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Health Equity Coverage Recommendation Form

Title:	Health Equity in Asthma
Date of Last Review:	11/1/24

Research Section

Background

The National Institute of Health defines asthma as a chronic condition that affects the airways in the lungs. Asthma affects people of all ages but often starts in childhood. Asthma symptoms include wheezing, coughing, shortness of breath or tightness in the lungs. These symptoms can be made worse by “triggers” which are things such as pollen, air pollution, infections, exercise, or cold air. When symptoms are very bad a person can experience an asthma attack which is when a swelling or tightening that narrows the airways occurs, making it harder to breathe.[1]

Inequities discussed on the Office of Minority Health Website[2]

***Asthma and Black/African Americans*:**[3]

- From 2018-2020, 4 million non-Hispanic Black individuals (adults and children) reported that they currently have asthma.
- Non-Hispanic African Americans were 30 percent more likely to have asthma than non-Hispanic white Americans, in 2019.
- In 2020, non-Hispanic Black individuals were almost three times more likely to die from asthma related causes than the non-Hispanic white population.
- In 2020, non-Hispanic African American children had a death rate 7.6 times that of non-Hispanic white children.
- Non-Hispanic Black children were 4.5 times more likely to be admitted to the hospital for asthma, as compared to non-Hispanic white children, in 2019.
- While all the causes of asthma remain unclear, children exposed to secondhand tobacco smoke exposure are at increased risk for acute lower respiratory tract infections, such as bronchitis. Children living below or near the poverty level are more likely to have high levels of blood cotinine, a breakdown product of nicotine, than children living in higher income families.

***Asthma and American Indians/Alaska Natives*:**[4]

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- In 2018, 278,000 American Indian/Native American adults reported that they currently have asthma.
- In 2018, American Indian/Alaska Native children were almost twice as likely to ever have had asthma as non-Hispanic white children.
- Of note, data on asthma conditions for American Indian/Alaska Natives is limited.

***Asthma and Hispanic/Latino Americans*:**[5]

- In 2021, 3.9 million Hispanic individuals reported that they currently have asthma.
- Puerto Rican Americans had twice the asthma rate as compared to the overall Hispanic population, in 2018.
- Hispanic Americans are twice as likely to visit the emergency department for asthma, as compared to non-Hispanic white individuals.
- Puerto Rican children are three times as likely to have asthma, as compared to non-Hispanic white individuals.

Review of current, peer-reviewed evidence from established sources

- In 2017, McCallum and colleagues published a Cochrane review addressing culture-specific programs for children and adults from minority groups who have asthma. In this review update, an additional three studies and 220 participants were added. A total of seven RCTs (two in adults, four in children, one in both children and adults) with 837 participants (aged from one to 63 years) with asthma from ethnic minority groups were eligible for inclusion in this review. The methodological quality of studies ranged from very low to low. For our primary outcome (asthma exacerbations during follow-up), the quality of evidence was low for all outcomes. In adults, use of a culture-specific program, compared to generic programs or usual care did not significantly reduce the number of participants from two studies with 294 participants for: exacerbations with one or more exacerbations during follow-up (odds ratio (OR) 0.80, 95% confidence interval (CI) 0.50 to 1.26), hospitalizations over 12 months (OR 0.83, 95% CI 0.31 to 2.22) and exacerbations requiring oral corticosteroids (OR 0.97, 95% CI 0.55 to 1.73). However, use of a culture-specific program improved asthma quality of life scores in 280 adults from two studies (mean difference (MD) 0.26, 95% CI 0.17 to 0.36) (although the MD was less than the minimal important difference for the score). In children, use of a culture-specific program was superior to generic programs or usual care in reducing severe asthma exacerbations requiring hospitalization in two studies with 305 children (rate ratio 0.48, 95% CI 0.24 to 0.95), asthma control in one study with 62 children and QoL in three studies with 213 children, but not for the number of exacerbations during follow-up (OR 1.55, 95% CI 0.66 to 3.66) or the number of exacerbations (MD 0.18, 95% CI -0.25 to 0.62) among 100 children from two studies.

  Authors concluded that available evidence showed that culture-specific education programs for adults and children from minority groups are likely effective in improving asthma-related outcomes. This review was limited by few studies and evidence of very low to low quality. Not all asthma-related outcomes improved with culture-specific programs for both adults and

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children. Nevertheless, while modified culture-specific education programs are usually more time intensive, the findings of this review suggest using culture-specific asthma education programs for children and adults from minority groups. However, more robust RCTs are needed to further strengthen the quality of evidence and determine the cost-effectiveness of culture-specific programs.[6]

Review of clinical practices guidelines from professional associations and societies in regard to these findings

***U.S. Department of Health and Human Services*:**[7]

In 2020, the U.S. Department of HHS, published focused updates to the Asthma Management Guidelines. Authors noted that exacerbations are more common in ethnic minority populations and individuals with lower socioeconomic status and that reductions in exacerbations by an intervention might disproportionately affect such individuals. Nonetheless, authors did not make any distinct recommendations in care for minority populations.

Do any of these findings relate to any of our current policies?

None of the above findings are applicable to any of our current medical policies at this time.

Summary

Asthma disproportionately affects minority populations in the United States. African Americans are 30 percent more likely to have asthma, as compared to their white adult counterparts. American Indian/Alaska Natives are almost twice as likely than non-Hispanic white adults to have asthma. Despite these discrepancies, evidence-based clinical practice guidelines state that optimal approaches for reducing recurrent asthma risk in high-risk populations are unclear. While all causes of asthma remain unclear, children exposed to secondhand tobacco smoke exposure are at increased risk for acute lower respiratory tract infections, such as bronchitis. Children living below or near the poverty level are more likely to have high levels of blood cotinine, a breakdown product of nicotine, than children living in higher income families. Nonetheless, further research is required to determine the best methods for reducing care gaps for these populations. For this reason, there are no distinct utilization and medical necessity criteria for vulnerable populations regarding asthma care.

Recommendation:	No recommended health equity updates to policies at this time. We will continue to review data and professional organization recommendations for future health equity updates.

References

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CORE Revision History Section

DATE	SUMMARY OF CHANGES
09/18/2023	Initial review.
10/28/2024	Annual update. No changes.

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