

Childhood Immunization Status Combination 10 Fact Sheet

Key Takeaways

- Vaccines protect against diseases that are easily transmittable and can cause serious complications and even death. NC Medicaid remains committed to monitoring and encouraging higher rates of childhood vaccinations to maintain beneficiary health and safety.
- NC Medicaid is underperforming in a key measure of vaccination (Combo 10) compared to national Medicaid rates, and NC Medicaid vaccination rates for Black or African American children are significantly lower compared to other children covered by NC Medicaid.
- NC Medicaid is actively using several tools to improve childhood vaccination rates.
- NC Medicaid is aware of and responsive to national trends when setting vaccination targets for its managed care plans.

INTRODUCTION

Childhood immunization is one of the most effective ways to reduce morbidity and mortality among children and strengthen population health.¹ NC Medicaid has closely monitored childhood vaccination rates among its beneficiaries using the Childhood Immunization Status (CIS) Combination 10 (Combo 10) quality measure.

The Combo 10 quality measure is important in addressing the state's quality aims related to children's health. Childhood vaccination rates for North Carolina Standard Plan members are consistently below the national average of Medicaid health maintenance organizations (HMOs). Additionally, there are large disparities in rates of vaccination for enrollees who identify as Black or African American, placing this population at greater risk of illness and disease.

NC Medicaid's focus on childhood vaccination is not unique. The Centers for Medicare & Medicaid Services (CMS) include the Combo 10 measure in priority measure sets and many other state Medicaid agencies prioritize childhood immunization in their quality improvement initiatives. NC Medicaid remains committed to protecting child beneficiaries through vaccination and will continue to work with health plans, providers and community partners to ensure children receive these crucial preventative services.

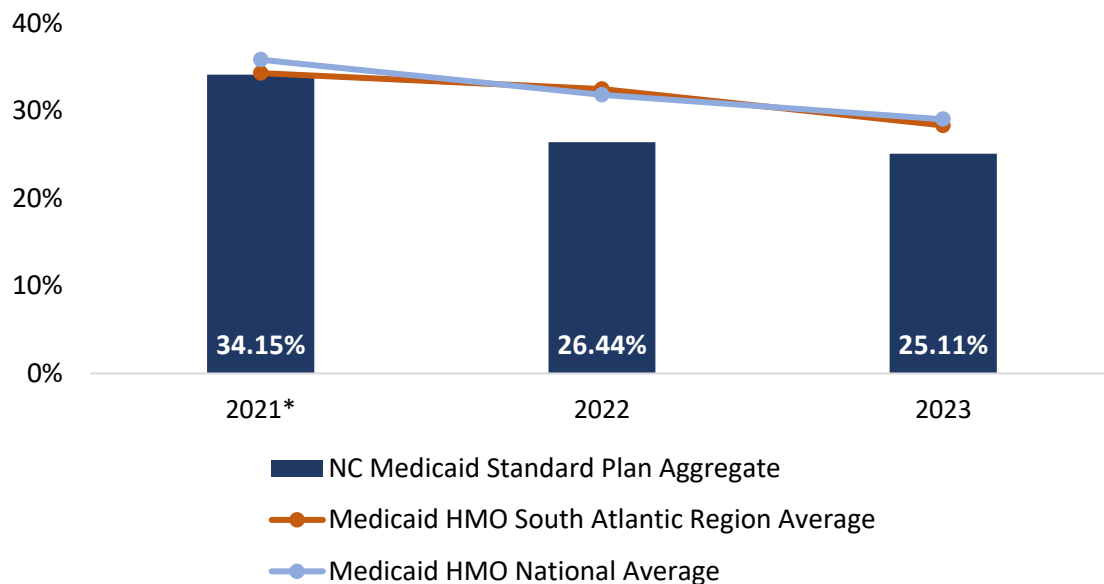
CHILDHOOD IMMUNIZATION STATUS (CIS) COMBINATION 10 QUALITY MEASURE

CIS Combination 10 is a standardized quality measure, created by one of the leading healthcare quality agencies, National Committee for Quality Assurance Healthcare Effectiveness Data and Information Set (NCQA HEDIS), that is widely used across Medicaid and CMS programs, including the CMS Child Core Set and CMS' Universal Foundation Set. CIS Combo 10 assesses the percentage of children at age 2 who had four DTaP, three polio, one MMR, three Haemophilus influenzae Tybe B (Hib), three hepatitis B, one chicken pox, four PCV, one hepatitis A, either two or three doses of the rotavirus vaccine (depending on the vaccine product used) and two flu vaccinations by their second birthday.^{II}

Since 2020, national rates of childhood vaccination have been steadily declining. Several studies have found that the COVID-19 pandemic had a negative effect on routine pediatric vaccination, with increased levels of vaccine hesitency and vaccine-related misinformation leading many caregivers to forego childhood vaccinations.^{III}

Compared to both national and regional averages of Medicaid HMO performance, NC Medicaid's Standard Plans¹ are underperforming on the CIS Combo 10 measure (see Figure 1).

Figure 1: CIS Combo 10 Rates, 2021-2023



*NC Medicaid Standard Plans launched halfway through 2021. Because of this, the 2021 Standard Plan aggregate rate is based on data from half of a measurement year and should be interpreted with caution.

Disparities in Combo 10 Performance

In North Carolina and nationally, children who identify as Black or African American have much lower rates of childhood vaccination compared to their non-Black counterparts. Among NC Medicaid beneficiaries, the relative difference in Combo 10 vaccination rates between Black/African American and non-Black/African American children is approximately 38%.² Studies indicate that common and

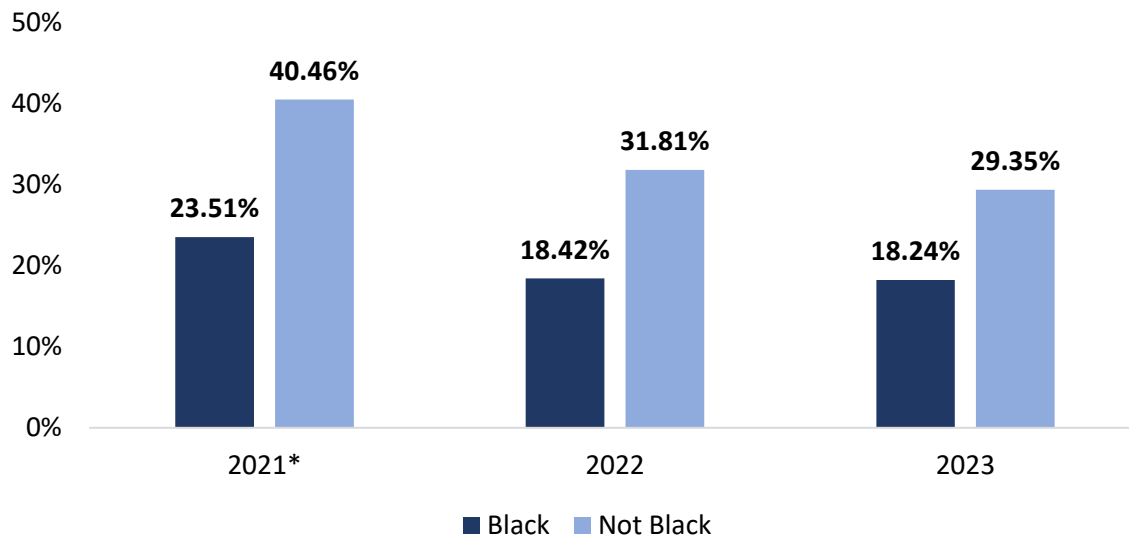
¹ Standard Plans are Managed Care Plans that cover most families and children enrolled in NC Medicaid.

² Relative difference is calculated by dividing the absolute difference between groups by the rate for the non-Black/African American population.



persistent causes of racial disparities in childhood vaccinations include a lack of family resources including reliable transportation and time off work, inadequate access to health care and infrastructure challenges and mistrust in the medical system due to a long history of systemic discrimination.^{IV,V} Closing these gaps is central to NC Medicaid’s Quality Strategy, as equitable access to vaccination is essential to protecting child health.

Figure 2: NC Medicaid Standard Plan Aggregate CIS Combo 10 Rates stratified by Black or African American vs. Not Black or African American, 2021-2023



*NC Medicaid Standard Plans launched halfway through 2021. Because of this, the 2021 Standard Plan aggregate rates are based on data from half of a measurement year and should be interpreted with caution.

CIS COMBO 10 AND THE FLU VACCINE

Since 2020, national rates of childhood flu vaccination have dropped from 62.4% in 2020 to 49.2% in 2025, with more than 1 in 4 parents reporting that they are hesitant about giving their child the flu vaccine.^{VI,VII} NC Medicaid performance on the flu vaccine mirrors national performance and rates of flu vaccination are lower than the other vaccines in the Combo 10 series, contributing to NC Medicaid’s declining overall CIS Combo 10 performance.

While the flu vaccine is not required for school enrollment in North Carolina, it plays an important role in protecting children from severe illness and even death from influenza. The 2024-2025 flu season resulted in a record high number of pediatric deaths, with children ages two and under, the age group measured by Combo 10, having the highest risk of serious flu complications.^{VIII,IX} A 2022 study found that flu vaccination reduces a child’s risk of developing severe influenza by up to 75%, reduces flu-related hospitalization among children by up to 41% and significantly reduces a child’s risk of dying from flu.^X The flu vaccine also plays a substantial role in cost savings as it was recently cited as one of the most cost effective, life-saving interventions.^{XI}

Because school enrollment does not require that a child receive the flu vaccine, it is particularly important for NC Medicaid, plans and providers to use other tools to drive increased rates of vaccination.



NC MEDICAID'S APPROACH TO IMPROVEMENT

NC Medicaid is using its available tools to encourage improved rates on the CIS Combo 10 measure while adapting to current challenges.

Benchmarking Methodology

NC Medicaid acknowledges national context of declining vaccination rates and has heard provider and managed care plan concerns surrounding targets set for CIS Combo 10 that call for year-over-year increases in vaccination rates. In response, NC Medicaid has adjusted its benchmarking methodology for the CIS Combo 10 measure. Beginning in 2025, plans will be assessed based on whether they demonstrate favorable trends in their rate compared to the national trend over the same time period. For example, if a measure's national benchmark has a 10% relative decrease between MY2026 and MY2027, plans must achieve a relative change from MY2026 to MY2027 that is better than a 10% relative decrease by a specified margin. This margin is set based on analysis of national and state data, including comparison of North Carolina's trends to national trends in prior years, as well as consideration of trends in other states or for similar measures.

Learn more about this methodology in NC Medicaid's [Quality Measure Technical Specifications](#).

Standard Plan Withholds Program

A key component of NC Medicaid's Quality Strategy includes measuring and incentivizing performance improvement. Standard Plans are subject to withholds tied to Combo 10 rates for their members, in which NC Medicaid withholds a portion of plan capitation payments³ and returns them if certain quality targets are met.

Under the withhold program, funds are withheld from plans and targets are calculated at the plan level. Providers may see increased emphasis by Standard Plans on the performance measures included in the Withhold Program. However, there are no requirements for Standard Plans to include Withhold Program measures or targets in provider incentive arrangements, and NC Medicaid does not withhold funds directly from providers. NC Medicaid encourages plans to consider a broad range of performance improvement strategies to meet withhold targets. More information on the Withhold Program is available in the [Withhold Program Guidance Document](#).

Performance Improvement Projects (PIPs)

Performance improvement projects, or PIPs, are year-long quality improvement projects that aim to help managed care plans improve performance on a specific measure. PIPs must measure performance using objective quality indicators, assessment of barriers, implementation of interventions to achieve improvement in access and quality of care, and evaluation of effectiveness of the interventions.

CIS Combination 10 has been a PIP for Standard Plans since 2022. This requires Standard Plans to be actively working to identify and initiate interventions aimed at improving rates of childhood vaccination among their members, while working alongside providers.

³ A capitation payment is a fixed amount of money per member per month (PMPM) paid to a managed care plan to provide a defined set of services, regardless of the amount of care the member actually receives.



MOVING FORWARD

NC Medicaid recognizes the crucial role that vaccinations play in keeping children healthy. NC Medicaid remains committed to ensuring all children—particularly those in communities with historically lower vaccination rates—receive timely immunizations through coordinated work with health plans, providers and community partners.

ADDITIONAL RESOURCES FOR PROVIDERS

The [North Carolina Immunization Registry](#) is the state's official source for immunization information and can assist in the evaluation of a child's immunization status and identify children who need (or are past due for) immunizations. In addition, providers can work with their contracted Medicaid managed care plans to understand Combo 10 rates for their covered patients and identify members who may be missing vaccines.

The [CDC Immunization Quality Improvement for Providers](#) (IQIP) utilizes evidence-based strategies to improve childhood and adolescent immunization rates.

The North Carolina Department of Health and Human Services [Childhood Vaccines Toolkit](#) has bilingual materials designed to help health care providers and families start a conversation about childhood vaccinations.

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