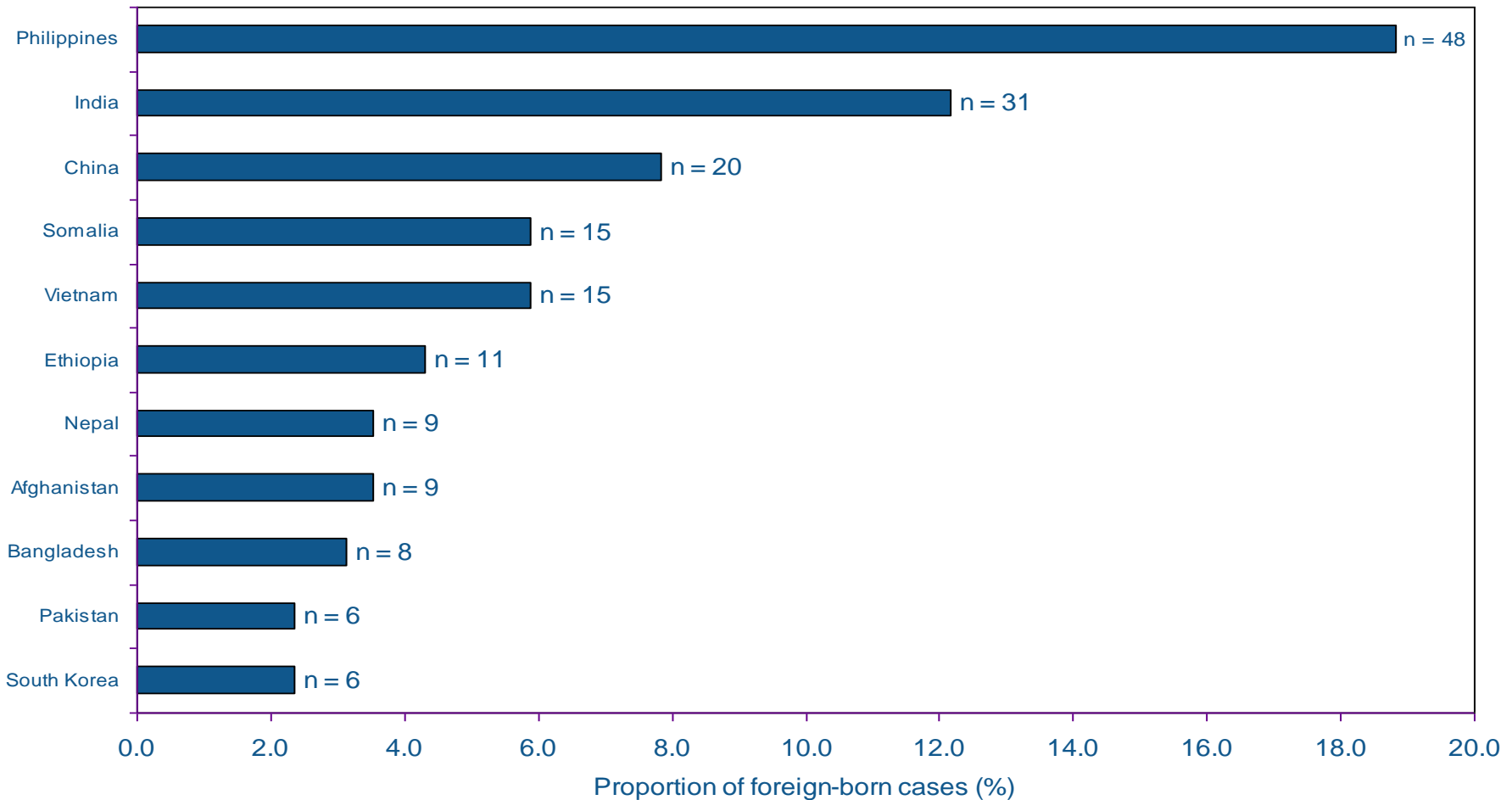
# And of working age....

**Figure 4.17: Incidence of tuberculosis by age group and sex.  
Toronto, 2009**



# Origin of cases reflects immigration patterns

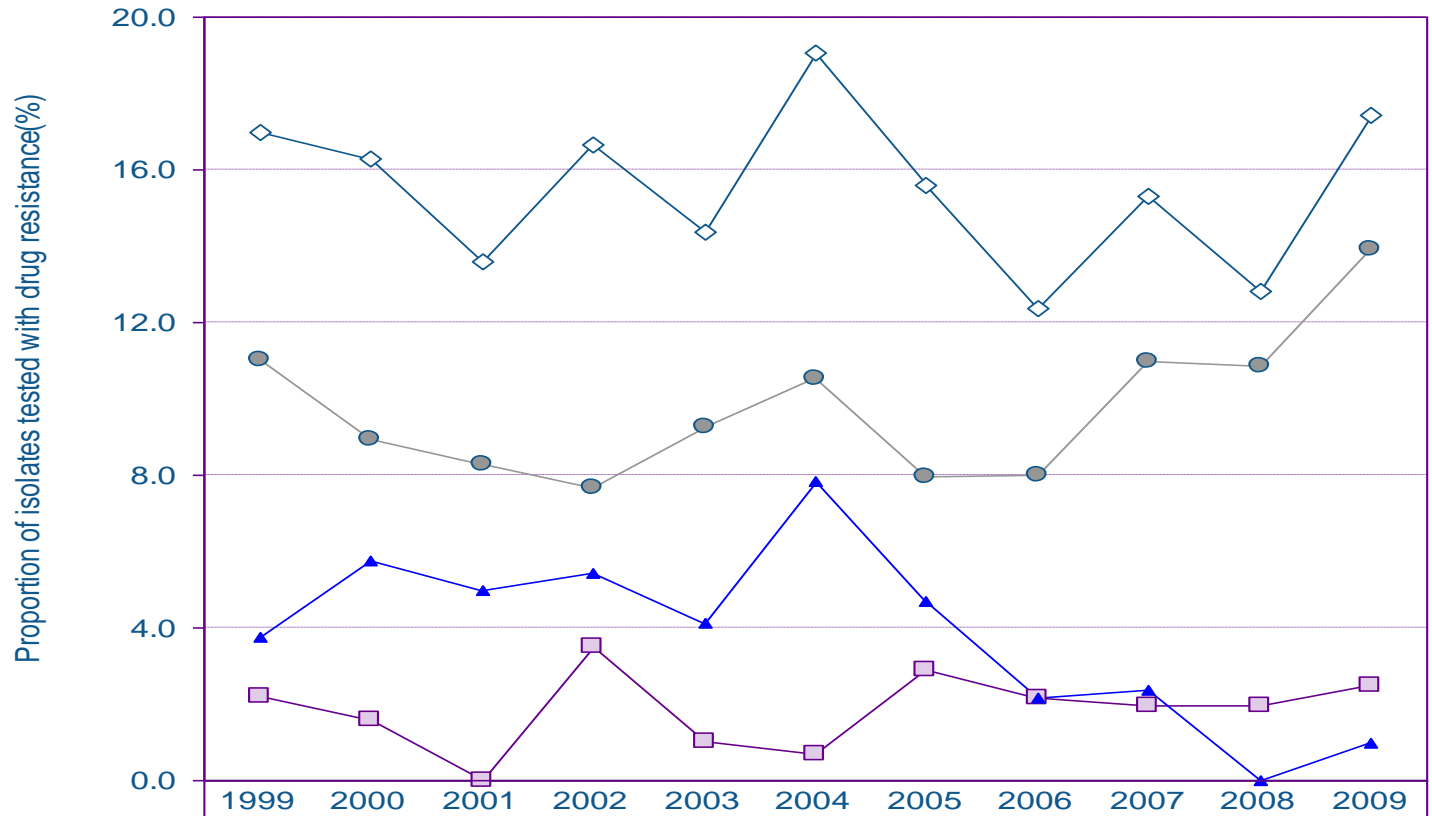
**Figure 4.20: Proportion of foreign-born tuberculosis cases by top countries\* of birth. Toronto, 2009**



\*Other countries of birth were reported by foreign-born tuberculosis cases in 2009.

# Drug resistance in Toronto....

**Figure 4.21: Proportion of culture positive tuberculosis cases that are drug resistant by year. Toronto, 1999 - 2009**



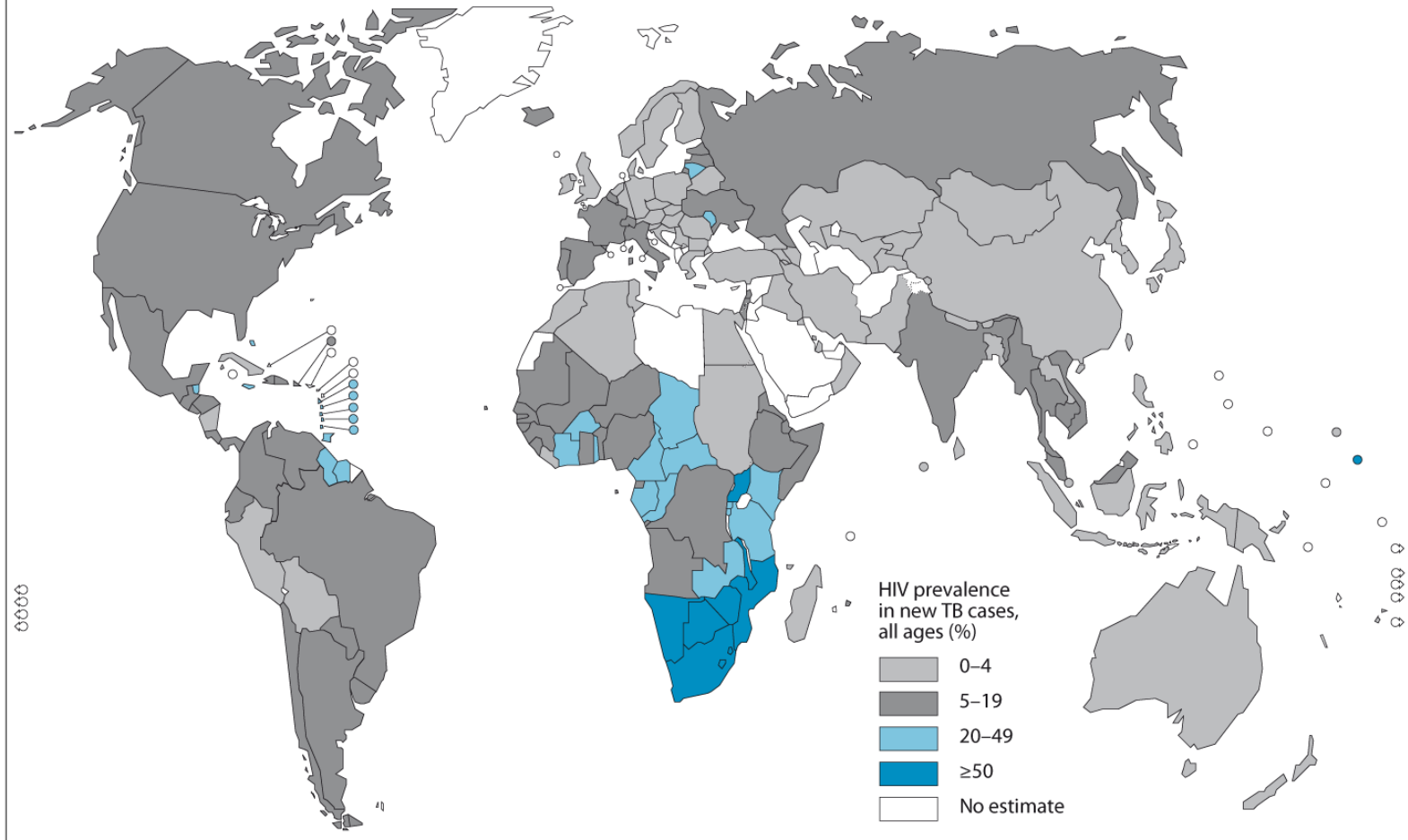
◇	Resistance to one or more drugs (%)	17	16	14	17	14	19	16	12	15	13	17
●	(INH)* resistance excluding RMP (%)	11	9	8	8	9	11	8	8	11	11	14
□	MDR-TB† (%)	2	2	0	4	1	1	3	2	2	2	2
▲	Other patterns (%)	4	6	5	5	4	8	5	2	2	0	1

\* (INH) is isoniazid.

†MDR-TB cases are resistant to at least isoniazid (INH) and rifampin (RMP)

Year

## Estimated HIV prevalence in new TB cases, 2009



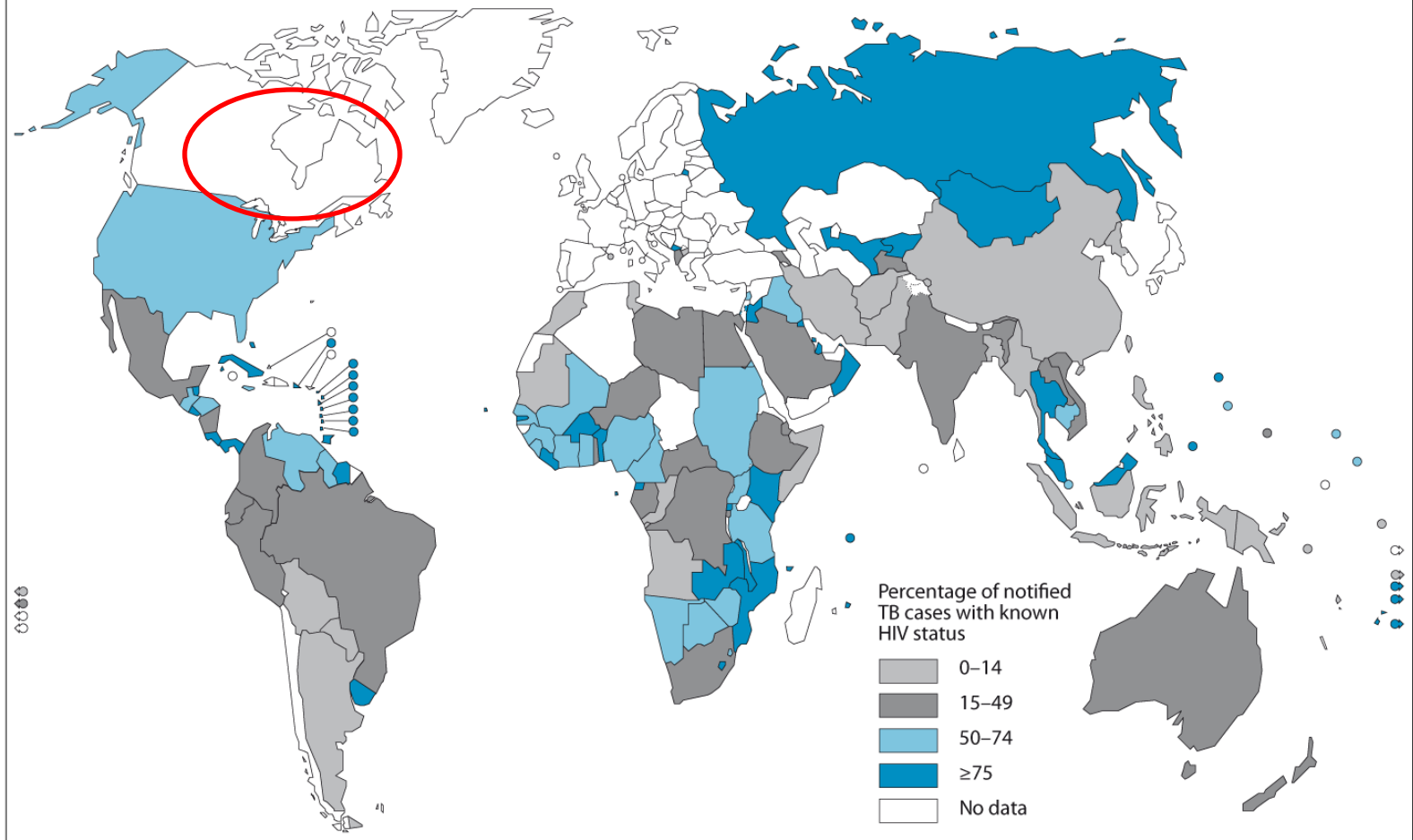
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## HIV testing for TB patients, 2009



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