

## **Epidemiology of Tuberculosis in Correctional Facilities, United States, 1993–2017**

**Slide 1 (Title slide). Epidemiology of Tuberculosis in Correctional Facilities, United States, 1993–2017.** This slide set was prepared by the Division of Tuberculosis Elimination, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services (HHS). It provides trends on TB cases in correctional facilities for the recent past and highlights data collected through the National Tuberculosis Surveillance System for 2017. Since 1953, through the cooperation of state and local health departments, CDC has collected information on newly reported cases of tuberculosis (TB) disease in the United States. Each individual TB case report (Report of Verified Case of Tuberculosis, or RVCT) is submitted electronically to CDC. The data for this slide set are based on TB case reports for 1993–2017 received by CDC as of June 1, 2018. All case counts for years 1993–2016 have been updated and data from 2017 has been added.

**Slide 2. The National Tuberculosis Surveillance System.** Tuberculosis (TB) is a reportable condition in all United States jurisdictions. TB cases are reported to the Centers for Disease Control and Prevention (CDC) in a standard format by public health authorities throughout the United States. Data are collected by CDC into the National TB Surveillance System (NTSS). This slide set presents summarized data for TB cases among persons residing in a correctional facility at the time of diagnosis for the years 1993 through 2017.

Reports of TB are counted according to a set of criteria (the “case definition”) that is specific to the United States. Only incident (or new) cases that are diagnosed each year in the United States are included. Cases are verified by three levels of certainty, depending on the types of information that are available to healthcare practitioners and public health authorities. Standardized data are collected for each case such as demographic, clinical, and laboratory information. Information on TB cases among persons residing in correctional facilities at the time of their TB diagnosis was first collected in 1993. In 2009, the NTSS began gathering information on Immigrations and Customs Enforcement (ICE) custody.

**Slide 3. Surveillance Reporting for Residence in a Correctional Facility.** In order to be classified as a TB case occurring in a resident of a correctional facilities, the patient must have been an inmate of a correctional facility when the TB diagnostic evaluation was performed or initiated. There are six types of correctional facilities to select from for TB-reporting purposes. The definitions of these facilities are as follows:

**Federal prison:** Confinement facility administered by a federal agency; includes privately operated federal correctional facilities.

**State prison:** Confinement facility administered by a state agency; includes privately operated state correctional facilities.

**Local jail:** Confinement facility usually administered by a local law enforcement agency, intended for adults but sometimes also containing juveniles; holds persons detained pending adjudication and/or persons committed after adjudication, typically for sentences of 1 year or less.

**Juvenile correction facility:** Public or private residential facility; includes juvenile detention centers, reception and diagnostic centers, ranches, camps, farms, boot camps, residential treatment centers, and halfway houses or group homes designated specifically for juveniles.

**Other correctional facility:** Includes ICE detention centers, Indian reservation facilities (e.g. tribal jails), military stockades and jails, federal park police facilities, police lockups (temporary holding facilities for persons who have NOT been formally charged in court), or other correctional facilities that are NOT included in the other specific choices.

Unknown: Inmate when the TB diagnostic evaluation was performed, but the type of correctional facility is NOT known.

**Slide 4. TB in Correctional Facilities.** The following slides (results) are for persons  $\geq 15$  years old living in the United States unless otherwise noted.

In 2017, 8,668 total TB patients  $\geq 15$  years old were reported in the United States. Among those, over 99% had information on whether or not they were a resident of a correctional facility at the time of diagnosis. There were 268 patients who were residing in a correctional facility at diagnosis of their TB disease, 3.1% of all the TB cases reported that year.

Between 1993 and 2017, 4.0% ( $n=13,770$ ) of TB cases among persons  $\geq 15$  years old reported in the United States were residents of correctional facilities at the time of diagnosis.

**Slide 5. TB Cases among Residents of Correctional Facilities and Percentage of all Reported TB Cases per year, 1993–2017.** From 1993 to 2017 there were a total of 13,770 TB cases reported among persons in correctional facilities at the time of their diagnosis. The percentage of confirmed TB cases among persons in correctional facilities has always been under 10% of total TB cases reported. The highest reported proportion occurred in 1994, with 5% (1,117) of all TB cases reported as residents of correctional facilities. In 2017, this percentage dropped to 3.1% (268).

**Slide 6. TB Cases among Residents of Correctional Facilities by Type of Facility, 2010–2017.** Persons in correctional facilities at the time of diagnosis can reside in federal or state prisons, local jails, juvenile correction centers or other facilities. Other facilities include Immigration and Customs Enforcement (ICE) detention centers, tribal jails operated by Indian reservations, police lockups (temporary holding facilities for person who have not been formally charged in court), military stockades and jails, or federal park facilities.

Since 1993, 49% of all TB cases reported among residents of correctional facilities were from local jails. About 8% in federal prisons, 28% resided in state prisons, about 12% resided in other facilities (e.g. ICE), less than 1% were in facilities housing juveniles and 2% had missing data on type of facility.

**Slide 7. TB Cases among U.S.-born and Non-U.S.-born Persons in Correctional Facilities, 1993–2017.** Just as the proportion of TB cases among non-U.S.-born persons has risen over the years, the proportion of TB cases among non-U.S.-born persons in correctional facilities has surpassed those among U.S.-born persons. The number of cases among U.S.-born persons has dropped sharply over the years from a high of 945 reported in 1994, to 108 reported in 2017. The number of cases among non-U.S.-born persons gradually rose from 148 in 1993 to 274 in 2010; from 2011 to 2016 the number of cases was between 200 and 232 each year, and in 2017, there were 160 cases among non-U.S.-born persons.

The overall number TB cases among non-U.S.-born persons exceeded the overall number of TB cases among U.S.-born persons in 2001 and subsequent years. For persons in correctional facilities this cross-over occurred in 2008.

**Slide 8. TB Cases by Correctional Facility Residence Status, Race/Ethnicity and Percentage of Non-U.S.-born Persons, 2010–2017.** From 2010 to 2017, the largest number of cases reported among residents in a correctional facility at the time of TB diagnosis were among Hispanics (1710), followed by Blacks (729), Whites (326), Asians (155) and persons of other race/ethnicities or unknown race (57). Among correctional facility residents with TB, the highest proportion of non-U.S.-born persons were among Asians (94%) followed by Hispanics (83%).

**Slide 9. TB Cases among Persons in Correctional Facilities by Immigration and Customs Enforcement (ICE) Status, 2017.** Since 2010, 97% of all TB cases among persons in correctional facilities had information reported on whether or not they were in Immigrations and Customs Enforcement (ICE) custody. As the number of TB cases has decreased, so has the number of TB cases among persons in ICE custody. In 2017, among persons in correctional facilities, 42% (n=112) were in ICE custody.

**Slide 10. TB Cases among Persons Age  $\geq$ 15 Years in Correctional Facilities by Age Group, 1993–2017.** The proportion of age groups reported in correctional facilities over the 24 years of data collection has remained relatively stable. One exception is the 25 to 44 age group. In the early years, 1993 to 1996, proportions for this age group ranged from 70% to 72% of all TB cases reported among persons in correctional facilities. By 2017, the 25 to 44 age group still reported more TB cases (139 out of 268) than other age groups but the percentage had dropped to 52%.

**Slide 11. TB Cases among Persons Age <15 Years in Correctional Facilities by Correctional Facility Type, 1993–2017.** Very few TB cases reported in correctional facilities are under age 15. From 1993 to 2017, only 19 TB cases among persons under 15 years of age were reported as residents of correctional facilities. Of these, 13 (68%) were in a juvenile correctional facility. From 2010-2017 there were only 4 cases, with all being among residents of a juvenile correction facility.

**Slide 12. TB Cases among Persons in Correctional Facilities by Sex, 1993–2017.** Over 90% of TB cases among persons reported to reside in a correctional facility were male. From 1993 to 2017, the number of males ranged from 1,011 in 1994 to 249 in 2017.

**Slide 13. TB Cases among Persons in Correctional Facilities by Race/Ethnicity, 1993–2017.** As the overall number of TB cases reported in the United States has dropped from 1993 to 2017 so has the number of TB cases among persons in correctional facilities.

**Slide 14. Percentage of TB Cases by HIV Status and Correctional Facility Status, 2010–2017.** A higher percentage of TB patients in correctional facilities were HIV positive (8.0%) than those who were not in correctional facilities (5.7%). For the other categories for HIV status (refused testing, testing not offered and unknown status) there were fewer among the TB patients residing in correctional facilities than for TB cases not residing in correctional facilities.

**Slide 15. Treatment of TB Cases among Persons in Correctional Facilities by Use of Directly Observed Therapy (DOT), 1993–2015.** The American Thoracic Society and CDC strongly recommend directly observed therapy (DOT) for all TB patients. DOT means that the ingestion of each dose of medication is observed by a trained health worker. The majority (78%) of TB patients residing in a correctional facility at the time of diagnosis were completely on DOT (Totally Directly Observed), compared to 60% for all TB patients not in a correctional facility. Some TB patients in correctional facilities may continue therapy using DOT or self-administered therapy or a combination of both after they are released from a corrections facility.

**Slide 16. TB Cases among Persons in Correctional Facilities at the Time of Diagnosis by Treatment Completion, 1993–2015.** Since 1993, most TB cases among persons in correctional facilities completed treatment for TB (71%) either during their stay in the correctional facility or after they were released. Most TB patients completed treatment within a year, but for some, treatment can take years. The data shown here are based on TB patients having ever completed treatment. Five percent died during treatment from any cause and a total of 24% were reported as lost, other outcome, refused treatment or had an unknown treatment outcome. It is likely that those who were lost during treatment were released from a correctional facility before treatment was completed.

**Slide 17. Percentage of TB Cases by Treatment Completion Status and Correctional Facility Status at Diagnosis, 2010–2015.** A lower percentage of TB patients who were residents in correctional facilities at the time of diagnosis completed therapy than TB patients not in a correctional facilities. This may be attributed to patients not reporting to their local health department after discharge from a correctional facility. A higher percentage of TB patients who were living in a correctional facility at the time of diagnosis were reported as being lost during treatment.

**Slide 18. TB Cases by Correctional Facility Residence and Excess Alcohol Use, 2010–2017.** In TB cases among persons in correctional facilities, 71% reported not having a history of excess alcohol use in the year prior to their TB diagnosis in comparison to 88% among persons not in a correctional facility. Among those in a correctional facility, 22% reported excess alcohol use; among those not in a correctional facility, 11% reported excess alcohol use.

**Slide 19. TB Cases by Correctional Facility Residence and History of Injection Drug Use, 2010–2017.** The majority (85%) of TB cases among persons in correctional facilities did not report a history of injection drug use in the year prior to their TB diagnosis. Eight percent reported a history of injection drug use.

**Slide 20. TB Cases by Correctional Facility Residence and History of Noninjection Drug Use, 2010–2017.** The majority (66%) of TB cases among persons in correctional facilities did not report a history of non-injection drug use in the year prior to their TB diagnosis. Twenty-six percent did report a history of non-injection drug use.

**Slide 21. (Final slide).** For more information, please contact Division of Tuberculosis Elimination at <https://www.cdc.gov/tb/>.