

## Department of Defense

United States (US) Department of Defense (DoD) Birth and Infant Health Research Program (BIHR)

**Purpose:** Surveillance, Research

**Partner:** Hospitals, Universities, Other DoD Programs

**Program status:** Currently collecting data

**Start year:** 1998

**Earliest year of available data:** 1998; data for formal analysis beginning with 2001

**Organizational location:** Deployment Health Research Department, Naval Health Research Center

**Population covered annually:** Approximately 100,000 per year

**Statewide:** No, National/Worldwide; includes all DoD beneficiaries

**Current legislation or rule:** Assistant Secretary of Defense, Health Affairs Policy Memorandum

**Legislation year enacted:** 1998

### Case Definition

**Outcomes covered:** Outcomes include those birth defects listed in the case definition of the National Birth Defects Prevention Network. For a birth defect to be represented, the diagnosis must appear at least once in an inpatient record, or at least twice on two separate dates for outpatient encounters. Same sex multiples are excluded from analysis.

**Pregnancy outcome:** Livebirths (All gestational ages and birth weights)

**Age:** Birth up to one year after delivery. Infants in the 2018 birth cohort may have incomplete data through the first year of life.

**Residence:** Worldwide; any birth to a US military beneficiary.

### Surveillance Methods

**Case ascertainment:** Active Case Finding, Passive case-finding with case confirmation, Passive case-finding without case confirmation, Electronic diagnostic codes from all inpatient and outpatient healthcare encounters of US military beneficiaries at both civilian and military care facilities.

**Delivery hospitals:** Disease index or discharge index, Discharge summaries, Specialty outpatient clinics, All inpatient and outpatient encounters at both civilian and military care facilities are captured in standardized DoD data.

**Pediatric & tertiary care hospitals:** Disease index or discharge index, Discharge summaries, Specialty outpatient clinics, All inpatient and outpatient encounters at both civilian and military care facilities are captured in standardized DoD data.

**Third party payers:** All inpatient and outpatient encounters at both civilian and military care facilities are captured in standardized DoD data.

**Other sources:** Validation of standardized electronic data performed by chart review of a random sample of births from military facilities.

### Case Ascertainment

**Conditions warranting chart review in newborn period:** Any chart with an ICD-9-CM code 740-759/ICD-10-CM code Q00-Q99, Any chart with a selected list of ICD-9-CM codes outside 740-759/ICD-10-CM codes outside Q00-Q99, Validation of standardized electronic data performed by chart review of a random sample of births from military healthcare facilities.

**Conditions warranting chart review beyond the newborn period:** Any infant with a codable defect

**Coding:** ICD-9-CM/ICD-10-CM, The BIHR program assesses outcomes through the first year of life; however, infants in the 2018 birth cohort may have incomplete data through the first year of life. Infants born on or after October 1, 2014 concluded their first year of life after the transition from ICD-9-CM to ICD-10-CM coding on October 1, 2015. For these infants, the BIHR program employed ICD-10-CM coding to assess outcomes for the final months of their assessment period.

### Data Collected

**Infant/fetus:** Identification information (name, address, date-of-birth, etc.), Demographic information (race/ethnicity, sex, etc.), Birth measurements (weight, gestation, Apgars, etc.), Tests and procedures, Infant complications, Birth defect diagnostic information

**Mother:** Identification information (name, address, date-of-birth, etc.), Demographic information (race/ethnicity, sex, etc.), Illnesses/conditions, Prenatal care, Prenatal diagnostic information, Pregnancy/delivery complications, Family history

**Father:** Identification information (name, address, date-of-birth, etc.), Demographic information (race/ethnicity, sex, etc.), Illnesses/conditions

### Data Collection Methods and Storage

**Data collection:** Electronic file/report submitted by other agencies (hospitals, etc.)

**Database collection and storage:** Access, SAS

### Data Analysis

**Data analysis software:** SAS

**Quality assurance:** Validity checks, Re-abstraction of cases, Double-checking of assigned codes, Comparison/verification between multiple data sources, Clinical review

**Data use and analysis:** Routine statistical monitoring, Baseline rates, Rates by demographic and other variables, Monitoring outbreaks and cluster investigations, Time trends, Observed vs. expected analyses, Epidemiological studies (using only program data), Identification of potential cases for other epidemiologic studies, Service delivery, Grant proposals, Prevention projects, Monitor birth defect outcomes following specific parental or gestational exposures of concern.

### System Integration

**System links:** DoD databases

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### Funding

**Funding source:** 100% Other federal funding (non-CDC grants)

### Other

**Web site:**

<https://www.med.navy.mil/Naval-Medical-Research-Center/Naval-Health-Research-Center/Core-Research/Military-Population-Health/DoD-Birth-and-Infant-Health-Research-BIHR/>

**Surveillance reports on file:** DoD/Health Affairs policy memorandum; annual reports

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