

RESEARCH BRIEF

JUNE 2021

Over Half of Massachusetts Residents Report Unmet Health-Related Social Needs in Their Families

Findings from the Massachusetts Health Insurance Survey

Summary

Issue: Unmet health-related social needs (HRSNs), such as food insecurity, housing instability, financial strain, and employment instability, are associated with poorer health, compromised health care access, and higher health care costs. Little is known about the prevalence of unmet HRSNs in Massachusetts.

Objective: To document the prevalence of unmet HRSNs across Massachusetts and among population subgroups known to face economic and health care barriers.

Study Design: Using CHIA's 2019 Massachusetts Health Insurance Survey (MHIS) follow-up study, this research brief presents rates of unmet HRSNs overall and among population subgroups defined by family income, race/ethnicity, and family type. Respondents who reported food insecurity, housing instability, financial strain, and/or employment instability in their families were considered to have an unmet HRSN.

Key Findings: The majority (52%) of Massachusetts residents and their families had at least one unmet HRSN in 2019. Multiple unmet HRSNs were less common, but still affected 34% of residents and their families. Food insecurity, housing instability, and employment instability each affected about a quarter of residents and their families. The most common unmet HRSN was financial strain, which affected 34% of residents and their families. Unmet HRSNs affected residents and their families at all income levels, across all race/ethnicity groups, and across all family types, but were most common for residents with very low or low income, residents of color, and residents in single-parent families.

Introduction

Social determinants of health (SDOH) are the physical, economic, and social conditions in which people are born, work, and live. It is well documented that SDOH impact health, health care access, and health care costs.^{1,2,3,4,5,6,7} Important examples of SDOH include food availability in the community (e.g., grocery stores and farmers' markets), housing costs and quality, air and water quality, employment opportunities, and transportation availability, among many other community dimensions. Health-related social needs (HRSNs), in contrast, are the immediate needs of an individual or family that influence their health care access, health care costs, and overall health. HRSNs may be influenced both by their community's SDOH and by individual circumstances. For example, a lack of grocery stores is a SDOH for that community, while an individual family's lack of access to food is an unmet HRSN that is related to their individual circumstances and their community's SDOH.^{8,9}

Health providers are increasingly incorporating screening for unmet HRSNs into patient care to inform treatment plans, including referrals to services outside of the health care system. For example, screening for food, housing, transportation, and safety issues are a key component of the Centers for Medicare and Medicaid Services (CMS) Accountable Health Communities Model.¹⁰ While screening for and addressing unmet HRSNs for individual patients does not address the SDOH that affect the overall health of the community,¹¹ there is evidence that addressing individual- or family-level unmet HRSNs increases health care access, reduces health care costs, and improves health outcomes.¹²

To better understand how unmet HRSNs are experienced by families across the state, it is important to document the prevalence of unmet HRSNs for Massachusetts residents as a whole and among population subgroups who are known to face economic and health care barriers. This research brief takes advantage of new data from the 2019 Massachusetts Health Insurance Survey (MHIS) to present rates of unmet HRSNs among Massachusetts residents and their families.¹³ The MHIS provides information on health insurance coverage, health care access and use, and

¹ Stahre, M., et al., Housing Insecurity and the Association With Health Outcomes and Unhealthy Behaviors, Washington State, 2011. *Prev Chronic Dis*, 2015. 12: p. E109.

² Tsai, J., et al., Longitudinal study of the housing and mental health outcomes of tenants appearing in eviction court. *Soc Psychiatry Psychiatr Epidemiol*, 2020.

³ Pak, T.Y. and G. Kim, Food stamps, food insecurity, and health outcomes among elderly Americans. *Prev Med*, 2020. 130: p. 105871.

⁴ Loftus, E.I., et al., Food insecurity and mental health outcomes among homeless adults: a scoping review. *Public Health Nutr*, 2020: p. 1-12.

⁵ Pantell, M.S., et al., Associations between unstable housing, obstetric outcomes, and perinatal health care utilization. *Am J Obstet Gynecol MFM*, 2019. 1(4): p. 100053.

⁶ Herber, G.C., et al., Single transitions and persistence of unemployment are associated with poor health outcomes. *BMC Public Health*, 2019. 19(1): p. 740.

⁷ Janlert, U., A.H. Winefield, and A. Hammarstrom, Length of unemployment and health-related outcomes: a life-course analysis. *Eur J Public Health*, 2015. 25(4): p. 662-7.

⁸ Green, K., Zook, M., When Talking About Social Determinants, Precision Matters. Health Affairs Blog, October 29, 2019.

⁹ Alderwick, H., Gottlieb, L.M., Meanings and Misunderstandings: A Social Determinants of Health Lexicon for Health Care Systems. *The Milbank Quarterly*, June 2019. 97.

¹⁰ Billioux, A.V., K.; Anthony, S.; Alley D., Standardized Screening for Health-Related Social Needs in Clinical Settings The Accountable Health Communities Screening Tool. *National Academy of Medicine Perspectives*, 2017: p. 1-9.

¹¹ Castrucci, B., Auerbach, J., Meeting Individual Social Needs Falls Short Of Addressing Social Determinants Of Health,. Health Affairs Blog, 2019.

¹² International, R., Accountable Health Communities (AHC) Model Evaluation: First Evaluation Report. 2020, Center for Medicare & Medicaid Services.

¹³ For this measure of family, family members include the resident's spouse as well as parents and children or stepchildren under 26 years of age who are living with them.

health care affordability. A new HRSN module was included in the follow-up study to the survey in 2019. Residents who reported any food insecurity, housing instability, financial strain, and/or employment instability in their families were considered to have an unmet HRSN.

Measure Definitions*

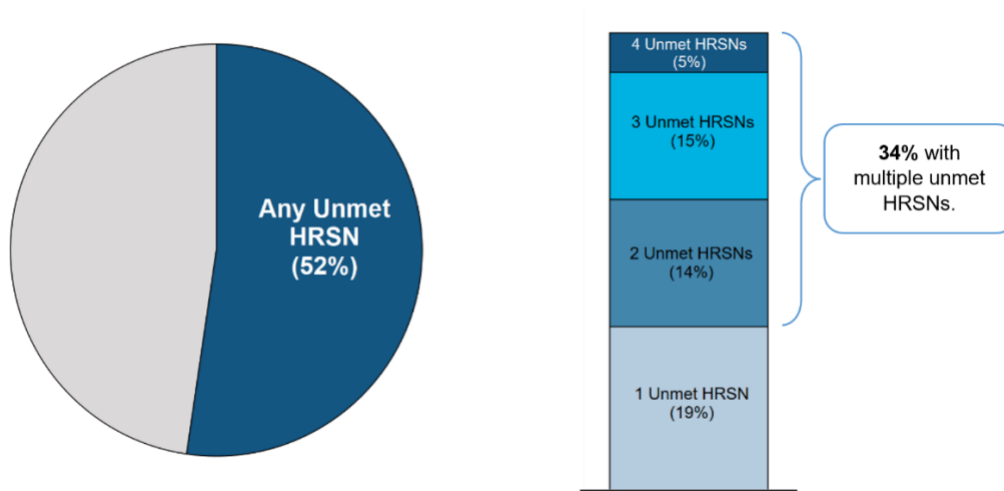
- **Food Insecurity:** Within the past 12 months, resident or a member of their family *sometimes, often, or always* experienced any of the following:
 - Worried that food will run out before there was money to buy more
 - Food didn't last long enough
 - Hungry but couldn't afford food
 - Got emergency food from a church, food pantry, or food bank
- **Housing Instability:** Within the past 12 months, resident or a member of their family *sometimes, often, or always* experienced any of the following:
 - Worried about having a steady place to live
 - Problems paying rent or mortgage
 - Problems paying utilities (such as electricity, water, etc.)
- **Financial Strain:** Within the past 12 months, resident or a member of their family *sometimes, often, or always* experienced problems paying for any of the following:
 - Health Insurance Premiums
 - Medical Bills
 - Car Payments
 - Credit Card Payments
 - Student Loans
 - Other Loans/Debt
- **Employment Instability:** Resident or a member of their family experienced any of the following:
 - Difficulty finding or keeping a job
 - Nobody in the family having a stable, full-time job (among those with a worker in the family and at least one member of the family under 65)

* Food insecurity, housing instability, and financial strain are measured with questions that specify how frequently the resident and their family experienced the occurrence, whereas employment instability is measured with questions using binary (yes/no) responses. Additionally, the second employment instability question may capture those who choose not to have stable, full-time employment as well as those who desire stable, full-time employment, but are not able to attain it.

What share of Massachusetts residents and their families have unmet health-related social needs?

Over half (52%) of all Massachusetts residents reported at least one unmet HRSN in their families in 2019 and over one-third (34%) reported multiple HRSNs (Figure 1).

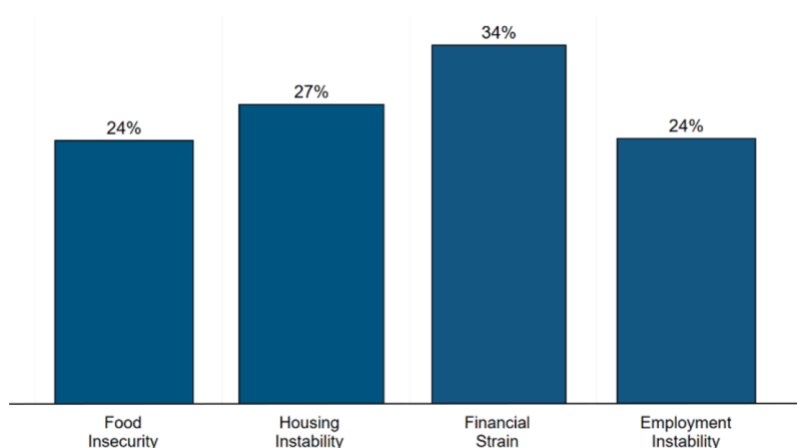
Figure 1. Prevalence and Number of Unmet HRSNs among Massachusetts Residents and their Families, 2019



Note: Percentage may not sum up to total due to rounding.

Food insecurity and housing instability affected about a quarter of Massachusetts residents and their families (24% and 27%, respectively). The most common unmet HRSN was financial strain, affecting 34% of residents and their families. Nearly one in four (24%) reported employment instability (Figure 2).

Figure 2. Prevalence of Types of Unmet HRSNs among Massachusetts Residents and their Families, 2019



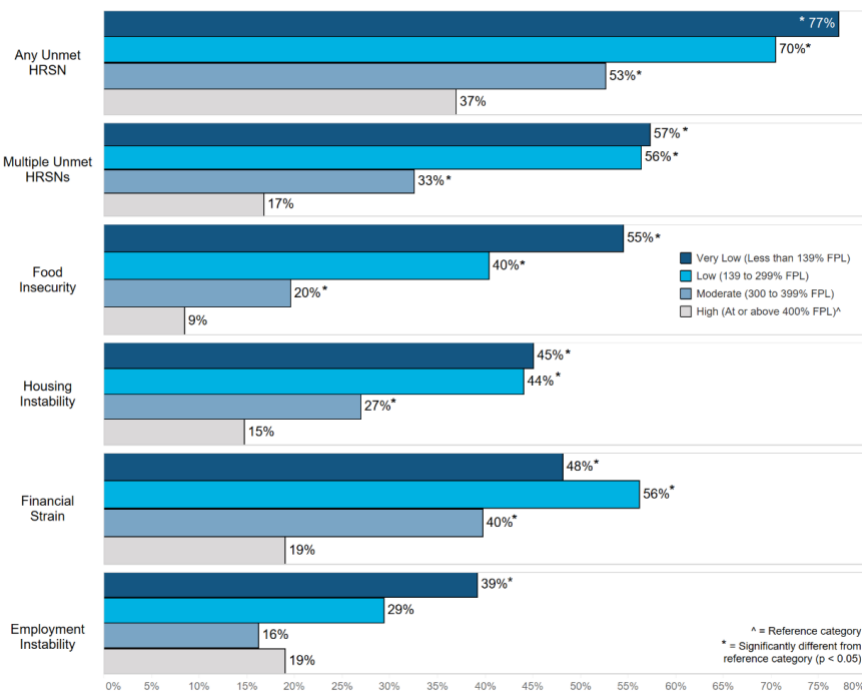
Which population subgroups are more likely to have unmet health-related social needs?

Very low- and low-income residents and their families experience greater levels of unmet health-related social needs.

Among Massachusetts residents with very low income (defined as family income less than 139% of the Federal Poverty Level or FPL), more than three-fourths (77%) had an unmet HRSN in their families in 2019 (Figure 3). The rate of any unmet HRSN decreases as income increases, as 70% of residents with low income (defined as family income from 139 to 299% of the FPL) and 53% of residents with moderate income (defined as family income from 300 to 399% of the FPL) had an unmet HRSN. More than half of very low- and low-income residents and their families reported multiple HRSNs (57% and 56%, respectively). Though less common, even residents with high income (defined as family income at or above 400% of the FPL) reported issues with at least one unmet HRSN (37%) and multiple HRSNs (17%).

Very low-, low-, and moderate-income residents were significantly more likely to report food insecurity, housing instability, and financial strain in their families compared to high-income residents. More than half of very low-income residents reported food insecurity (55%) and over 40% of residents with very low or low income reported housing instability. Similarly, very low-, low- and moderate-income residents were each at least twice as likely as high-income residents to experience financial strain (48%, 56%, and 40%, respectively, relative to 19%). Very low-income residents were also twice as likely to report employment instability compared to high-income residents (39% relative to 19%).

Figure 3. Rates of Unmet HRSNs among Massachusetts Residents and their Families by Family Income, 2019

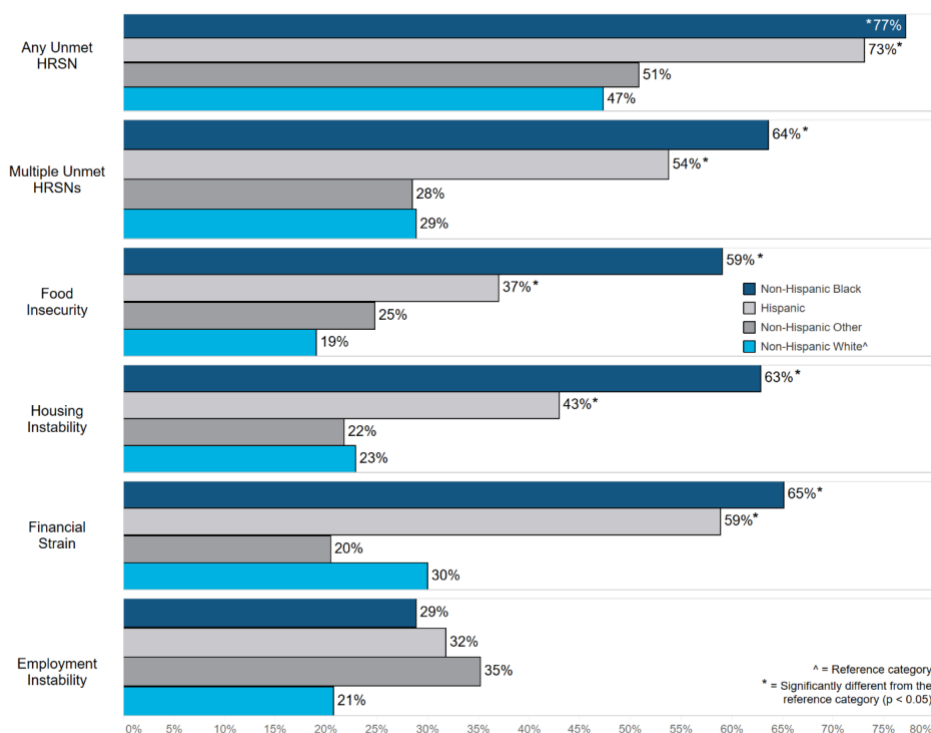


Residents of color and their families experience greater levels of unmet health-related social needs.

Unmet HRSNs are experienced disproportionately by non-Hispanic Black and Hispanic residents and their families relative to non-Hispanic White residents and their families. Over three-fourths (77%) of non-Hispanic Black residents and nearly three-fourths (73%) of Hispanic residents had an unmet HRSN in their families in 2019 (Figure 4). Most non-Hispanic Black and Hispanic residents also reported issues with multiple HRSNs (64% and 54%, respectively). Though less common than in other groups, non-Hispanic White residents and their families also reported at least one unmet HRSN (47%) and multiple HRSNs (29%) in their families.

Consistent with higher overall levels of unmet HRSNs, non-Hispanic Black and Hispanic residents were significantly more likely to report food insecurity, housing instability and financial strain than non-Hispanic White residents. The differences were particularly notable for non-Hispanic Black residents, where levels of unmet HRSN for all three measures were more than double those of non-Hispanic White residents.

Figure 4. Rates of Unmet HRSNs among Massachusetts Residents and their Families by Race/Ethnicity, 2019



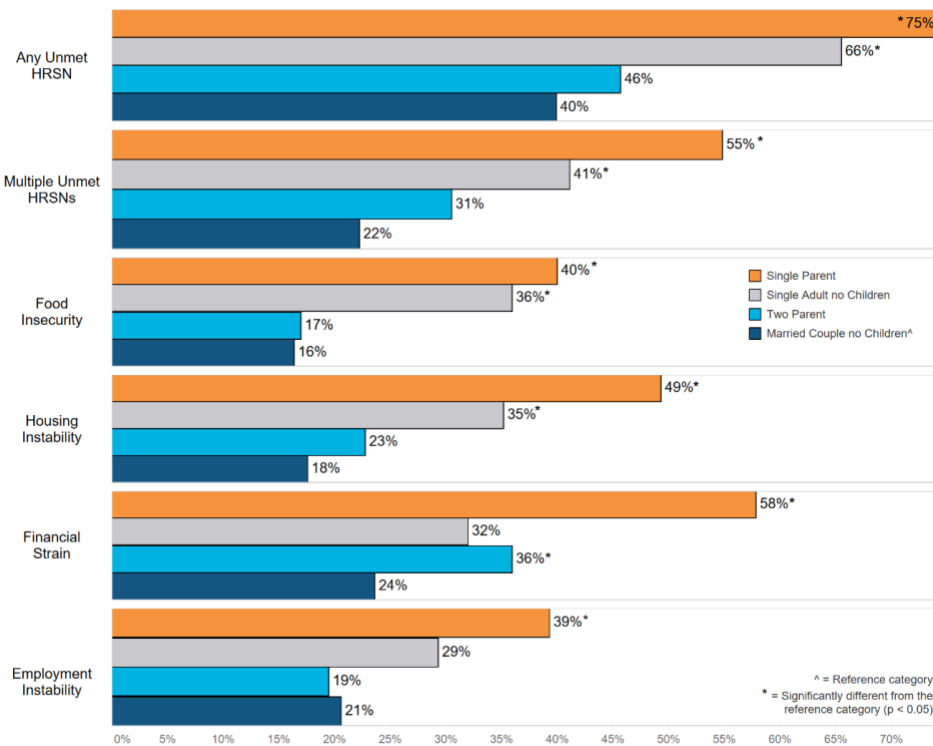
Residents in single-parent families experience greater levels of unmet health-related social needs.

Whether a family has children or is headed by a married couple, domestic partners, or an otherwise unmarried person influences that family's level of need and availability of resources. The combination of these factors results in stark differences in rates of unmet HRSNs by family type. Three-fourths (75%) of residents in single-parent families in Massachusetts had an unmet HRSN and over half (55%) had multiple unmet HRSNs in 2019 (Figure 5). Similarly, two-thirds (66%) of single adults without children had an unmet HRSN and 41% had multiple unmet HRSNs. It is

important to note that about 30% of families in Massachusetts without children are single or partnered elderly (65+) adults, and therefore these groups (i.e., single adults without children and married couples without children) are not homogenous in age or circumstance.

Residents in single-parent families were more likely to experience food insecurity (40%), housing instability (49%), financial strain (58%), and employment instability (39%) in their families compared to married couples without children (16%, 18%, 24%, and 21%, respectively). The differences in rates of unmet HRSNs between family types were particularly wide for financial strain, for which most residents in single-parent families reported issues.

Figure 5. Rates of Unmet HRSNs among Massachusetts Residents and their Families by Family Type, 2019



Discussion

Unmet HRSNs, including food insecurity, housing instability, financial strain, and employment instability, are associated with poorer health, compromised health care access and higher health care costs.^{14,15,16,17,18,19,20} This statewide analysis found that over half (52%) of Massachusetts residents experienced at least one unmet HRSN in their families in 2019. Unmet HRSNs were particularly high for residents with very low or low income, residents of color, and residents in single-parent families. These groups were significantly more likely to experience any unmet HRSN compared to residents with high income, non-Hispanic White residents, or residents in married couple families without children, respectively. The gaps in rates of unmet HRSNs were stark between population subgroups. Particularly striking, levels of food insecurity, housing instability, and financial strain for non-Hispanic Black residents and their families were more than double those of non-Hispanic White residents and their families. These individual-level disparities in HRSNs are likely rooted in community-level differences, as reflected in differences in SDOH, along with structural inequities that limit access to needed resources and are known to drive poorer health outcomes among marginalized communities based on race, ethnicity, and income.^{21,22,23}

This research brief addresses an important gap in our understanding of unmet HRSNs for Massachusetts residents by providing representative data for the Commonwealth. While it is difficult to compare these specific findings to those in other studies of unmet HRSNs because of differences in time periods, populations studied and HRSNs examined, the general patterns of these findings are consistent with prior work. Regardless of the population studied and the specific HRSNs examined, prior work also tends to find unmet HRSNs are more common among lower income and minority populations.^{24,25,26,27}

¹⁴ Stahre, M., et al., Housing Insecurity and the Association With Health Outcomes and Unhealthy Behaviors, Washington State, 2011. *Prev Chronic Dis*, 2015. 12: p. E109.

¹⁵ Tsai, J., et al., Longitudinal study of the housing and mental health outcomes of tenants appearing in eviction court. *Soc Psychiatry Psychiatr Epidemiol*, 2020.

¹⁶ Pak, T.Y. and G. Kim, Food stamps, food insecurity, and health outcomes among elderly Americans. *Prev Med*, 2020. 130: p. 105871.

¹⁷ Loftus, E.I., et al., Food insecurity and mental health outcomes among homeless adults: a scoping review. *Public Health Nutr*, 2020: p. 1-12.

¹⁸ Pantell, M.S., et al., Associations between unstable housing, obstetric outcomes, and perinatal health care utilization. *Am J Obstet Gynecol MFM*, 2019. 1(4): p. 100053.

¹⁹ Herber, G.C., et al., Single transitions and persistence of unemployment are associated with poor health outcomes. *BMC Public Health*, 2019. 19(1): p. 740.

²⁰ Janlert, U., A.H. Winefield, and A. Hammarstrom, Length of unemployment and health-related outcomes: a life-course analysis. *Eur J Public Health*, 2015. 25(4): p. 662-7.

²¹ Bailey, Z.D., et al., Structural racism and health inequities in the USA: evidence and interventions. *Lancet*, 2017. 389(10077): p. 1453-1463.

²² Bell, C.N. and J.L. Owens-Young, Self-Rated Health and Structural Racism Indicated by County-Level Racial Inequalities in Socioeconomic Status: The Role of Urban-Rural Classification. *J Urban Health*, 2020. 97(1): p. 52-61.

²³ Cunningham, P.J., Why Even Healthy Low-Income People Have Greater Health Risks Than Higher-Income People. The Commonwealth Fund, 2018.

²⁴ Pooler, J.L., S., Older Adults and Unmet Social Needs: Prevalence and Health Implications. AARP Foundation & IMPAQ International, 2017.

²⁵ Permanente, K., Social Needs in America. 2019.

²⁶ Cole, M.B. and K.H. Nguyen, Unmet social needs among low-income adults in the United States: Associations with health care access and quality. *Health Serv Res*, 2020. 55 Suppl 2: p. 873-882.

²⁷ Berkowitz, S.A. and S. Basu, Unmet Social Needs And Worse Mental Health After Expiration Of COVID-19 Federal Pandemic Unemployment Compensation. *Health Aff (Millwood)*, 2021. 40(3): p. 426-434.

High levels of unmet HRSNs for individuals and their families represent a lack of essential resources that may pose a threat to their health. Food security and housing, financial and employment stability are HRSNs that when not met, can interfere with an individual's or family's ability to access the health care they need and may contribute to higher health care costs overall. This analysis finds significant disparities in unmet HRSNs by income, race/ethnicity, and family type, which may contribute to health and health care inequities across the state.²⁸ As this analysis presents statewide rates in 2019, it will serve as an important baseline in understanding how residents' HRSNs have been impacted by the COVID-19 pandemic.

This research brief is CHIA's first step to document the burden of unmet HRSNs in Massachusetts, with newly collected data from the 2019 MHIS follow-up study. One limitation of this statewide analysis is that there are additional HRSNs, such as access to transportation, social isolation, stress levels, and interpersonal safety, that may affect Massachusetts residents and their families that were not captured in the 2019 MHIS. CHIA plans to incorporate additional domains into future surveys and to continue to refine these measurements in order to capture a more complete picture of the unmet HRSNs that are experienced by residents across the Commonwealth.

²⁸ Massachusetts State Health Assessment. 2017, Massachusetts Department of Public Health.

Appendix

TABLE 1. PREVALENCE OF UNMET HRSNS AMONG MASSACHUSETTS RESIDENTS AND THEIR FAMILIES	PERCENT WITH ANY UNMET HRSN
Any Unmet HRSN	52.3%
Multiple Unmet HRSNs	33.9%
Food Insecurity	24.0%
Worried that food will run out before there is money to buy more	15.3%
The food bought does not last long enough	19.2%
Was hungry but could not afford food	8.4%
Got emergency food from a church, food pantry, or food bank	7.9%
Housing Instability	27.3%
Worried about having a steady place to live	16.6%
Had problems paying rent or mortgage	13.5%
Had problems paying utilities (such as electricity, water, etc.)	18.4%
Financial Strain	34.0%
Had problems paying for health insurance premiums	10.8%
Had problems paying for medical bills	24.2%
Had problems paying car payments	9.7%
Had problems paying credit card payments	19.6%
Had problems paying student loans	10.4%
Had problems paying other loans/debt	17.5%
Employment Instability	24.2%
Had difficulty finding or keeping a job	16.4%
Nobody in the family has a stable, full-time job (among those with a worker in the family and at least one member of the family under 65)	12.4%

* Food insecurity, housing instability, and financial strain are measured with questions that specify how frequently the resident and their family experienced the occurrence, whereas employment instability is measured with questions using binary (yes/no) responses. Additionally, the second employment instability question may capture those who choose not to have stable, full-time employment as well as those who desire stable, full-time employment, but are not able to attain it.

CENTER FOR HEALTH INFORMATION AND ANALYSIS

501 Boylston Street, Boston, MA 02116

617. 701. 8100 | www.chiamass.gov