Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. This document provides an overview of poverty and food insecurity and their impact on health and quality of life. While this resource will be helpful to any clinician, it is specifically designed to support National Health Service Corps (NHSC) Scholarship Program and Students to Service Loan Repayment Program participants and approved-site staff working in Health Professional Shortage Areas.

What can you expect to learn?
1. The impact of poverty and food insecurity on health and quality of life
2. Strategies to screen patients for poverty and food insecurity
3. Interventions that can be implemented at the clinic, organization, and community or systems-level to address poverty and food insecurity

What Is Poverty, and Why is it Important to Health?

- **Poverty**: The U.S. Census Bureau defines poverty using a set of dollar thresholds by family size and composition. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty.

- **Socioeconomic status (SES)**: SES is a construct used to define one's social and economic standing by measuring income, educational attainment, and occupation.

Both poverty and SES are reliable predictors of physical and psychological health across the lifespan and are linked to factors that influence health including educational level and success, childhood exposure to violence, and developmental outcomes for children.

In 2022, 37.9 million Americans (11.5%) were living in poverty. Individuals living in poverty often have to juggle financial priorities and may forgo needed medical services or prescription refills in order to pay for other basic needs such as housing and food. Additionally, people living in poverty are more likely to live in more polluted and higher crime areas, experience food insecurity, and have jobs that do not offer health insurance benefits. All of these factors contribute to higher rates of chronic disease and mental illness, lower life expectancies, and higher mortality rates.
When looking at the U.S. Census Bureau’s data on poverty, clear disparities emerge regarding race and ethnicity (See Table 1). American Indian and Alaska Native populations experience the highest rate of poverty of any racial or ethnic group (25.0%), more than double the poverty rate of the general population (11.5%). Additionally, people in families with a female householder and no spouse present experience a much higher rate of poverty (24.7%) compared to the general population; the poverty rate is even higher for those same households with related children under six (44.9%). Disabled individuals are less likely to be employed than those who are not disabled, and, in 2022, 24% of disabled individuals lived in poverty. The U.S. Census Bureau measures disability as any individual who reports any one of six disability types: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty.

### Table 1. Percent of People in Poverty in the U.S. by Selected Characteristics in 2022

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>11.5%</td>
</tr>
<tr>
<td>Race and Hispanic Origin</td>
<td></td>
</tr>
<tr>
<td>White (non Hispanic)</td>
<td>8.6%</td>
</tr>
<tr>
<td>Black</td>
<td>17.1%</td>
</tr>
<tr>
<td>Asian</td>
<td>8.6%</td>
</tr>
<tr>
<td>American Indian and Alaska Native</td>
<td>25.0%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>12.2%</td>
</tr>
<tr>
<td>Hispanic (any race)</td>
<td>16.9%</td>
</tr>
<tr>
<td>Disability Status</td>
<td>24.0%</td>
</tr>
<tr>
<td>Work Experience</td>
<td></td>
</tr>
<tr>
<td>Did not work at least 1 week in the last year</td>
<td>29.9%</td>
</tr>
<tr>
<td>All workers (full or part-time)</td>
<td>6.6%</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
</tr>
<tr>
<td>No high school diploma</td>
<td>25.2%</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>4.3%</td>
</tr>
<tr>
<td>Immigration Status</td>
<td></td>
</tr>
<tr>
<td>Not a citizen</td>
<td>18.8%</td>
</tr>
<tr>
<td>Naturalized citizen</td>
<td>9.4%</td>
</tr>
</tbody>
</table>

### Table 2. Percent of People in Poverty in the U.S. by Types of Family, 2022

<table>
<thead>
<tr>
<th>Types of Family</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>In primary families*</td>
<td>9.4%</td>
</tr>
<tr>
<td>Related children under age 6</td>
<td>15.9%</td>
</tr>
<tr>
<td>In married couple families</td>
<td>5.4%</td>
</tr>
<tr>
<td>Related children under age 6</td>
<td>6.9%</td>
</tr>
<tr>
<td>In families with a female householder, no spouse present</td>
<td>24.7%</td>
</tr>
<tr>
<td>Related children under age 6</td>
<td>44.9%</td>
</tr>
<tr>
<td>In families with a male householder, no spouse present</td>
<td>11.6%</td>
</tr>
<tr>
<td>Related children under age 6</td>
<td>22.3%</td>
</tr>
<tr>
<td>Unrelated individuals**</td>
<td>20.1%</td>
</tr>
</tbody>
</table>

*A primary family is a group of two or more people, one of whom is the householder, related by birth, marriage, or adoption and residing together. All such people (including related subfamily members) are considered as members of one family.

** Unrelated individuals are people of any age who are not living with any other family members.
Screening for Poverty

Discussing income with patients can feel uncomfortable for both you and your patients. Cultural factors or stigma may prevent patients from disclosing their income. Additionally, your patient may have concerns about how the information will be used. For example, they may be concerned that an income increase will disqualify them for benefits and have concerns about losing access to those benefits. However, understanding your patient’s income will help you tailor an appropriate treatment plan and better understand factors that may be contributing to poor health.

Screening tools such as the Protocol for Responding to and Assessing Patients’ Assets, Risks, and Experiences (PRAPARE) are often used in health care settings to assess social determinants of health. The PRAPARE tool includes the following question to assess poverty at the household level which can be used to determine if your patient may be eligible for certain local, state, and federal programs:

In the past year, what was the total combined income for you and the family members you live with? This information will help us determine if you are eligible for any benefits.

☐ Please write:

☐ I choose not to answer this question

How Can NHSC Clinicians Can Address Poverty?

- **Use empathic inquiry** – If your screening tool indicates that your patient is living in poverty or near poverty, gain a better understanding of your patient’s needs by asking questions that come from a place of curiosity and non-judgement. Two resources to learn more about incorporating empathic inquiry into your discussions of social needs are the Oregon Primary Care Association’s Patient-Centered Social Needs Screening Conversation Guide and the PRAPARE Implementation and Action Toolkit.

- **Make referrals** – Refer under-resourced patients to a social worker or case manager to help them access programs such as the ones described in Table 3. Findhelp.org is a good resource for identifying local programs to support income, employment, housing and utility payments, transportation, childcare, and education needs.
• **Connect patients with resources to lower the cost of prescriptions** – Many local, state, and national programs assist patients in obtaining free or low-cost prescription medications. These include:
  
  ▶ The 340B Drug Pricing Program
  ▶ Prescription assistance programs run by pharmaceutical companies
  ▶ Drug discount cards and program savings
  ▶ Local, state, and national charitable programs

  When discussing cost barriers to accessing prescriptions, it is helpful to ask about access to clean drinking water, food, and how patients are storing and administering their medications. Your patients’ responses may reveal additional social needs and provide an opportunity to address them.

  **Online resources for prescription assistance:**
  
  ▪ [NeedyMeds.org](https://www.needymeds.org) (discount cards, store programs, targeted charities, prescription assistance programs)
  ▪ [GoodRx.com](https://www.goodrx.com) (discount savings card, pharmacy comparison)
  ▪ [MAT.org](https://www.molf.com) (prescription assistance programs)

• **Identify opportunities to improve access to specialty care** – Low-income patients experience disparities in accessing specialty care. Common barriers to accessing specialty care include cost, specialists that do not take Medicaid insurance, low health literacy, transportation issues, long wait times, and lack of coordination and tracking of referrals. Some NHSC-approved sites have partnerships with specialists to provide low- or no-cost specialty care and have formalized mechanisms to make and track referrals. If needed, discuss opportunities with your site’s leadership to establish partnerships, to hire a referral coordinator, and to use existing technology for effective care coordination.

• **Provide services that reduce barriers to care** – Increasing access to telehealth services, offering expanded hours on nights and weekends, and providing on-site pharmacy, childcare, and transportation services can reduce barriers for patients with transportation issues or mobility impairments, or individuals whose jobs do not offer paid medical or sick leave.

• **Identify opportunities to enter medical-financial partnerships** – Medical-financial partnerships provide financial coaching, free tax preparation, budgeting, debt reduction, savings support, and job assistance, all of which can improve health outcomes.

• **Engage in advocacy** – As an NHSC clinician, you have a unique perspective on the health impacts of poverty that may be of interest to decision makers. You can engage in advocacy on your own or through health care organizations and associations that serve as platforms for clinicians to raise awareness and address policy issues. You can make an impact on poverty advocating for:
A livable wage: The federal minimum wage has not increased from $7.25/hour since 2009 which is roughly $15,000 annually for a full-time job.

Paid family leave: In 2023, 73% of private sector workers in the U.S. lacked access to paid family leave for long-term family caregiving needs; furthermore, 95% of the private sector workers earning less than $14/hour did not have access to paid time off for family leave.

Affordable, high-quality childcare: Childcare in the U.S. is expensive, with infant and toddler care often costing between $800 and $1,230 a month. Additionally, more than half of all Americans live in areas with childcare shortages. Long wait times for childcare contribute to job disruptions and consequently income disparities.

Affordable, accessible housing: In 2022, half of all US renters were cost burdened meaning they spent more than 30% of income on rent and utilities. Over 50% of those renters had severe cost burdens, spending more than half of their income on housing. Dedicating a large share of income to rent and utilities leaves little for other necessities, including food and healthcare.
<table>
<thead>
<tr>
<th>Name of Program</th>
<th>Description of Program</th>
<th>State-Specific Eligibility Criteria?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medicaid</strong></td>
<td>Medicaid is a joint federal and state program that provides health care benefits, including long-term care coverage, to low-income individuals who qualify.</td>
<td>Yes. Eligibility varies across states based on income level, age, disability or pregnancy status, household size, and role within the household.</td>
</tr>
<tr>
<td><strong>Head Start Programs</strong></td>
<td>Head Start programs promote school readiness for infants, toddlers, and preschool-aged children from low-income families.</td>
<td>No. Eligibility is based on the Department of Health and Human Services (HHS) Poverty Guidelines.</td>
</tr>
<tr>
<td><strong>Supplemental Security Income (SSI)</strong></td>
<td>SSI is a federal income supplement program designed to help older adults, persons with vision impairments, and individuals with a disability who have little or no income by providing cash to meet basic needs. Some states supplement the federal SSI benefit with additional payments.</td>
<td>Yes, but only in the states that offer supplemental payments. Eligibility in these states is based on income, living arrangements, and other factors.</td>
</tr>
<tr>
<td><strong>Supplemental Nutrition Assistance Program (SNAP)</strong></td>
<td>SNAP provides monthly funds through a benefits card, similar to a debit card, to buy groceries at local stores or farmers’ markets.</td>
<td>Yes. State eligibility differs based on household income, resources, and assets as well as citizenship/immigration status.</td>
</tr>
<tr>
<td><strong>Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)</strong></td>
<td>WIC provides nutritious foods, nutrition and breastfeeding education, and healthcare access in order to safeguard low-income women, infants, and children dealing with or at risk of developing nutrition-related health problems.</td>
<td>No. However, WIC is not an entitlement program, so it can only serve as many people as it has funding available.</td>
</tr>
</tbody>
</table>
What is Food Insecurity, and Why Is it Important to Health?

**Household food insecurity** is the uncertainty of having, or inability to acquire, enough food to meet the needs of all family members due to insufficient money or other resources for food.18

There are two levels of food insecurity:

- **Low food security households** are able to obtain enough food to avoid substantially disrupting their eating patterns or reducing food intake by using a variety of coping strategies, such as eating less varied diets, participating in federal food assistance programs, or getting food from community food pantries.

- **In very low food security households**, normal eating patterns of one or more household members are disrupted and food intake is reduced at times during the year because of insufficient money or other resources for food.

According to the U.S. Department of Agriculture, 17.0 million (12.8%) U.S. households were food insecure (low and very low food secure) at some time during 2022, which amounts to **44.2 million individuals total**.18 While food insecurity is often income related, other factors such as geographic location, transportation, mobility, and social isolation can impact access to food. Additionally, people may forego food to accommodate other financial priorities such as housing and prescription medications. In some cases, food insecurity may be temporary like during a period of unemployment.

Demographic data on food insecurity show deep inequities for Black/African American and Hispanic households. In 2022, 22.4% of Black, non-Hispanic households and 20.8% of Hispanic households were food insecure compared to 9.3% of White households. Not accounting for race or ethnicity, female-led, single parent households (33.1%) were more food insecure than male-led, single parent households (21.2%).18 Households where a member has a disability are also more likely to experience food insecurity. In 2019-2020, the percent of children with disability living in a food insecure household (19.3%) was over twice the rate of children without disability (9.8%).19

Food insecurity has a significant impact on health and is associated with.20
Birth defects, anemia, cognitive problems, aggression, and anxiety among children

Decreased nutrient intakes, depression and other mental health issues, diabetes, and hypertension among adults

Lower nutrient intakes, depression, limitations in activities of daily living, and poor or fair health among older adults

Screening for and addressing factors related to food insecurity with your patients can help reduce health disparities and improve health equity.

What Are Strategies for Screening for and Assessing Food Insecurity?

When health care providers assess patients for food insecurity, they can help overcome stigma, tailor care to patient needs, identify vulnerable populations within their service area, and help reduce the prevalence of food insecurity. The American Academy of Pediatrics recommends universal screening at all patient visits since food access can change throughout the year.21

The Hunger Vital Sign™, is a two-item food insecurity screening tool for low-income families with young children.

1. Within the past 12 months, you worried that your food would run out before you got money to buy more.
   - Often True
   - Sometimes True
   - Never True

2. Within the past 12 months, the food you bought just didn’t last and you didn’t have enough money to get more.
   - Often True
   - Sometimes True
   - Never True

How Can NHSC Clinicians Address Food Insecurity?

- **Recognize signs and symptoms of malnutrition** – Food insecurity is a sensitive topic for many patients and their discomfort may prevent them from letting you know about their inability to access food. As such, it is important for you to recognize signs and symptoms of malnutrition. In adults, signs and symptoms include reduced appetite/lack of interest in food or drink; feeling tired, weak, or irritable; frequent sickness and long recovery times; poor concentration; always feeling cold; and/or longer healing times for wounds.22 Children may also experience these signs and symptoms as well as a lack of growth, low body weight, or slow behavioral/intellectual

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**Food Insecurity and Nutrition Risk Screening Resources**

The Malnutrition Quality Improvement Initiative has compiled tools to support clinical decision making and staff education around malnutrition screening and interventions. They also highlight resources and referral lists, including case studies of effective organizational interventions.
development. If signs and symptoms of malnutrition are evident, practice empathetic inquiry to better understand their food needs.

- **Make referrals to hunger relief programs** – When a patient or family screens positive for food insecurity, you can refer them to a social worker or case manager to help them access federal, state, and local nutrition assistance programs. The Food Research & Action Center and Findhelp.org are helpful resources for identifying programs that address food insecurity.

- **Partner with local organizations** – Partnerships with local organizations that address food insecurity can bolster efforts to address food insecurity and support culturally responsive interventions. Some NHSC-approved sites have innovative partnerships with local organizations to establish programs such as:
  - **Food pharmacies** are programs that can include nutrition education, written prescriptions for fresh produce, on-site gardens, and more.
  - **Food pantries** can be established on-site by building partnerships with local food banks allowing patients to immediately receive non-perishable items during their clinic visit.
  - **Afterschool and summer meal sites for children** can be established on-site to offer out-of-school time meals after school, on weekends, during school holidays, and on summer breaks to children 18 years old and younger with the assistance of federal funding.

- **Be a food security champion at your site** – Educating and training all staff on the health effects of food insecurity, signs of malnutrition, screening tools, government nutrition assistance programs, and local resources is an important step in addressing food insecurity among your patient population. A food security champion can help garner support from leadership and staff to make changes to how food insecurity is addressed.

- **Engage in research** – Engage in research to address questions such as the extent of food insecurity among your patient population and the impact of any hunger relief programs established at your site.

- **Participate in advocacy efforts to address the causes of food insecurity** – Talk with policy makers about the trends and causes of food insecurity at your site and opportunities to address structural factors (e.g., wages, transportation, food deserts, increased access to school meals).
Case Study #1

Meeting the Income and Housing Needs of a Patient Experiencing Homelessness
Case Study with Greg Morris, PA-C (former NHSC Loan Repayment Participant)
Founder and CEO, Ascending to Health Respite Care

A 50-year-old man, Mr. A, was seen after suffering an acute injury. Mr. A had a previous diagnosis of end-stage chronic obstructive pulmonary disease (COPD) and drank alcohol to manage depression. Mr. A was experiencing homelessness and lacked stable employment. Due to his COPD, depression, and low income, a social worker at the clinic flagged him as potentially eligible for disability income assistance. However, obtaining the proper medical documentation to demonstrate eligibility would be difficult as Mr. A did not have current medical and mental health records. Furthermore, communication and coordination of appointments would be difficult as Mr. A did not have a cell phone and lacked stable housing.

Greg’s team first addressed Mr. A’s immediate need for shelter by asking a local emergency shelter to hold a bed for him until he was able to transition into stable housing. After, Mr. A’s immediate needs were met, Greg’s team partnered with the local federally qualified health center (FQHC) to obtain the necessary testing and documentation to verify his disability status. The team worked with the local hospital social workers to obtain records documenting that Mr. A’s mental health symptoms were attributable to his depression and not alcohol abuse. Because Mr. A was hard to reach, the local Health Care for the Homeless program’s outreach team was leveraged to communicate and follow up with Mr. A on the status of his disability benefits application.

During one of Mr. A’s clinical visits at the FQHC, he was diagnosed with pancreatic cancer, and he received an emergency disability determination within 42 days of his application date. The emergency disability determination allowed him to receive full Supplemental Security Income (SSI) benefits. The social worker on Greg’s team partnered with the local Department of Human Services (DHS) office to guide Mr. A through his disability income assistance claim and set up a bank account. Mr. A was also able to obtain housing through a local Housing and Urban Development (HUD) grant because of his income and disability status. Given the progressive nature of end-stage COPD and pancreatic cancer, Mr. A’s health did not necessarily improve but obtaining housing improved his quality of life until he eventually moved into hospice care.
Case Study #2
Supporting a Foster Family with Food
Case Study with William Vince Powell, DMD (current NHSC Scholar)

An 8-year-old boy, Albert, came for a dental cleaning. During the visit, Albert complained that his head was hurting like he had suffered trauma, but when Dr. Powell asked what happened, Albert could not provide an explanation. The next patient, Brandon, was Albert’s 13-year-old sibling who came in to have a broken tooth treated after a fall. Brandon was also wearing a cast due to a broken limb, so Dr. Powell asked Brandon about Albert’s head trauma. Brandon explained that a few days earlier, Albert had bumped his head while playing and lost consciousness. Dr. Powell suspected mistreatment, so he asked Brandon about his family. Brandon stated that he is the eldest of 14 foster children and that they had recently lost their foster mother due to COVID. Brandon added that his foster father works evenings and sleeps during the day leaving Brandon to be the primary caregiver to his 13 siblings. As Dr. Powell had this discussion with Brandon, he noticed that Brandon was undersized for a 13-year-old and extremely skinny, almost brittle, leading him to think that food was likely scarce in the household.

After seeing multiple instances of trauma and possible malnutrition, Dr. Powell asked the foster father for a 1-on-1 conversation to determine if Child Protective Services (CPS) would need to be involved. Dr. Powell started the conversation carefully by asking if Albert had received any medical treatment after bumping his head. The foster father stated that he had not had a chance yet to seek treatment, and he had only given the child ibuprofen. Dr. Powell explained that Albert should be seen as he likely lost consciousness and offered to work with the medical clinic to have Albert seen immediately. The foster father was receptive. Dr. Powell also raised that Brandon shared the family had fallen on hard times with the loss of their foster mother and asked if there was any way that he could support them. The foster father agreed to meet with the clinic’s coordinator who provides referrals to support programs.

The foster father met with the clinic coordinator who was able to gain more insight into the family’s needs determining that this was not a case where CPS needed to be involved. However, the family needed financial assistance, so the clinic coordinator made a referral to a local program, the Cooperative Christian Ministry, which helps families with their electric and gas bills as well as groceries for up to six months.
References


topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics


23 Cleveland Clinic. (2022, May 4). Malnutrition. [https://my.clevelandclinic.org/health/diseases/22987-malnutrition](https://my.clevelandclinic.org/health/diseases/22987-malnutrition)