



Progress and Remaining Challenges in Reducing Child Undernutrition in Indonesia, 2018-2024: Evidence from the National Stunting Dashboard

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Abstract

Child undernutrition remains an important public health challenge in Indonesia despite measurable progress in recent years. This article describes progress and remaining challenges in reducing stunting, wasting, and underweight among children under five using secondary data from the National Stunting Dashboard for 2018-2024. The dashboard presents national trends based on RISKESDAS 2018, SSGBI/SSGI 2019, SSGI 2021, SSGI 2022, SKI 2023, and SSGI 2024. A secondary descriptive analysis was conducted by comparing national prevalence values across survey years, calculating absolute percentage-point changes, and interpreting the 2024 values using the dashboard categories. Stunting declined from 30.8% in 2018 to 19.8% in 2024, representing an 11.0 percentage-point reduction. Wasting decreased from 10.2% in 2018 to 7.4% in 2024, although the trend fluctuated and increased in 2022 and 2023 before declining again in 2024. Underweight changed only slightly from 17.7% in 2018 to 16.8% in 2024, indicating that this indicator remains a persistent challenge. In 2024, stunting and wasting were categorized as medium, while underweight remained in the very high category according to the dashboard. These findings indicate that Indonesia has made meaningful progress in reducing stunting, but more intensive and integrated interventions are still needed to address wasting and underweight, strengthen child feeding practices, improve disease prevention, and enhance household-level nutrition support.

Keywords: Child Undernutrition, Stunting, Wasting, Underweight, Indonesia, National Stunting Dashboard, SSGI

1. Introduction

Child undernutrition remains one of the most important indicators of child health, human development, and social welfare. In children under five, stunting, wasting, and underweight represent different but interrelated forms of nutritional deprivation. Stunting reflects chronic linear growth failure, wasting reflects acute nutritional deterioration, and underweight may capture both chronic and acute deficits in body weight relative to age [3], [5]. These indicators are important because undernutrition in early life is associated with increased morbidity, impaired cognitive development, reduced school performance, and lower productivity in adulthood [11], [15]. Therefore, monitoring the trends of child undernutrition is essential for evaluating national nutrition progress and identifying remaining programmatic challenges.

Indonesia has implemented several policy and program efforts to reduce child undernutrition,

including nutrition-specific interventions, nutrition-sensitive interventions, and national strategies for accelerating stunting prevention [8], [9]. The National Stunting Dashboard provides a public monitoring platform that presents the magnitude of nutrition problems among children under five, including stunting, wasting, and underweight at national and subnational levels [1]. The dashboard page on child nutrition problems states that its trend data are derived from Riskesdas 2018, SSGBI/SSGI 2019, SSGI 2021, SSGI 2022, SKI 2023, and SSGI 2024 [1]. This makes the dashboard a useful secondary source for describing national progress over time. However, the presence of trend information also highlights the need to interpret progress and remaining challenges across multiple indicators rather than focusing only on stunting.

Recent data show that Indonesia has made substantial progress in reducing stunting, but child undernutrition has not been fully resolved. The National Stunting Dashboard reports that stunting among children under five reached 19.8% in 2024, while wasting was 7.4% and underweight was 16.8% [1]. These values show that undernutrition remains a meaningful public health problem, particularly because the dashboard categorizes underweight in 2024 as very high [1]. International evidence also emphasizes that undernutrition is multidimensional and influenced by dietary intake, infection, household food security, water and sanitation, caregiving, and access to health services [11], [13], [19]. For this reason, a trend-based analysis can help clarify which indicators have improved and which still require stronger policy attention.

This article aimed to describe progress and remaining challenges in reducing child undernutrition in Indonesia from 2018 to 2024 using evidence from the National Stunting Dashboard. The analysis focused on three indicators: stunting, wasting, and underweight. Specifically, the study compared national prevalence values across survey years, calculated changes between 2018 and 2024, and interpreted the 2024 situation using dashboard categories. The findings are expected to contribute to policy discussion on nutrition surveillance, integrated child nutrition programs, and the prioritization of indicators that show slower improvement.

2. Materials and Methods

This section describes the methodological approach used to analyze national trends in child undernutrition in Indonesia from 2018 to 2024. Because the study relied on publicly available aggregate data, the methods were designed to support a descriptive interpretation of progress and remaining challenges rather than causal explanation. The section explains the study design, data sources, indicator definitions, data extraction and analysis procedures, and ethical considerations. This structure ensures that the trend analysis is transparent, reproducible, and consistent with the purpose of using dashboard-based evidence for public health policy discussion.

2.1 Study Design

This study used a secondary descriptive analysis design based on publicly available national dashboard data. The design was selected because the objective of the study was to describe progress and remaining challenges in reducing child undernutrition in Indonesia, rather than to test causal relationships or estimate individual-level determinants. A descriptive approach is appropriate for summarizing national trends when the available data are presented as aggregate prevalence estimates from official public sources [1], [2]. Therefore, the findings of this study are interpreted as descriptive evidence for public health and nutrition policy discussion.

The study focused on three major forms of child undernutrition among children under five: stunting, wasting, and underweight. These indicators are widely used in national and global nutrition monitoring because they reflect different dimensions of nutritional deprivation and child growth failure [7], [8]. Stunting indicates long-term or chronic undernutrition, wasting reflects acute undernutrition, and underweight represents low weight-for-age that may be influenced by either chronic or acute nutritional problems [7], [11]. By examining these three indicators together, the study provides a broader picture of child undernutrition trends in Indonesia.

This study did not use primary data collection, interviews, household surveys, or anthropometric measurement conducted by the authors. Instead, it relied on secondary data that had already been collected, processed, and published by official national institutions and international organizations. The



main advantage of this approach is that it allows the use of nationally representative data for policy-oriented analysis [1], [3], [5]. However, the interpretation remains limited to aggregate trends and does not permit causal inference at the individual or household level.

2.2 Data Sources

The main data source was the National Stunting Dashboard page on child nutrition problems among children under five in Indonesia. This dashboard presents maps and trend information for stunting, wasting, and underweight from 2018 to 2024 [1]. The dashboard identifies the underlying data sources as Riskesdas 2018, SSGBI/SSGI 2019, SSGI 2021, SSGI 2022, SKI 2023, and SSGI 2024 [1]. These sources represent major national health and nutrition surveys used by the Government of Indonesia to monitor child nutritional status.

Additional official documents were used to support interpretation and ensure consistency with national nutrition reporting. These included the *Survei Status Gizi Indonesia 2024 dalam Angka*, the *Laporan Nasional Riskesdas 2018*, the *Buku Saku Hasil Survei Status Gizi Indonesia 2022*, and the *Survei Kesehatan Indonesia 2023 dalam Angka* [2]–[5]. UNICEF Indonesia's *Update Gizi Indonesia* was also used to contextualize recent progress in child nutrition indicators and policy priorities [6]. These documents were selected because they are official or institutional sources directly related to child nutrition surveillance in Indonesia.

Global references were also used to define the indicators and interpret the public health relevance of child undernutrition. The WHO Child Growth Standards provide the anthropometric basis for classifying child growth status using height-for-age, weight-for-height, and weight-for-age indices [7]. The UNICEF/WHO/World Bank joint malnutrition estimates provide global context for interpreting national child malnutrition trends [8]. Other international references were used to support the discussion of nutrition strategy, complementary feeding, and wasting prevention [9]–[11].

2.3 Study Variables and Indicator Definitions

The variables analyzed in this study were the national prevalence of stunting, wasting, and underweight among children under five. The National Stunting Dashboard defines stunting as the combined category of short and very short children based on height-for-age [1]. This indicator reflects impaired linear growth and is commonly interpreted as a marker of chronic undernutrition, repeated infection, poor dietary intake, and inadequate care over a prolonged period [7], [17]. Because of its long-term consequences, stunting remains one of the central indicators in Indonesia's national nutrition policy [12], [13].

Wasting was defined as the combined category of thin and severely thin children based on weight-for-height [1]. This indicator reflects acute undernutrition and may be associated with recent food deprivation, illness, infection, or rapid weight loss [7], [11]. Wasting is important because it is closely related to immediate health risks and may increase vulnerability to morbidity and mortality if not addressed early [11], [14]. Therefore, reductions in wasting are essential for improving child survival and health outcomes.

Underweight was defined as the combined category of undernutrition and severe undernutrition based on weight-for-age [1]. Unlike stunting and wasting, underweight is a composite indicator that may reflect either chronic or acute nutritional problems [7]. A child may be underweight because of long-term growth faltering, recent weight loss, or both conditions occurring together. For this reason, underweight was interpreted as a complementary indicator that helps describe the overall burden of child undernutrition in Indonesia [8], [15].

2.4 Data Extraction and Analysis

Data were extracted from the national trend values displayed in the National Stunting Dashboard for the years 2018, 2019, 2021, 2022, 2023, and 2024 [1]. The year 2020 was not included because the dashboard series does not present a national estimate for that year. The extracted values were organized into a tabular format according to year and indicator. This process allowed comparison of changes in stunting, wasting, and underweight over the study period.

The analysis was conducted descriptively by comparing prevalence values across years and indicators. Absolute change was calculated by subtracting the 2018 prevalence from the 2024



prevalence. A negative value indicated a reduction in prevalence, while a positive value would indicate an increase. Relative change was calculated by dividing the absolute change by the 2018 prevalence and expressing the result as a percentage.

The study also compared the magnitude of change across the three indicators. This comparison was used to identify which indicators showed stronger reductions and which indicators remained persistent challenges. Stunting, wasting, and underweight were interpreted together because each indicator reflects a different dimension of child undernutrition [7], [8]. The analysis did not include statistical testing, regression modeling, or province-level multivariate analysis because the study was designed as a national descriptive trend analysis.

2.5 Ethical Considerations and Study Limitations

Ethical approval was not required for this study because it used publicly available aggregate data from official dashboards and published reports. The analysis did not involve human participants, direct contact with respondents, individual-level records, household identifiers, names, addresses, or other personal information. All data were already presented in summarized form by national or institutional sources [1]–[6]. Therefore, the study posed no risk to individual privacy or confidentiality.

Several limitations should be considered when interpreting the findings. First, the analysis was based on aggregate national prevalence values, so it could not identify individual, household, community, or regional determinants of undernutrition. Second, the study did not conduct statistical significance testing because the dashboard presents summary prevalence data rather than raw survey microdata. Third, differences in survey design, timing, and data collection procedures across Riskesdas, SSGI, SKI, and related surveys may affect direct year-to-year comparability [1], [3], [5].

Despite these limitations, the use of official national dashboard data provides a useful overview of child undernutrition trends in Indonesia. National monitoring systems are important for assessing progress, identifying remaining public health burdens, and supporting policy decisions [1], [12], [13]. The findings should therefore be understood as descriptive evidence for strengthening nutrition policy, improving intervention targeting, and sustaining efforts to reduce stunting, wasting, and underweight among Indonesian children under five.

3. Results

This section presents the descriptive findings on national trends in child undernutrition in Indonesia from 2018 to 2024. The results are organized into five subsections covering stunting, wasting, underweight, comparative changes across indicators, and the remaining nutritional burden in 2024. The analysis begins with a narrative description of each indicator to clarify the direction of change over time. The detailed prevalence values are presented after the three main indicators have been discussed so that the table supports the interpretation rather than interrupting the flow of the results.

3.1 National Trend of Stunting among Children Under Five

Stunting showed the clearest reduction among the three child undernutrition indicators during the 2018–2024 period. The prevalence declined from 30.8% in 2018 to 27.7% in 2019, then continued to fall to 24.4% in 2021 and 21.6% in 2022 [1]. The reduction became slower between 2022 and 2023, when the prevalence changed only slightly from 21.6% to 21.5% [1]. In 2024, stunting declined further to 19.8%, indicating that the national prevalence had fallen below 20% [1], [2]. This pattern suggests that Indonesia achieved measurable progress in reducing chronic undernutrition among children under five.

The overall reduction in stunting from 2018 to 2024 was 11.0 percentage points. This decline is consistent with Indonesia's policy focus on accelerating stunting reduction through nutrition-specific and nutrition-sensitive interventions [12], [13]. However, the 2024 prevalence remained within the medium category according to the National Stunting Dashboard [1]. This means that stunting reduction has progressed, but the problem has not yet been fully resolved as a public health issue. Therefore, the stunting trend should be interpreted as an important achievement



that still requires sustained policy attention.

Stunting remains a major indicator because it reflects long-term nutritional deprivation, repeated infection, inadequate child feeding, and broader socioeconomic constraints [17]–[19]. The downward trend indicates that national and local interventions may have contributed to improvement, but the slower decline after 2022 suggests that future progress may become more difficult. Further reduction will likely require stronger integration of maternal nutrition, infant and young child feeding, sanitation, health services, and household welfare interventions [10], [12], [16]. Thus, stunting remains central to child nutrition policy, even though the trend shows substantial improvement.

3.2 National Trend of Wasting among Children Under Five

Wasting showed a more fluctuating trend than stunting during the observed period. The prevalence declined from 10.2% in 2018 to 7.4% in 2019 and decreased slightly again to 7.1% in 2021 [1]. However, wasting increased to 7.7% in 2022 and 8.5% in 2023 before returning to 7.4% in 2024 [1]. This pattern indicates that acute undernutrition did not follow a consistent downward trajectory. Compared with stunting, wasting appears more sensitive to short-term changes in food intake, illness, household vulnerability, and access to health and nutrition services.

The net reduction in wasting between 2018 and 2024 was 2.8 percentage points. Although this shows improvement, the increase between 2021 and 2023 indicates that the burden of wasting can rise again when underlying conditions become less favorable. Wasting reflects acute weight loss or failure to gain weight and is commonly associated with recent illness, inadequate food consumption, or sudden household-level stress [7], [11]. Because wasting is associated with immediate health risks among children under five, prevention and early management remain essential components of child nutrition policy [11], [14]. Therefore, the fluctuating trend suggests that wasting requires continuous surveillance and rapid response systems.

In 2024, wasting was recorded at 7.4% and categorized as medium by the National Stunting Dashboard [1]. This classification shows that acute undernutrition remains a relevant public health concern. The decline from 8.5% in 2023 to 7.4% in 2024 is encouraging, but the previous increase demonstrates that progress is not always stable. This finding supports the need for early detection through growth monitoring, timely referral, and effective management of acute malnutrition. Nutrition services should remain responsive during periods of food price instability, disease outbreaks, and disruptions in health service access.

3.3 National Trend of Underweight among Children Under Five

Underweight showed the slowest improvement among the three indicators. The prevalence declined only from 17.7% in 2018 to 16.8% in 2024, representing a reduction of 0.9 percentage points [1]. Unlike stunting, which showed a clearer downward trend, underweight remained above 15% in all observed years [1]. This indicates that low weight-for-age among children under five remains a persistent nutrition problem in Indonesia. The limited decline also suggests that improvement in stunting has not automatically translated into substantial improvement in weight-related nutritional status.

The underweight trend fluctuated across the study period. The prevalence decreased from 17.7% in 2018 to 16.3% in 2019, increased to 17.0% in 2021 and 17.1% in 2022, declined to 15.9% in 2023, and then increased again to 16.8% in 2024 [1]. This pattern suggests that underweight may be influenced by both chronic and acute nutritional pressures. Because underweight is based on weight-for-age, it may reflect long-term growth faltering, recent weight loss, or both conditions occurring together [7], [8]. Therefore, underweight provides a complementary view of child undernutrition that cannot be fully captured by stunting or wasting alone.

In 2024, underweight was categorized as very high by the National Stunting Dashboard [1]. This category is important because it shows that underweight remained a serious national problem even when stunting had declined below 20%. The result suggests that national nutrition policy should not rely only on stunting trends to evaluate overall child nutrition improvement. Underweight reduction requires stronger attention to dietary adequacy, complementary feeding quality, illness prevention, and household food security [10], [16], [18]. The detailed national



prevalence values for the three indicators are presented in Table 1.

Table 1. National prevalence of stunting, wasting, and underweight among children under five in Indonesia,

Year	Stunting (%)	Wasting (%)	Underweight (%)
2018	30.8	10.2	17.7
2019	27.7	7.4	16.3
2021	24.4	7.1	17.0
2022	21.6	7.7	17.1
2023	21.5	8.5	15.9
2024	19.8	7.4	16.8

3.4 Comparative Changes across Undernutrition Indicators

The patterns described above indicate that the three indicators improved at different rates. To clarify the magnitude of change, Table 2 compares the 2018 and 2024 prevalence values and presents both absolute and relative changes. This comparison is important because a decline in one indicator does not necessarily mean that all forms of child undernutrition improved equally. Stunting, wasting, and underweight represent different dimensions of nutritional problems, so each indicator must be interpreted separately [7], [8]. The comparison therefore helps identify which nutrition problems showed stronger improvement and which remained persistent.

Table 2. Absolute and relative changes in child undernutrition indicators, 2018–2024

Indicator	2018 (%)	2024 (%)	Absolute change (pp)	Relative change (%)
Stunting	30.8	19.8	-11.0	-35.7
Wasting	10.2	7.4	-2.8	-27.5
Underweight	17.7	16.8	-0.9	-5.1

As shown in Table 2, stunting experienced the largest absolute decline, decreasing by 11.0 percentage points from 30.8% in 2018 to 19.8% in 2024 [1]. In relative terms, this represented a 35.7% reduction from the 2018 baseline. Wasting declined by 2.8 percentage points, equivalent to a 27.5% relative reduction [1]. Underweight showed the smallest reduction, with only a 0.9 percentage-point decline or a 5.1% relative reduction [1]. These results demonstrate that progress in reducing child undernutrition has been uneven across indicators.

The comparison indicates that Indonesia made stronger progress in reducing chronic undernutrition than in reducing low weight-for-age. Stunting showed the clearest improvement, while wasting improved but remained unstable across years. Underweight remained comparatively persistent and showed only limited reduction. This pattern suggests that national nutrition monitoring should continue to include all three indicators rather than focusing only on stunting. The overall visual pattern of these changes is presented in Figure 1.

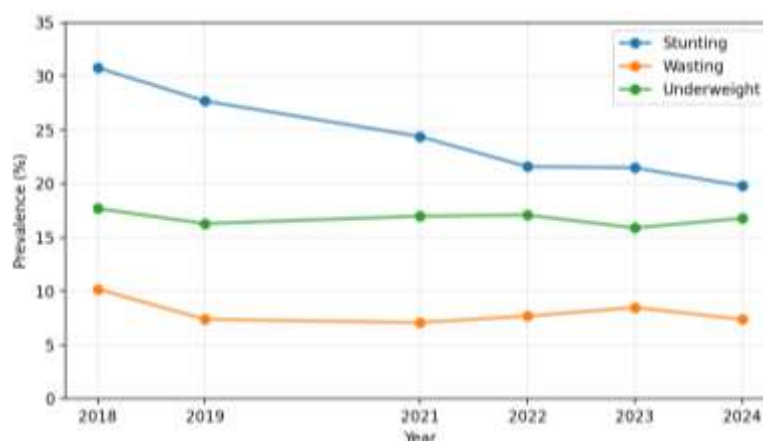


Figure 1. Trends in child undernutrition indicators in Indonesia, 2018-2024



Figure 1 supports the interpretation presented in Tables 1 and 2. The line for stunting shows a clear downward trajectory, while wasting fluctuates and underweight remains relatively stable at a high level. This visual comparison strengthens the finding that child undernutrition reduction in Indonesia has been uneven. It also highlights the need for a multidimensional nutrition policy that addresses chronic growth failure, acute malnutrition, and low weight-for-age simultaneously. Therefore, future monitoring should maintain a broad indicator framework.

3.5 Summary of 2024 Nutritional Status and Remaining Challenges

The trend analysis shows that Indonesia made progress between 2018 and 2024, but the 2024 status still indicates remaining public health challenges. Table 3 summarizes the final-year prevalence and dashboard category for each indicator. This summary is useful because it shows not only whether each indicator declined over time, but also whether the 2024 burden remains high enough to require continued policy intervention. The categories help identify which indicator should receive stronger attention in future nutrition programming.

Table 3. National status and dashboard category of undernutrition indicators in 2024

Indicator	2024 prevalence (%)	Dashboard category
Stunting	19.8	Medium
Wasting	7.4	Medium
Underweight	16.8	Very high

As shown in Table 3, stunting was recorded at 19.8% and categorized as medium, while wasting was recorded at 7.4% and also categorized as medium [1]. Underweight was recorded at 16.8% and categorized as very high [1]. These categories show that Indonesia has achieved measurable progress but continues to face substantial child nutrition challenges. The remaining burden is especially visible in the underweight indicator. This result indicates that child undernutrition in Indonesia cannot be assessed only from the decline in stunting.

The 2024 results also show that different policy responses are needed for each indicator. Stunting reduction requires sustained long-term investment in maternal nutrition, infant and young child feeding, sanitation, health services, and poverty-sensitive interventions [12], [13], [18], [19]. Wasting prevention requires early detection, management of acute malnutrition, and timely response to food and health shocks [11]. Underweight reduction requires integrated approaches that improve dietary adequacy, feeding quality, disease prevention, and household-level nutrition resilience [10], [16]. Therefore, nutrition policy should address both chronic and acute dimensions of child undernutrition.

Overall, the results show that Indonesia made important progress in reducing child undernutrition between 2018 and 2024, especially for stunting. However, the slower decline in underweight and the fluctuating trend in wasting show that progress remains incomplete. The National Stunting Dashboard provides useful evidence for monitoring national progress and identifying remaining policy priorities. The findings also emphasize the need to strengthen interventions that address multiple forms of child undernutrition simultaneously. Therefore, future nutrition programs should maintain stunting reduction while giving greater attention to wasting and underweight.

4. Discussion

The findings show that Indonesia achieved notable progress in reducing stunting between 2018 and 2024. The 11.0 percentage-point decline in stunting indicates that national efforts to improve child nutrition, maternal and child health services, and stunting prevention have produced measurable gains. This progress is consistent with national strategies that emphasize convergence, early-life interventions, and multisectoral coordination in accelerating stunting reduction [12], [13]. However, the remaining prevalence of 19.8% in 2024 still indicates that stunting remains a public



health issue requiring continued attention [1]. Sustained reductions will likely require stronger implementation quality, improved targeting, and better use of data for decision-making.

The wasting trend suggests that acute undernutrition was more unstable than chronic undernutrition during the observed period. Although wasting declined from 10.2% in 2018 to 7.4% in 2024, the increase in 2022 and 2023 indicates that children may remain vulnerable to short-term nutritional shocks [1]. Wasting is commonly associated with recent food shortage, illness, poor dietary intake, and limited access to health services [7], [11]. The 2024 reduction is encouraging, but the medium category reported by the dashboard shows that wasting still requires preventive and curative strategies [1]. These strategies should include early detection, growth monitoring, treatment of illness, and timely nutritional support for children at risk.

Underweight appears to be the most persistent challenge in this dashboard-based analysis. Unlike stunting, which declined substantially, underweight decreased only slightly from 17.7% in 2018 to 16.8% in 2024 and remained in the very high category [1]. This may indicate that many children continue to experience insufficient weight gain, repeated illness, inadequate complementary feeding, or combined chronic and acute nutritional stress. Literature on child undernutrition in Indonesia has shown that determinants include poor diet quality, low household socioeconomic status, inadequate sanitation, infections, maternal factors, and limited health service access [17], [19]. Therefore, underweight should be treated as a priority indicator alongside stunting and wasting.

The results also show the value of the National Stunting Dashboard as a public nutrition monitoring tool. By presenting trends across multiple undernutrition indicators, the dashboard supports evidence-based policy discussion and helps identify areas where progress is uneven [1]. However, dashboard-based analysis has limitations because it uses aggregate data and cannot explain individual-level determinants or causal pathways. Differences across survey years may also reflect methodological differences, sampling design, or timing of data collection. Future studies should complement dashboard analysis with microdata analysis and district-level investigation to understand why underweight remains high and why wasting fluctuates.

The policy implication of this study is that Indonesia should maintain stunting reduction efforts while strengthening integrated actions for wasting and underweight. Interventions should include improved complementary feeding, maternal nutrition support, management of childhood illness, sanitation improvement, health service access, and social protection for vulnerable households [10], [11], [13], [16]. Nutrition programs also need to use the dashboard to identify populations and areas requiring more intensive support. Because underweight remained very high in 2024, monitoring should include all three indicators rather than treating stunting as the only measure of progress. This broader approach can support more balanced child nutrition policy and accelerate improvement in child health outcomes.

5. Conclusions

Indonesia made substantial progress in reducing child stunting between 2018 and 2024. Based on the National Stunting Dashboard, stunting prevalence declined from 30.8% in 2018 to 19.8% in 2024, representing an 11.0 percentage-point reduction [1]. This finding indicates that national efforts to accelerate stunting prevention have produced measurable improvement over time. The decline is also consistent with Indonesia's multisectoral policy direction that emphasizes convergence, early-life nutrition, maternal and child health services, sanitation, and social protection [12], [13]. However, the 2024 prevalence remained in the medium category, meaning that stunting continues to require sustained policy attention [1].

Wasting also declined from 10.2% in 2018 to 7.4% in 2024, but the trend was not fully stable across the observed period [1]. The increase in wasting during 2022 and 2023 shows that acute undernutrition can fluctuate and may be sensitive to short-term shocks, such as illness, food insecurity, poor dietary intake, or disruption in service access [7], [11]. In contrast, underweight showed only a small reduction from 17.7% in 2018 to 16.8% in 2024 and remained in the very high category [1]. These findings show that progress in reducing child undernutrition has been uneven across indicators. Therefore, wasting and underweight should receive greater



policy attention alongside continued stunting reduction efforts.

The National Stunting Dashboard provides useful evidence for monitoring national nutrition progress and identifying remaining challenges. By presenting trend data for stunting, wasting, and underweight, the dashboard supports evidence-based discussion on child nutrition policy and program priorities [1]. However, dashboard-based findings should be interpreted as descriptive trends because aggregate data cannot explain causal mechanisms or individual-level determinants. Differences across survey years may also reflect variation in survey timing, sampling design, and data collection procedures. For this reason, dashboard analysis should be complemented with further studies using individual-level SSGI or SKI microdata to examine determinants of underweight and wasting in more detail [2], [5].

Overall, stronger integrated nutrition programs are needed to sustain stunting reduction and accelerate improvement in wasting and underweight among Indonesian children under five. Future interventions should strengthen complementary feeding, maternal nutrition support, management of childhood illness, sanitation improvement, health service access, and social protection for vulnerable households [10], [11], [16]. District-level analysis may also help identify priority areas where the burden of child undernutrition remains high. Monitoring should continue to include all three indicators because stunting, wasting, and underweight reflect different dimensions of child nutritional status [7], [8]. A broader indicator-based approach can support more balanced nutrition policy and help accelerate improvement in child health outcomes.

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