

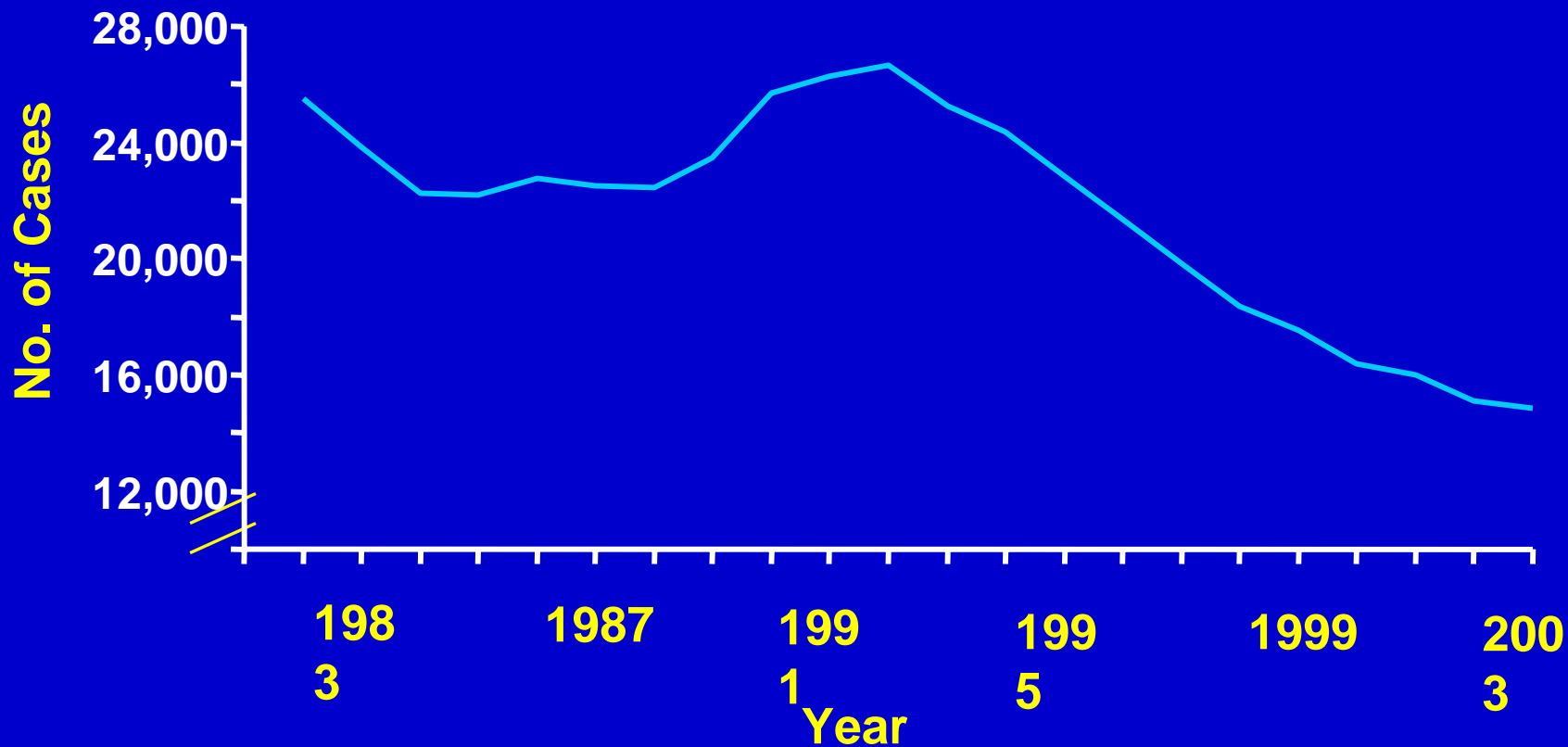
**Infectious Disease related
Health Issues in South Asian
Americans**

Sunanda Gaur MD

Professor of Pediatrics

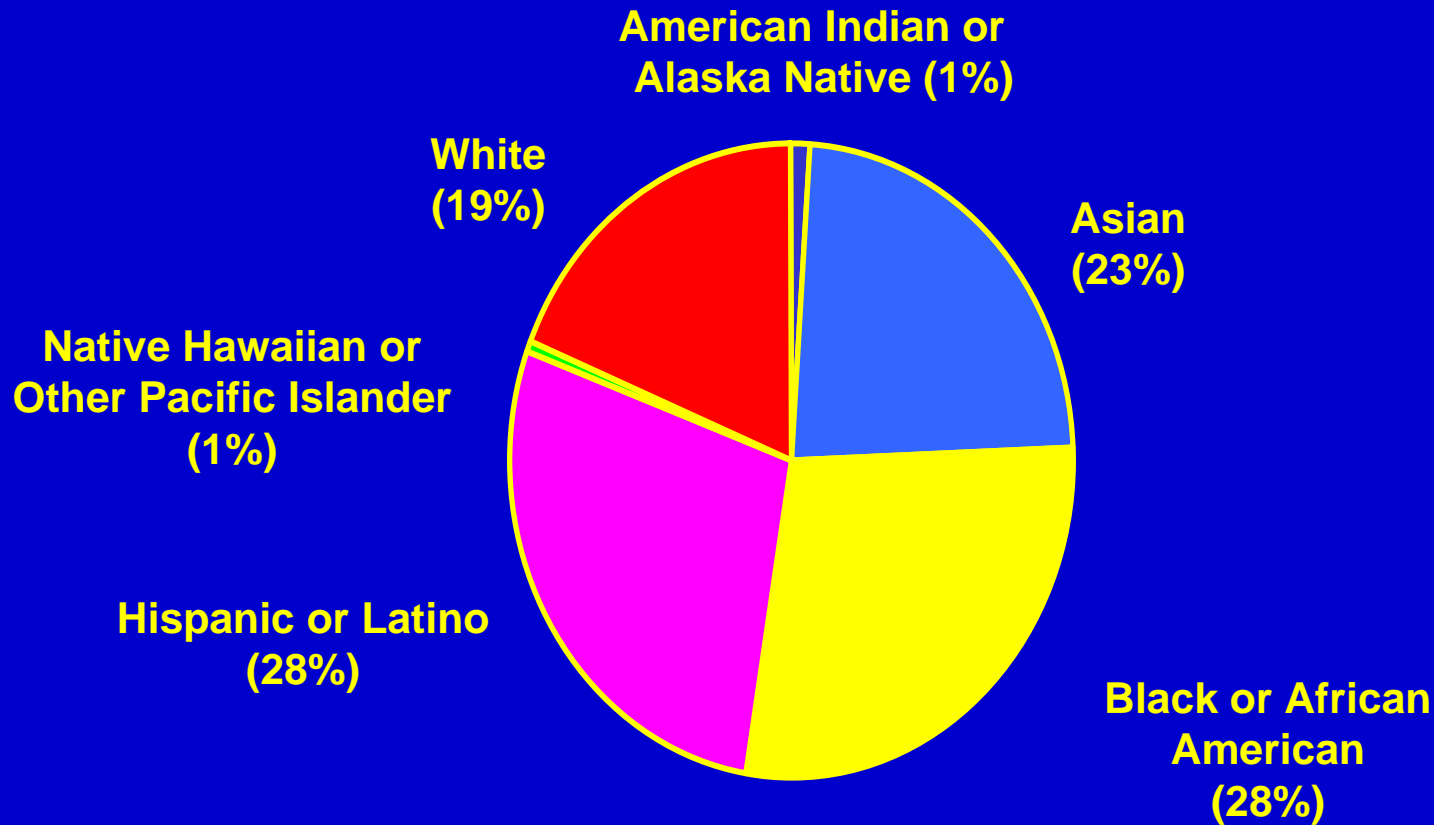
UMDNJ-Robert Wood Johnson Medical School

Reported TB Cases United States, 1982-2003



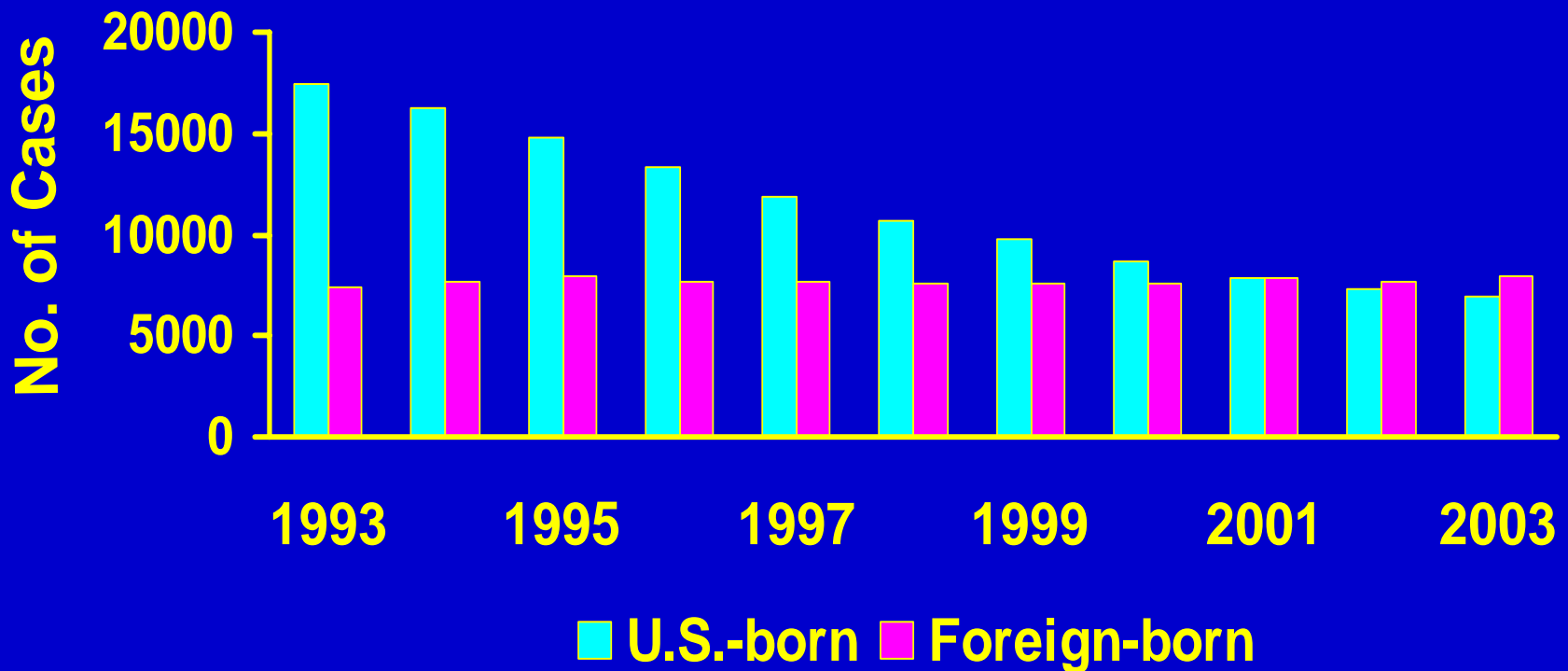
Reported TB Cases by Race/Ethnicity*

United States, 2003



*All races are non-Hispanic. Persons reporting two or more races comprised less than 1% of all cases.

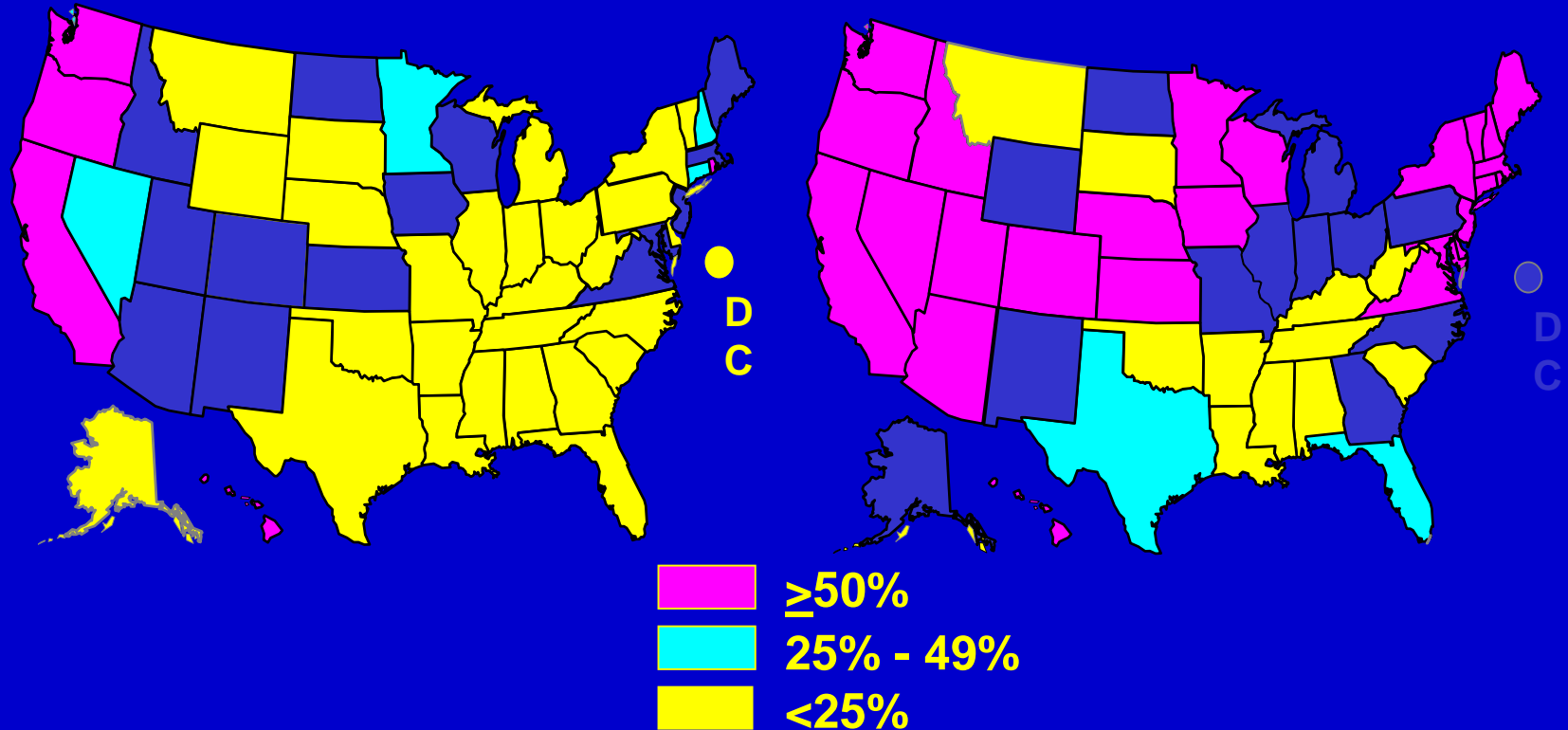
Number of TB Cases in U.S.-born vs. Foreign-born Persons United States, 1993-2003



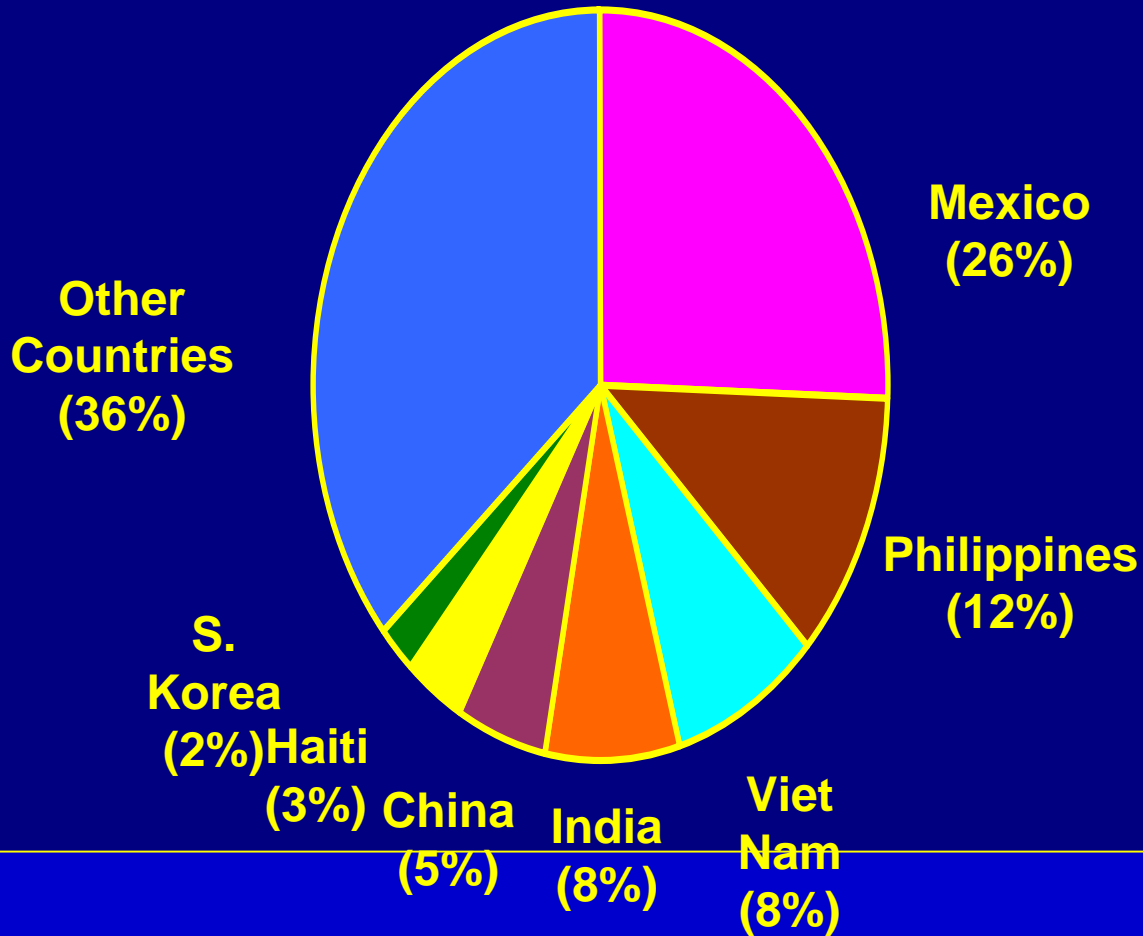
Percentage of TB Cases Among Foreign-born Persons, United States

1993

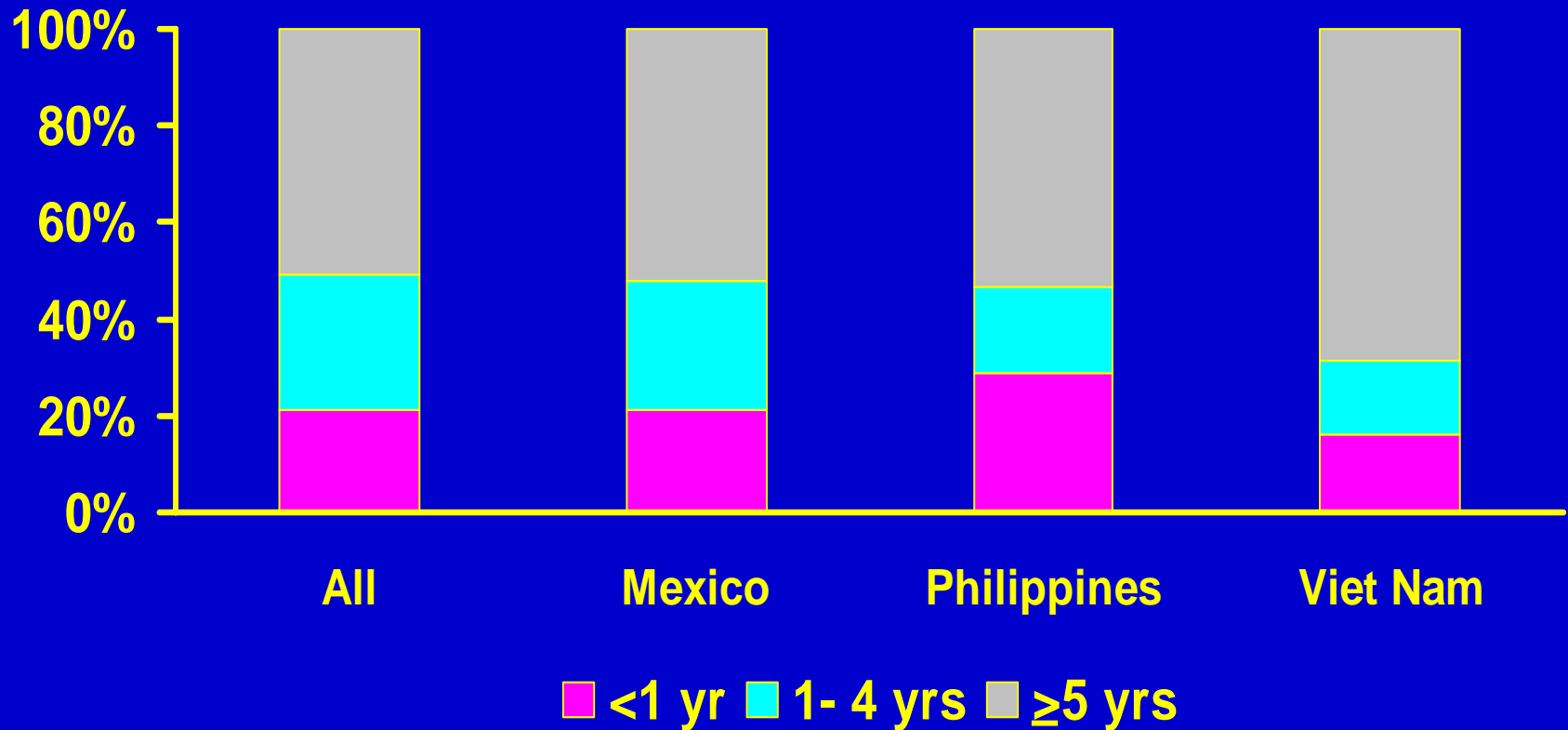
2003



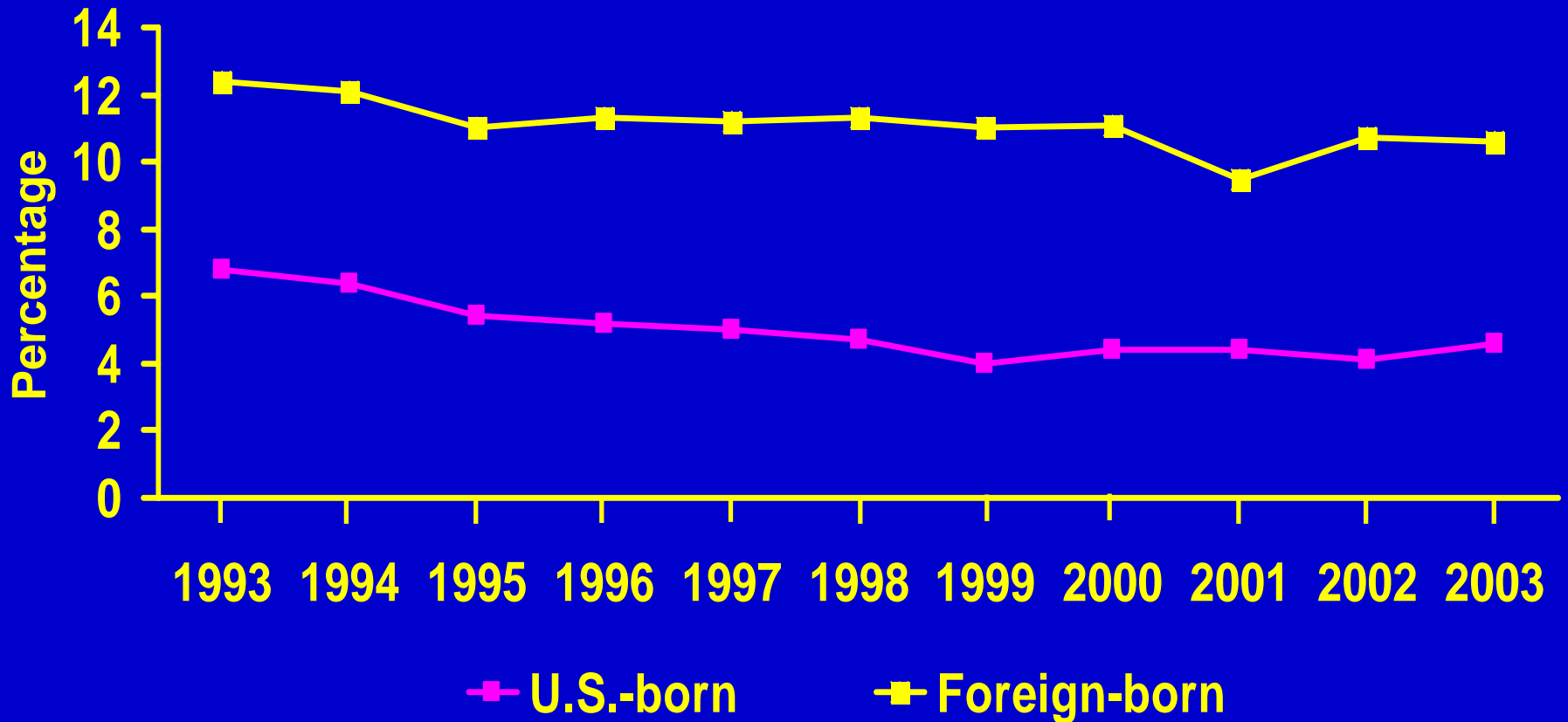
Countries of Birth of Foreign-born Persons with TB



Length of U.S. Residence Prior to TB Diagnosis, United States, 2003



Primary Isoniazid Resistance in U.S.-born vs. Foreign-born Persons United States, 1993-2003



Note: Based on initial isolates from persons with no prior history of TB.

What Can Be Done ?

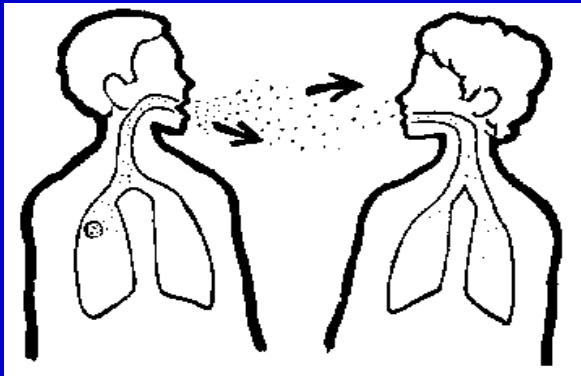
- TB elimination in the US will depend significantly on the ability to control it in the foreign born population...(IOM Report-2000)
- Early diagnosis and treatment in this group has gained top priority

Latent TB Infection (LTBI)

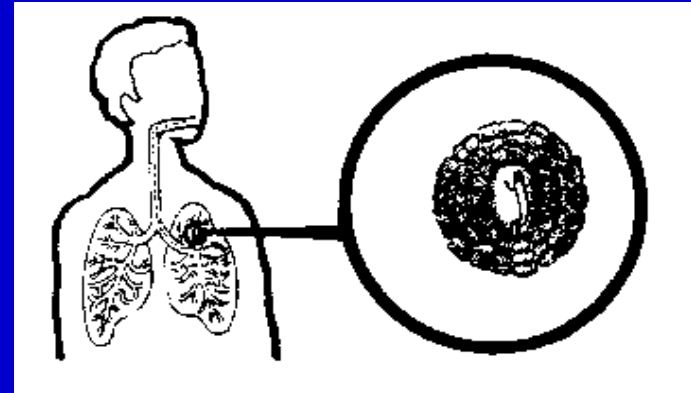
v.s

Tuberculosis (TB)

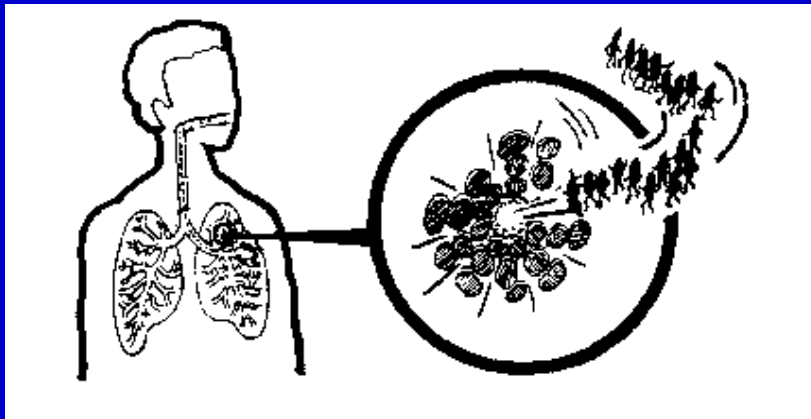
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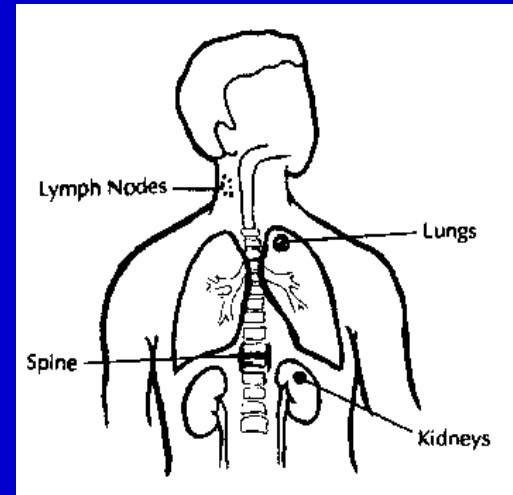
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LTBI vs. Pulmonary TB Disease

Latent TB Infection

- Negative chest radiograph
- No symptoms or physical findings suggestive of TB disease

Pulmonary TB Disease

- Chest radiograph may be abnormal
- Symptoms *may* include one or more of the following: fever, cough, night sweats, weight loss, fatigue, hemoptysis, decreased appetite
- Respiratory specimens *may* be smear or culture positive

Diagnostic Tests for TB Infection

- The Tuberculin Skin Test (TST or PPD)
- A positive TST means that a person has been infected with the TB bacteria
- The diagnosis of active TB vs. Latent TB is based on presence or absence of signs of TB disease

The Quantiferon TB Test

- A new FDA approved blood test to detect TB infection
- The test measures interferon-gamma production from lymphocytes incubated with PPD antigen. TB sensitized lymphocytes have in-vitro IFN gamma production in response to PPD antigen

Treatment Of Latent TB

- In persons with LTBI there is an annual 3-5% risk of developing active TB
- Treatment with INH (9 months) reduces progression to active TB by 70-80%
- Identification and treatment of latent TB in recent arrivals is gaining strategic importance in TB elimination

BCG Vaccine

- Efficacy 50-80%
- Prevents disseminated but not localized pulmonary disease
- Recommended for infants born in countries with high TB prevalence
- Also recommended in special high risk situations .

BCG and TST

- BCG vaccine induced TST size is maximal at 2.5 years post BCG and decreases progressively afterwards
- Post –BCG TST is rarely >10mm
- A positive TST of >15 mm is rarely due to BCG

CASE

An 8 year old south-asian american female was seen at the pediatrician's office for cough and fever of 7-8 days duration. She was initially thought to have a viral infection and observed, however 3 days later due to persisting symptoms a Chest X Ray was done which showed a left lower lobe infiltrate. She was treated with "Z-pack" and improved

4 months later she again developed same symptoms. A CXR showed left lower lobe infiltrate. She was given "Z pack" but did not improve.

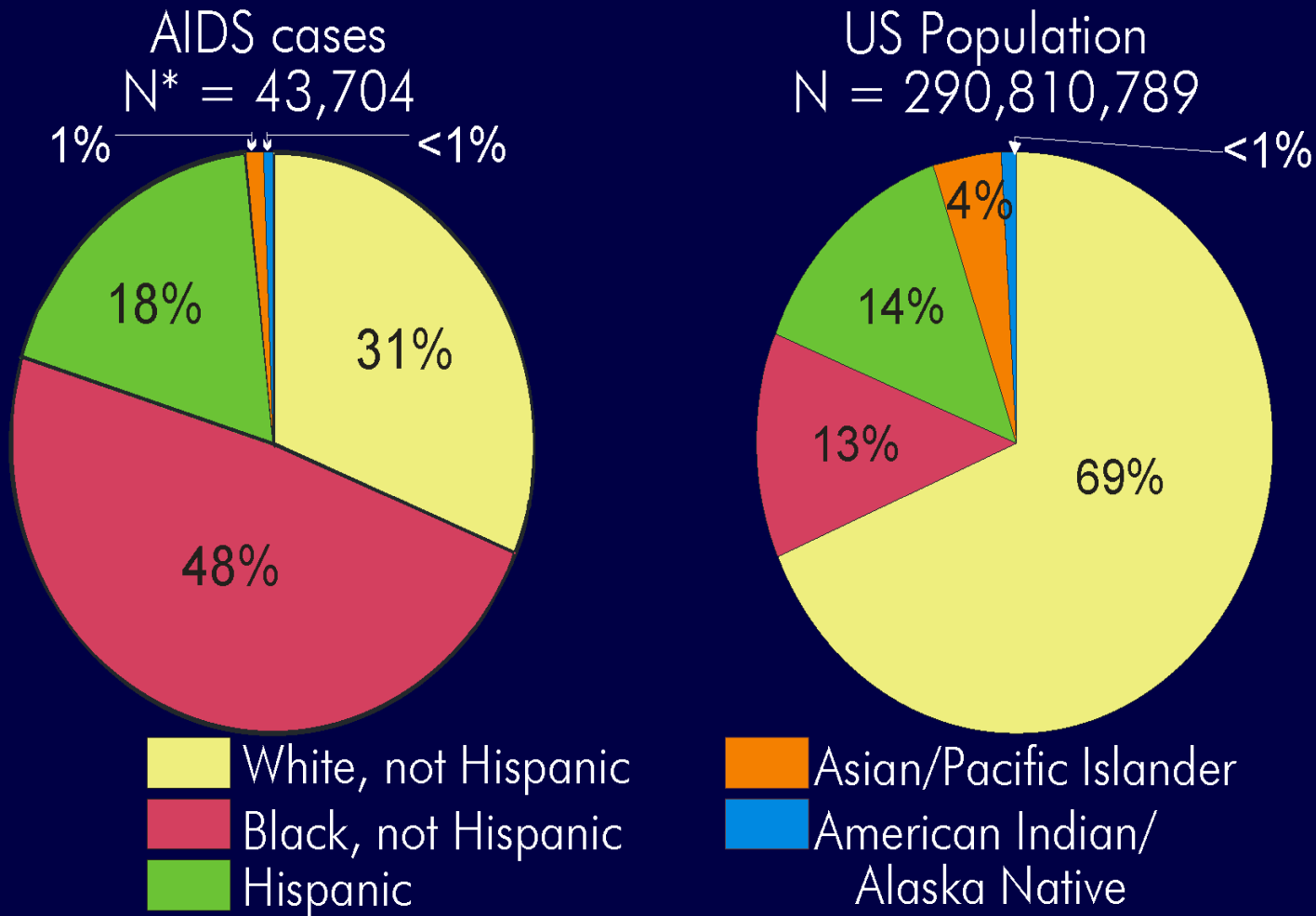
CASE (continued)

- A TST was done and was positive at 15mm
- A diagnosis of TB was confirmed with AFB cultures
- 3 months prior to the first CXR she had returned after a six week stay in Pakistan.
- A TST 6-8 weeks after travel could have led to early diagnosis and treatment !!

TB and Travel

- Limited data on travel related risk
- In a small uncontrolled UK study, of 1032 cases with TB in south asians (1978-97), 22% traveled to the Indian Subcontinent(ISC)
- 66% of the travelers visited ISC within 3 yrs of diagnosis
- 60% of recent travelers were UK born

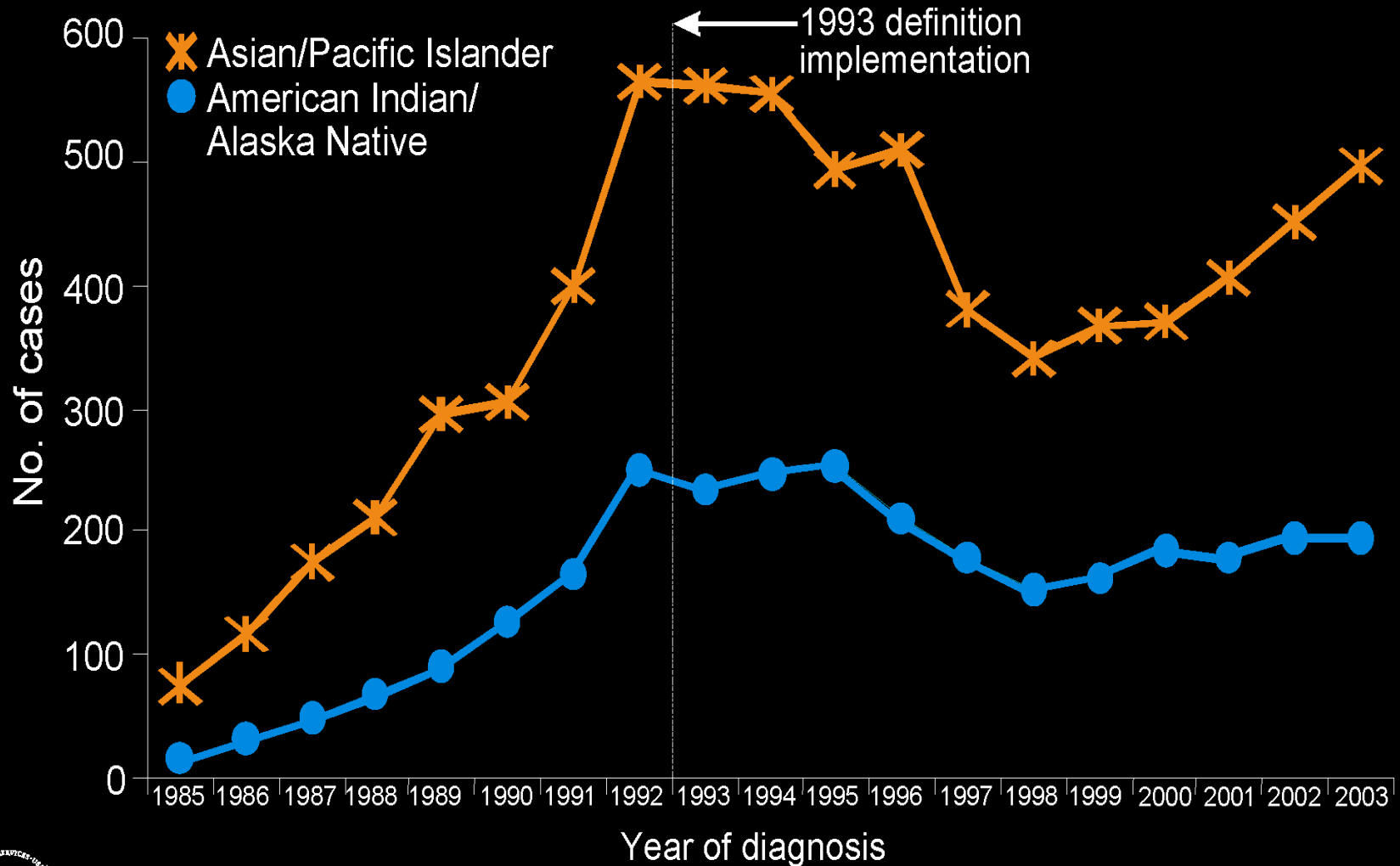
Proportion of Reported AIDS Cases and Population, by Race/Ethnicity, 2003—50 States and D.C.



Note. Excludes persons from US dependencies, possessions, and associated nations.
* Includes 225 persons of unknown race or multiple races.



Estimated Number of AIDS Cases among Adults and Adolescents, by Race/Ethnicity, 1985-2003 United States



Note. Data adjusted for reporting delays.



HIV/AIDS in South-Asian Americans

- Lack of South-Asian specific data
- API (Asian-American and Pacific Islanders) comprise about 1% of total cases of HIV/AIDS in the US
- APIs living with AIDS has climbed more than 10% each year for last 5 years, one of the fastest growing ethnic groups

CASE

- A 29 year old South Asian American woman was evaluated for persistent diarrhea and weight loss. She underwent an extensive work up in the U.S. but no diagnosis was reached . Several months later she visited India where stool studies revealed *Cryptosporidium*. This led to HIV testing and she was found to be positive. Her 2 year old child was also found to be HIV infected. Her husband tested negative for HIV.

CASE--Missed Opportunities

- HIV diagnosis was delayed because “no risk factors” were identified
- HIV infection in the child could have been prevented if mother was offered HIV testing in pregnancy

HIV/AIDS in South Asians

- At RWJ AIDS Program, in the last five years an increasing number of south asian women with HIV have been evaluated (data from seven mother infant pairs is being presented at this conference poster session)
- Increased efforts are needed to raise awareness among the community and providers
- Increased culturally sensitive education, outreach and prevention efforts are urgently needed

HIV/AIDS in API

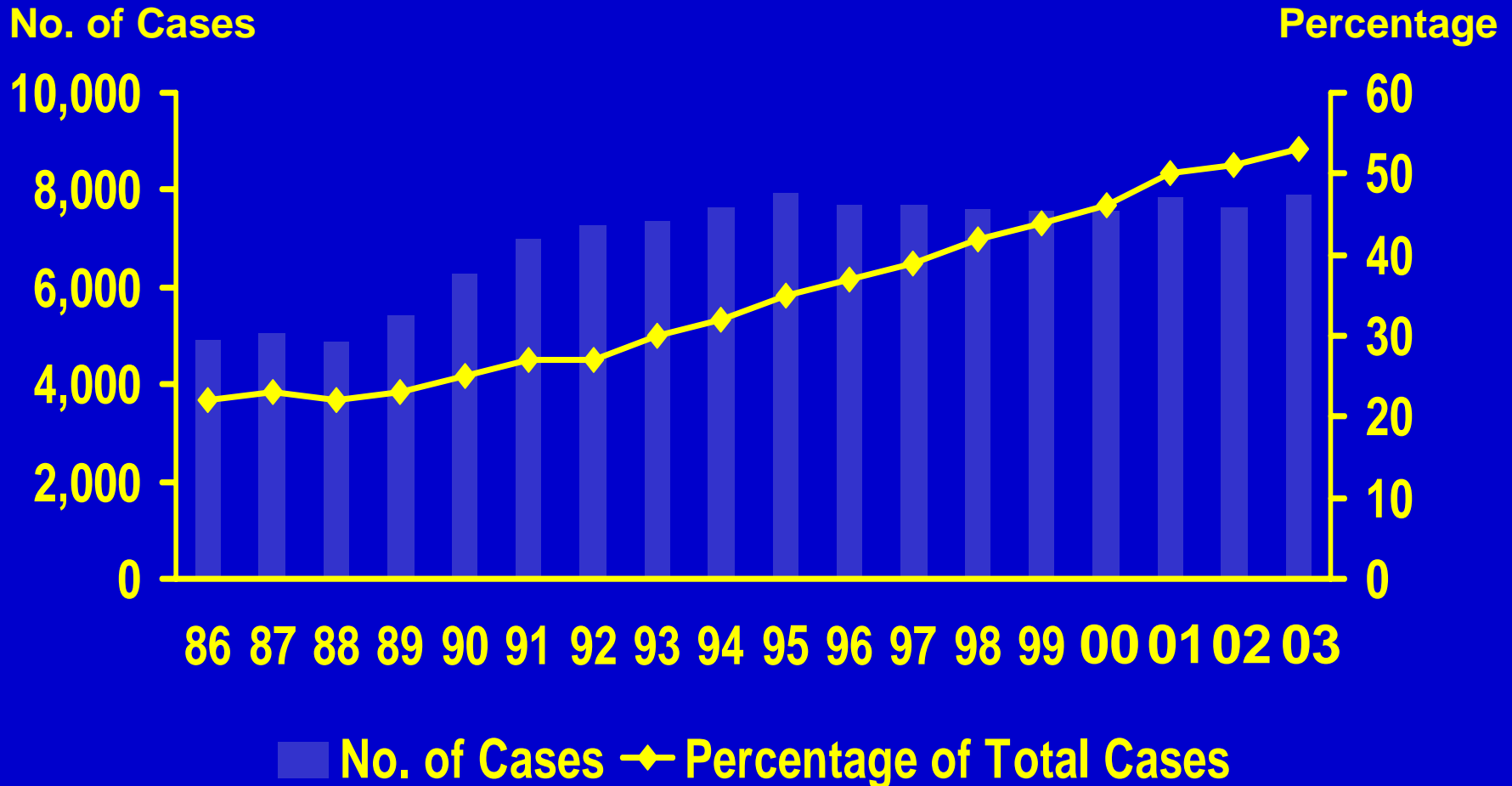
- Recent Attention: 1st National Asian American and Pacific Islander HIV/AIDS awareness day— May 19, 2005
- Resources for education and prevention programs geared toward specific ethnic groups within this very diverse category are limited.
- Asian & Pacific Islander Coalition on HIV/ AIDS in NY (www.apicha.org)



Selected References

- Geiter L,ed,Ending neglect in the elimination of tuberculosis in the US. Washington.DC:National academic press;2000
- Trends in Tuberculosis- US'2004:MMWR,March18,2005/vol.54/No.10
- Recommendations for Prevention and Control of Tuberculosis Among Foreign-Born Persons. MMWR,Sept 18,1998/vol47/No.RR-16
- HIV/AIDS Surveillance Reports (cdc.gov)
- Darbes LA etal, Systematic Review of HIV Behavioral Prevention Research in Asian Americans and Pacific Islanders

Trends in TB Cases in Foreign-born Persons, United States, 1986-2003



TB in Asians : Summary

- Asians comprised 23% of all reported TB cases in 2003, 95% of cases were among foreign-born
- In 2004, 54% of all new TB cases were among foreign-born
- Asians have 20 times greater TB rates than whites
- The number of yearly TB cases have not declined in foreign-born since 1993
- A greater % of foreign born have MDR TB
- Recently Arrived (<5 years) are at greatest risk

The Quantiferon TB Test

Advantages

- Single visit
- Objectivity in reading
- Very specific
- Unaffected by BCG vaccine
- Can be useful in assessing LTBI in persons at low risk

TB and Travel

- 12/656 (1.8%) of travelers had TST conversions
- 2/12 had active TB
- Travel related TB incidence was twice as high in health care workers
- Conclusion : Consider TST prior to travel and 2-3 months after return