ISSN 0915-5813

IASR

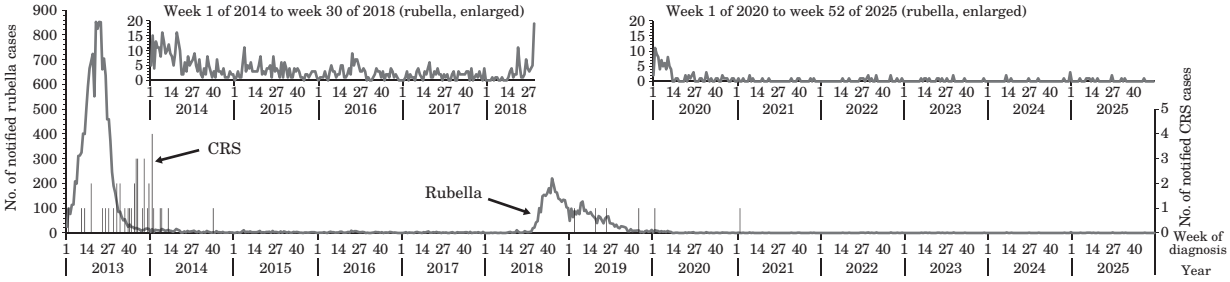
Vol. 47 No. 4 (No. 554) April 2026
Infectious Agents Surveillance Report
https://id-info.jihs.go.jp/en/surveillance/iasr/index.html

National Institute of Infectious Diseases,
Japan Institute for Health Security and
Division of Infectious Disease
Prevention and Control,
Ministry of Health, Labour and Welfare

International framework for rubella elimination verification, achievement of elimination in Japan, and future challenges 61
Progress toward rubella elimination verification in Japan: from vaccination targeting girls to additional measures for adult men in Japan..... 62
Detection of endogenous control (human RNase P RNA) in measles and rubella testing 63
External quality control of measles and rubella testing (nucleotide sequencing and genotyping analysis)..... 65
Implementation status of routine immunization with rubella-containing vaccines: first, second, and fifth stages in Japan 66
Rubella vaccination coverage and seroprevalence in fiscal year 2025: preliminary results from the FY 2025 National Epidemiological Surveillance of Vaccine-Preventable Diseases 68
Workplace-based initiatives for rubella prevention 70
Effectiveness and safety analysis using Japan's national vaccination database 71
Assessment of the need for laboratory confirmation in mumps surveillance: findings from a study in Kanazawa City, Ishikawa Prefecture 73

<THE TOPIC OF THIS MONTH>
Rubella and congenital rubella syndrome in Japan, as at February 2026

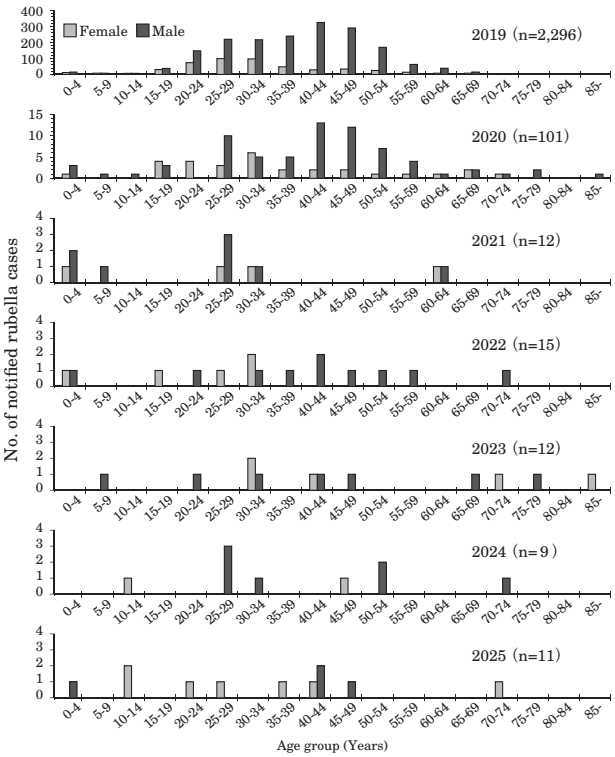
Figure 1. Weekly number of notified rubella cases and congenital rubella syndrome (CRS) cases, week 1 of 2013 to week 52 of 2025, Japan



(National Epidemiological Surveillance of Infectious Diseases: As at 17 February 2026)

Rubella is an acute infectious disease caused by the rubella virus, and is characterized by fever, rash, and lymphadenopathy. Rubella virus infection during pregnancy may result in stillbirth, miscarriage, or congenital rubella syndrome (CRS), which presents with various manifestations in the child, including congenital heart disease, hearing impairment, and cataracts. Although no specific treatment exists for rubella or CRS, prevention is possible using rubella-containing vaccines (RCV), and measures toward rubella elimination are being promoted in each country, led by the World Health Organization (WHO) (see p.61 of this issue). The definition of rubella elimination is "the absence of endemic rubella virus transmission in a defined geographical area (e.g. region or country) for >12 months and the absence of CRS cases associated with endemic transmission in the presence of a well-performing surveillance system". Furthermore, certification of elimination requires the demonstration of "no transmission of endemic virus for at least 36 months since the last endemic case", "the existence of a surveillance system that meets verification standards", and "virological evidence demonstrating the absence of endemic virus transmission". In Japan, the Ministry of Health, Labour and Welfare (MHLW) formulated the "Guidelines on Prevention of Specified Infectious Diseases for Rubella" in 2014, setting the goal of achieving rubella elimination by fiscal year (FY) 2020 and establishing the direction of measures to build a system that meets the verification criteria. Furthermore, as an additional measure for rubella, routine immunization (fifth stage) was implemented during FY2019-FY2024, targeting men born between 2 April 1962 and 1 April 1979, who had no previous opportunity to receive routine rubella vaccination and had particularly low seroprevalence. Through continuous efforts, including these measures, rubella elimination in Japan was newly certified in September 2025 by the Regional Verification Commission for Measles and Rubella Elimination in the Western Pacific (see p.62 of this issue).

Figure 2. Age distribution of notified rubella cases by sex, 2019-2025, Japan



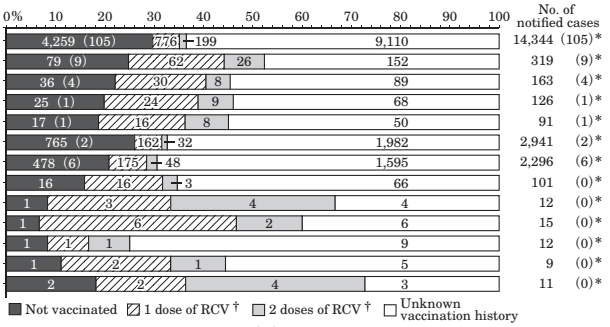
(National Epidemiological Surveillance of Infectious Diseases: As at 17 February 2026)

National Epidemiological Surveillance of Infectious Diseases: Rubella is a Category V Infectious Disease and is subject to notifiable disease surveillance under the Infectious Diseases Control Law (https://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou11/01-05-14-02.html). In 2013, 14,344 cases were reported, and epidemics occurred in 2018 and 2019 with more than

(Continued on page 60′)

(THE TOPIC OF THIS MONTH-Continued)

Figure 3. Number and proportion of notified rubella cases by vaccination status, 2013-2025, Japan

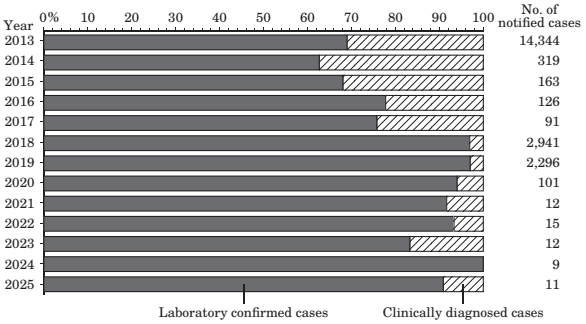


( ) *: No. of cases <1 year of age indicated in parentheses

† rubelle-containing vaccine

(National Epidemiological Surveillance of Infectious Diseases: As at 17 February 2026)

Figure 4. Number and proportion of notified rubella cases by method of diagnosis, 2013-2025, Japan



(National Epidemiological Surveillance of Infectious Diseases: As at 17 February 2026)

2,000 cases notified annually (Fig. 1 on p.59). Since 2020, the number of notified cases has remained low, particularly during 2021-2025, when the annual number remained at 9-15 cases. In 2019, when the number of notified cases was high, individuals aged ≥20 years accounted for approximately 94% of cases, and notifications were particularly frequent among men, mainly in their 40s (Fig. 2 on p.59). Regarding the proportion of rubella cases by vaccination history, especially during the nationwide epidemics in 2013 and 2018-2019, excluding those with unknown vaccination history, the proportion with "no vaccination history" (21-30% overall) was high, whereas the proportions with "one dose" (5-8% overall) and "two doses" (1-2% overall) were low (Fig. 3). During periods with fewer rubella cases (2014-2017 and 2021-2025), these characteristics in the sex-age distribution and vaccination history were not clearly observed.

CRS is also a Category V Infectious Disease and is subject to notifiable disease surveillance under the Infectious Diseases Control Law (https://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou11/01-05-10.html). With rubella epidemics, the number of notified CRS cases increased, with 45 cases reported during 2012-2014 and six cases during 2019-2021; however, no cases have been reported since week 3 of 2021 (Fig. 1 on p.59).

Laboratory testing for rubella: Since 2018, in principle, serologic and viral genetic testing are required for all rubella cases, and since then the proportion of notifications based on laboratory confirmation cases has been increasing (Fig. 4). Various efforts have been made to ensure quality control of testing, and for tests conducted at Public Health Institutes and other facilities for detection of measles and rubella virus genes, a method to simultaneously detect human-derived nucleic acids as an endogenous control has been developed and can be used for internal quality control (see p.63 of this issue). In addition, the MHLW has implemented an external quality control program for government testing facilities conducting administrative testing under the Infectious Diseases Control Law, with the aim of ensuring reliability of testing by providing opportunities for external quality assessment and promoting quality assurance through evaluation and feedback of results. In FY2025, external quality control for the analysis of viral gene sequences and genotyping of measles and rubella viruses was conducted, with participation from 75 facilities (see p.65 of this issue).

Vaccination coverage surveys and the National Epidemiological Surveillance of Vaccine-Preventable Diseases: Since FY2006, routine rubella vaccination (first and second stages) has been implemented for children aged 1 year and for children in the year before entering elementary school. According to nationwide vaccination coverage surveys of RCV conducted annually, a decreasing trend in vaccination coverage has been observed since FY2020 (see p.66 of this issue). In FY2024, the vaccination coverage was 92.7% for the first stage and 91.0% for the second stage, both showing further decreases from the previous fiscal year. The number of individuals eligible for the fifth stage was 15,374,162 at the start of FY2019. Of these, by March 2025, 5,043,900 individuals (32.8% of the target population) had undergone antibody testing, and 1,090,292 individuals (7.1% of the target population) had received vaccination.

The rubella susceptibility survey in the National Epidemiological Surveillance of Vaccine-Preventable Diseases was conducted in FY2025 among 4,148 individuals in 15 prefectures (Fig. 5 on p.61). The seroprevalence of rubella HI antibody titers ≥1:8 was generally ≥90% among those aged or in age group ≥2 years (see p.68 of this issue). Among men eligible for the fifth stage vaccination, seroprevalence remained around 80% in surveys conducted during FY2016-FY2020, but increased to the high 80% range in surveys during FY2021-FY2025. Although this remained lower than that among women of the same age group, the gap has narrowed.

Future challenges: In 2025, rubella elimination in Japan was internationally verified. This achievement reflects the efforts of many stakeholders, including those in government, healthcare, education, childcare, patient groups/associations, and the business sector (see p.70 of this issue), and going forward, it is required to maintain this status. Overseas, particularly in the African Region, many countries still have insufficient rubella control measures, such as not having introduced RCV into routine immunization. It is important to prevent the re-establishment of transmission in Japan in the event of rubella importation, and continued maintenance and strengthening of vaccination, surveillance, and outbreak response are required. In recent years, a decline in vaccination coverage of RCV among children has been pointed out, and addressing this issue is an urgent priority. As one of the measures, based on the revision of the Immunization Act in 2022, discussions are currently underway regarding the digitalization of the administrative paperwork required for immunization and the development and utilization of a vaccination database; it is expected that a system will be established in which vaccinations can be delivered efficiently and with public confidence (see p.71 of this issue).

Figures and tables included in the articles of the Infectious Agents Surveillance Report (IASR) are analyzed and prepared based on: (1) data on reported cases and detected pathogens from the National Epidemiological Surveillance of Infectious Diseases, operated based on the Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases; and (2) data on infectious diseases other than those described in (1). These data were provided through the cooperation of the following institutions: Public Health Institutes; Public Health Centers; subnational Infectious Disease Surveillance Centers; the Ministry of Health, Labour and Welfare's quarantine stations and the Public Health Bureau. The articles published herein were commissioned by IASR.

Department of Infectious Disease Surveillance, JIHS NIID
Toyama 1-23-1, Shinjuku-ku, Tokyo 162-8640, JAPAN Tel (+81-3)5285-1111

＜特集関連情報＞

風疹排除認定の国際的枠組みと日本における排除達成ならびに今後の課題

2025年9月，日本は世界保健機関（WHO）西太平洋地域事務局（Regional Office for the Western Pacific: WPRO）で開催された西太平洋地域麻疹風疹排除認定委員会（Regional Verification Commission for Measles and Rubella Elimination in the Western Pacific Region）により風疹排除達成国として認定された[1]。本稿では，風疹排除認定の国際的枠組みと，日本における排除達成の経緯，さらに排除維持に向けた課題について概説する。風疹は先天性風疹症候群（congenital rubella syndrome: CRS）を引き起こす可能性のあるワクチン予防可能疾患であり，WHOは各地域において風疹排除を国際的な公衆衛生上の重要な目標として掲げている[2]。

風疹排除認定の国際的枠組み

風疹の排除（elimination）とは，一定の地域において，風疹ウイルスの持続的な伝播（endemic transmission）が遮断された状態を指す概念である。世界から病原体が完全に消失する「根絶（eradication）」とは区別される[2]。

WHO西太平洋地域における風疹排除の定義は，「適切なサーベイランスが実施されているある地域（国等）において，12カ月間以上継続して伝播した風疹ウイルス（endemicウイルス）が存在しない状態，さらにendemicウイルスによるCRS児の発生がない状態」であるが，排除状態の認定にはさらに，「最後のendemicウイルスによる症例から少なくとも36カ月間，endemicウイルスの伝播がないこと」，「検証基準を満たすサーベイランス体制が存在すること」，「endemicウイルスによる伝播がないことを示すウイルス遺伝子の解析データ」，が必要とされる[2]。

排除認定のプロセスは，各国に設置された国内麻疹・風疹排除認定会議（National Verification Committee: NVC）が，疫学状況，ワクチン接種率，サーベイランス体制，検査体制などの情報を毎年WHOへ報告し，その内容を地域麻疹風疹排除認定委員会（Regional Verification Commission: RVC）が評価する仕組みである[2]。排除認定は単一の指標ではなく，疫学，検査，免疫状況（予防接種状況を含む）など，複数の指標を総合的に評価して確認されるものである。

日本における風疹排除達成までの経緯

日本では2010年代に入り，成人男性を中心とする抗体保有率の低い集団の存在が指摘され，2012～2013年には成人男性を中心とした大規模な風疹流行が発生した[3]。この流行ではCRSの発生が45例報告され，日本における風疹対策の課題が改めて認識された[3]。

さらに，2018～2019年にも成人男性を中心とした風疹流行が発生し，免疫を十分に有していない成人層の存在，いわゆる「免疫ギャップ（immunity gap）」の問題が改めて指摘された[3]。

このような背景を受け，日本では1962～1978年度生まれの男性を対象とした抗体検査および予防接種の機会を提供する「風しん第5期定期接種」が2019年から開始された[3]。これは，過去の予防接種制度の変遷により免疫獲得機会が限定されていた男性世代へのキャッチアップ対策として導入されたものである。

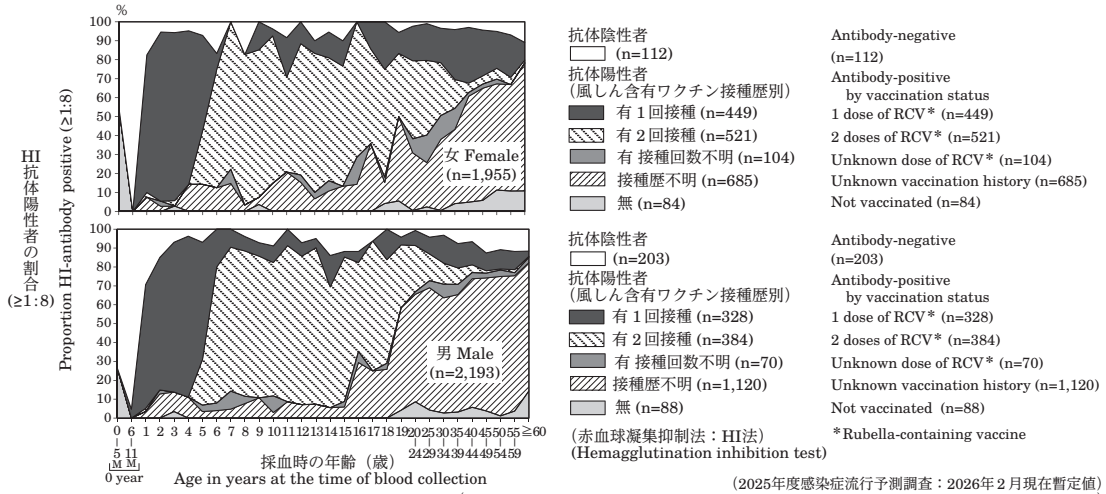
途中，新型コロナウイルス感染症（COVID-19）パンデミックの時期を含むが，前述の対策にもよると考えられる血清疫学の情報も踏まえて，日本ではendemicな風疹ウイルスの持続的伝播が36カ月以上確認されない状態が継続し，優れたサーベイランス体制およびウイルス遺伝子解析による証拠が確認された。これらの条件が満たされたことにより，2025年の風疹排除が日本に対して正式に認定されたものである[1]。

排除維持に向けた課題

風疹排除の達成は，日本の予防接種政策およびサー

（特集つづき）（THE TOPIC OF THIS MONTH-Continued）

図5. 性別，年齢／年齢群別，予防接種歴別風疹抗体保有状況，2025年度
Figure 5. Proportion seropositive against rubella virus by age, sex and vaccination status, fiscal year 2025, Japan



（2025年度感染症流行予測調査：2026年2月現在暫定値）
（National Epidemiological Surveillance of Vaccine-Preventable Diseases: As at February 2026）