JOHN'S JOURNEY: CARING FOR VULNERABLE POPULATIONS IN THE COMMUNITY

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Health Science Center at Houston

Facilitator Guide for Unfolding Case Study

University of Texas Health Science Center at Houston
Cizik School of Nursing

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Introduction

This facilitator guide is written to provide information and guidance for the unfolding case study. Unfolding case studies can be used to promote critical thinking and clinical judgment, to help students make connections between didactic and clinical content, and to assess learning. The learning objectives are met as the student uses the case study information, resources, online links, or other resources provided by the instructor to collect and analyze data to answer the questions presented in the case study. As students progress through the case study, they will answer questions embedded in the case study and answer questions at the end of the case study. The questions embedded in the case study are open ended and may have more than one correct answer or way of approaching the problem presented. The students' answers to each of the questions should be thorough and include the rationale for the answers. Facilitators may use these questions as a reference point to confirm understanding and to guide discussion when the case study is presented in a classroom or clinical setting. The questions guide students through the application of the nursing process to the case study scenario.

This case study can be completed synchronously or asynchronously, by an individual student or by a group. This case study can be completed in the classroom, in a clinical group, or online. The case study may be implemented in parts, or it may be completed in its entirety at one time. For synchronous activities (such as face-to-face or online class), students can identify, describe, and compare their answer to each question within the case study and receive immediate feedback. The instructor may provide support and guidance throughout the case study. For asynchronous environments (online), students can complete the case study and answer the questions presented within and at the end of the case study at their own pace or according to a schedule provided by the instructor.

This case study is presented in PowerPoint Slides. The students can use the weblinks to gather additional information to assess and analyze the data to answer the questions. This facilitator guide follows the numbered slides, provides additional information, and provides the answers to the questions in the case study. The facilitator guide also includes supplemental case study applications which include, activities and discussions that may be done by an individual, online, or as a class room exercise.

Case Study: Learning Objectives

At the completion of the case study the learner will:

(1) Assess for and document the client's immediate needs, function, expectations, physiological status, social determinates of health (SDOH), and culture within the community.

(2) Use epidemiological data to determine the incidence and prevalence of co-morbidities associated with homelessness, veteran status, disabilities, and those specific to age and gender.

(3) Interpret findings to ascertain intervention goals for the population.

(4) Analyze and document risks and benefits of care decisions in collaboration with the care team, the client, and the family.

(5) Consider the clients' wishes, expectations, resources, culture, economic and educational needs when developing a care plan.

(6) Discuss health promotion and health education in the management of health, wellness and illness across the life trajectory for the client.

(7) Communicate with an interprofessional team to manage chronic conditions and to assist the client to reach his/her health goals.

Glossary

Assets - An asset is any factor (or resource) which enhances the ability of individuals, groups, communities, populations, social systems and/or institutions to maintain health and well-being and to help to reduce health inequalities (Van Bortel, et al., 2019).

Barriers – Factors that hamper access to needed health services (Jacobs, et al. 2012).

Community - A collection of people who interact with one another and whose common interests or characteristics form a sense of unity or belonging (Rector, 2017); a group of people who share something in common and interact with one another, who may exhibit a commitment with one another and share a geographic boundary (Lundy & Janes, 2015).

Community/Public health nursing - Is the synthesis of nursing practice and public health nursing. The major goal of community/public health nursing is to preserve the health of the community and surrounding populations by focusing on health promotion and health maintenance for individuals, families, communities (Nies & McEwen, 2019).

Culture – Culture is a complex universal phenomenon, including knowledge, beliefs, values, morals, attitudes, customs, and any other abilities and customs that are present by being a member of that particular society (Tylor, 1871).

Downstream – Refers to interventions that are focused on support for individuals. This may be health care delivered in community health settings as well as an emergency room and focused on illness care. Includes primary prevention such as behavior change campaigns (Keleher et al., 2007; Nies & McEwen, 2019).

Epidemiology – The study of the distribution and determinants of health and disease in human populations (CDC, 2012a).

Family – Family is any person(s) who plays a significant role in an individual's life. This may include a person(s) not legally related to the individual. Member of "family" included spouses, domestic partners, and both different-sex and same-sex, step-parents, those serving in loco parentis, other persons operating in caretaker roles (Human Rights Campaign, 2017).

Health Education - Any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes (CDC, 2019).

Health Promotion – Any combination of health education and related organizational, economics, and environmental supports for behavior of individuals, groups, or communities conducive to health (Green & Kreuter, 1991).

Incidence - Refers to the occurrence of new cases of disease or injury in a population over a specified period of time. Although some epidemiologists use incidence to mean the number of new cases in a community, others use incidence to mean the number of new cases per unit of population (CDC, 2012b).

Individuals/Clients/Persons – Individuals, clients or persons are members of a larger community or population. Individual and person is used interchangeably in the facilitator guide. Client is a person who is being served by an agency or who is being provided professional services (Merriam-Webster, n.d.-a; Nies & McEwen, 2019).

Midstream – Interventions that focus on addressing psychosocial needs and behaviors. This includes secondary prevention such as screening about food access and using the information to provide referrals and care. Also includes community action interventions such as raising awareness for social change. Includes providing direct care and assistance to meet social and physical needs (Castrucci & Auerbach, 2019; Keleher et al., 2007; Turrell et al., 2006).

Morbidity – Morbidity has been defined as any departure, subjective or objective, from a state of physiological or psychological well-being. In practice, morbidity encompasses disease, injury, and disability (CDC, 2012c).

Mortality - A mortality rate is a measure of the frequency of occurrence of death in a defined population during a specified interval. The formula for the mortality of a defined population, over a specified period of time, is:

$$\frac{\textit{Deaths occurring during a given period}}{\textit{Size of the population among which the deaths occurred}} \times 10^n$$

When mortality rates are based on vital statistics (e.g., counts of death certificates), the denominator most commonly used is the size of the population at the middle of the time period. In the United States, values of 1,000 and 100,000 are both used for 10^n for most types of mortality rates (CDC, 2012d).

Population – Typically used to denote a group of people with common characteristic such as age, gender or location and is made up of individuals (Nies &McEwen, 2019).

Population Health - Population health as an interdisciplinary, customizable approach that allows health providers to connect practice to policy for change to happen locally. Population health brings significant health concerns into focus and addresses ways that resources can be allocated to overcome the problems that drive poor health conditions in the population (CDC, 2020).

Population Health Management – The optimal use of the resources of a society and its health services towards the improvement of the health experience of the population (Alderslade & Hunter 1994).

Predictive - Predictive factors describe variables that increase a person's risk of developing a condition or disease (NIH: National Cancer Institute, n.d.).

Prevalence - is the proportion of persons in a population who have a particular disease or attribute at a specified point in time or over a specified period of time. Prevalence differs from incidence in that prevalence includes all cases, both new and preexisting, in the population at the specified time, whereas incidence is limited to new cases only (CDC, 2012b).

Protective - Protective factors are conditions or attributes in individuals, families, communities, or the larger society that mitigate or eliminate risk, thereby increasing the health and well-being of children and families (Developmental Services Group, 2015).

Public Health – Public health promotes and protects the health of people and the communities where they live, learn, work and play. Public health aims to prevent illness and injury. Public health promotes wellness by encouraging healthy behaviors (APHA, 2020).

Rates – "Arithmetic expressions that help practitioners consider a count of an event relative to the size of the size of the population from which it is extracted" (Nies & McEwen, 2019, p. 75).

Risk - Incidence proportion is the proportion of an initially disease-free population that develops disease, becomes injured, or dies during a specified (usually limited) period of time. Synonyms include attack rate, risk, probability of getting disease, and cumulative incidence. Incidence proportion is a proportion because the persons in the numerator, those who develop disease, are all included in the denominator, the entire population (CDC, 2012). Method for calculating incidence proportion (risk):

$$\frac{\textit{Number of new cases of disease or injury during specified period}}{\textit{Size of population at start of period}}$$

System(s) – A goal-directed unit made up of independent, interacting parts which endure over a period of time. A unified whole formed from an interdependent group of items or regularly interacting group of items. An organized set of ideas, concepts, or principles intended to explain the interactions of the whole or explain the organization of the systematic whole. (Friedman, 1992; Merriam-Webster, n.d.-b).

Upstream – Interventions with a population focus to promote social change focused on modifying institutional practices, economic, political, environmental factors and legislation. To promote change in the factors that are the precursors of social and health inequalities (Keleher et al., 2007; Nies & McEwen, 2019).

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Case Study Slide Facilitator Guide

Slide 1-3

Title and goals of the case study. Note the goals of the case study include a wide range of ways this case study can be utilized with students. In working through the case study, there are opportunities to expand student interaction such as having students complete a care plan or practice communication elements such as SBAR, call-out, check-back, or handoff.

Slide 4

This slide presents instructions for students regarding how to work through the case study and explains the two symbols used throughout the presentation:

- Links to data and online resources. 
- Analyze the information and data to answer questions. 

Slides 5-6

These slides introduce Mr. John Miller and his daughter Sophie. As you follow their story, you will find examples of how the social determinants of health (SDOH) impact the life and health of the population, communities, and families. Their story is very typical of families in many communities and on the case load of many community health nurses. The practice of public health nursing is defined as "the practice of promoting and protecting the health of populations using knowledge from nursing, social, and public health sciences…focuses on improving population health by emphasizing prevention, and attending to multiple determinants of health. Often used interchangeably with community health nursing, this nursing practice includes advocacy, policy development, and planning, which addresses issues of social justice." (American Public Health Association [APHA], 2013). The terms public health nursing and

community health nursing are used interchangeably here in the facilitator guide. Each nurse has different roles and focus relating to the community, and to Mr. Miller and his family.

The Quad Council, now the Council of Public Health Nursing Organizations [CPHNO] defines the scope and standards for community health and public health nursing. The core functions are assessment, policy development and assurance. Further information on the role and function of community/ public health nursing along with the competencies and examples can be explored with students (Quad Council Coalition Competency Review Task Force, 2018).

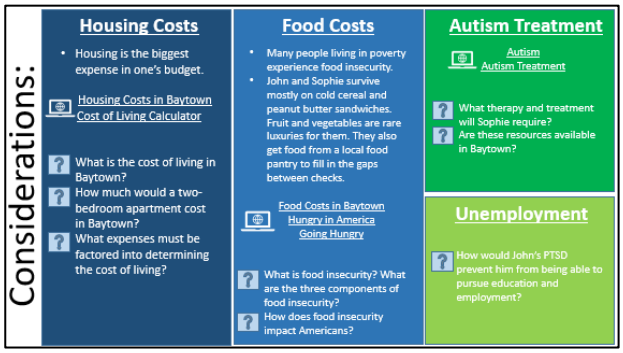
Slides 7-8

Mr. John Miller has a service-connected disability of post-traumatic stress disorder (PTSD) from combat in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). Untreated PTSD often results in many difficulties once veterans return home. Substance abuse, incarceration, and homelessness are common results of PTSD (Veteran Affairs, 2020). The links on slide 8 provide details, veteran demographics and includes data on morbidity, mortality and economics. Fortunately, there are also resources to help veterans suffering from PTSD and other mental illnesses.

Mr. Miller's other than honorable discharge disqualifies him for all VA services except for care related to his service-connected condition - his PTSD. He will be eligible for mental health care through the VA, but he will not receive other services such as housing vouchers and vocational rehabilitation services (VA Health Care, 2011).

Slide 9-10

Mr. Miller's income of $15 an hour for 40 hours a week, which equals $600 dollars a week, provides an approximate income of $31,200 a year without overtime. A two-bedroom apartment in Baytown, Texas, costs about $1,000 per month. The average Baytown resident spends about $185 per month on utility costs and $198 per month for a telephone. Though groceries are less expensive in Baytown compared to many cities, Mr. Miller can expect to spend at least $50 per week on groceries. Mr. Miller would need an income of approximately $46,000 per year to live an "average lifestyle" in Baytown (Best Places, 2020).



Autism is a developmental disorder that can result in deficiencies in social skills and language development. Autism may also cause repetitive and challenging behaviors. As each child is unique, the approach to treating autism is personalized to each child. Speech and occupational therapy are often helpful in the development of social and communication skills and to address behavioral problems (CDC, January 27, 2020). Goose Creek, the school district for Baytown, offers special education classes at each academic level. Various therapies for autism are available in the community but are offered through private clinics. Private clinics usually do not accept Medicaid for payment, so Mr. Miller will need to travel to Houston to access therapy for Sophie.

Food insecurity is the lack of access to nutritious and affordable food. There are three components of food security:

1. Food must be nutritious, fresh, and unprocessed.
2. Food must be affordable.
3. People must have access to nutritious food at all times.

Food insecurity impacts over 3 million homes in the US. Hunger can impact anyone of any age. College students can struggle with hunger as do many individuals living on fixed incomes. Households can go from meeting their needs to being food insecure in a matter of weeks if a breadwinner loses employment or in the event of unexpected expenses such as medical bills or car maintenance. In food-insecure homes, people must often choose between buying food and paying rent or buying medicine. Adults may go without food so that children can eat (Feeding America, 2020).

Mr. Miller's PTSD can present challenges in obtaining and keeping employment. People suffering from PTSD are hyper-vigilant. They are always in a heightened state of awareness looking out for threats in the environment. This hyper-vigilance can cause them to be uncomfortable in crowds, and in some cases, they may be unable to leave home. The hyper-vigilance may lead to violence or other aggressive behaviors. Nightmares often disrupt their sleep leaving them tired and unable to concentrate. People experiencing PTSD also try to avoid anything that may trigger a flashback. These triggers may be smells, sounds, or certain sights. In an effort to cope with the distressing symptoms of PTSD, sufferers may self-treat with alcohol or drugs (VA, 2020).

Slide 11

The most common work-related injuries are injuries caused by:

1. Pushing, lifting, turning, or carrying an object. This also includes repetitive motion injuries.

2. Slips, trips, and falls. This includes falls from equipment such as ladders.
3. Contact with objects and equipment such as a moving object striking a worker, part of a worker's body being squeezed, compressed, or crushed by an object, or a worker being caught, stuck, or crushed by an object (National Safety Council, 2020).

Mr. Miller's injury is one of the more common types of work-related injury. The causes of fatal and non-fatal injuries are often not the same (National Safety Council, n.d.).

Overexertion and slips, trips, and falls are the top causes of non-fatal injuries with transportation injuries being the top cause of fatal injuries. See the graphic at this link for details of the most common causes of fatal and non-fatal injuries (National Safety Council, 2020). Most fatal injuries are preventable. Construction has the highest rate of preventable fatal injuries followed by transportation and warehousing. The work sectors with the highest rates of fatal injuries are agriculture, forestry, fishing, hunting, and mining. Men are more likely than are women to be employed in the jobs with the highest rates of fatalities and injury putting them at higher risk for being injured or killed on the job.

With Mr. Miller's discharge from the hospital, a care plan would be completed by the nurse. Care plans include the following elements:

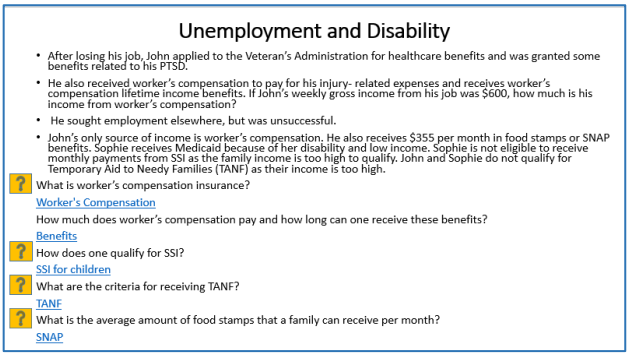
Assessment	Nursing Diagnosis	Plan	Intervention	Evaluation

The care plan should take Mr. Miller's physiological status, veteran status, his wishes, and needs into consideration. There are several other slides in the case study to which both care plans and communication elements could be applied, such as slide 16 (start of rehabilitation) and slide 18

(mandatory report). Also, further in the case study, the overall application of the SDOH and the impact on Mr. Miller's family are illustrated.

Slide 12

Worker's compensation is a federally–mandated program to cover expenses related to injuries sustained on the job (Workplace Fairness, n.d.). Though it is a federal program, it is administered by the states, so benefits vary from state to state. In order to receive worker's compensation, one's employer must have worker's compensation insurance (Texas Division of Worker's Compensation, September 3, 2020). In Texas, worker's compensation focuses on providing medical care for work-related injuries and illnesses and getting the employee back to work. Most worker's compensation benefits are temporary, and the employee is required to provide proof that he is looking for work to continue to receive benefits. The one exception is lifetime income benefits. An employee is eligible for this benefit if he loses a limb or other body part. Mr. Miller is eligible to receive 75% of his average weekly wage due to the loss of his arm. His average weekly income was $600; therefore, he receives 75% of that amount or $450 per week in worker's compensation benefits (Texas Department of Insurance, 2020).



Social Security Income Benefits (SSI) pays benefits to disabled adults and children who have limited income and resources. To qualify for this program, a child must meet strict criteria:

1. The child must have a physical or mental condition that severely limits his or her activities.

2. The condition must have lasted or be expected to last at least one year or to result in death.
3. The child must have little or no income. All family income and assets are considered in determining benefit eligibility (Social Security Administration, n.d.).

As with SSI, one must have very little or no income in order to qualify for Temporary Aid to Needy Families (TANF) benefits (Texas Health and Human Services, 2020). The income for one caregiver and one child cannot exceed $163 per month in order to qualify for TANF benefits. Mr. Miller's income from worker's compensation makes them ineligible for this program (Texas Health and Human Services, 2020).

Slide 13-15

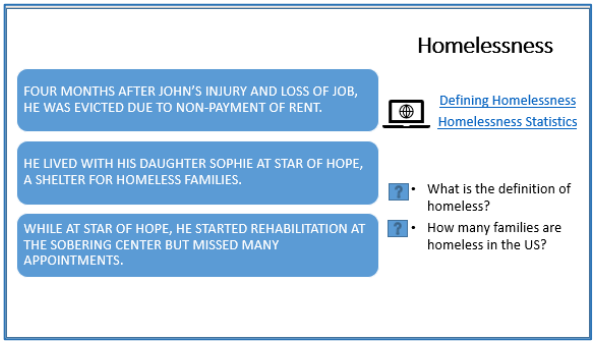
Social determinants of health include social, economic, and physical environmental conditions that are vital and essential to the health of communities. The social determinants of health include: economic stability, education, social and community context, health and health care, neighborhood, the built environment (Healthy People, 2030). The SDOH often explain why some people and communities thrive while others struggle. The SDOH may result in differences in health and health care across populations. Environmental and social conditions may lead to inequities in access to health care and availability of health care, which can lead to health disparities.

Nurses have an important role and have opportunities to be a change agent for a community. Nurses often encounter at-risk populations and individuals and have an opportunity to improve the individual's well-being as well as the overall health of the community. Nurses must be able to recognize and address SDOH and population health needs. Low-income communities often lack many amenities that contribute to community health such as grocery

stores, transportation, affordable and available health care, and affordable child care (Lathrop, 2013). Nursing strategies to address the SDOH may include structural changes such as access to higher education, improvement in general living and working conditions, community interventions, and individual interventions such as those for Mr. Miller in his journey (Lathrop, 2013). Slide 15 instructs students to look for the SDOH relating to Mr. Miller and the community. This slide provides an opportunity for discussion on SDOH in your local community and to alert students to be alert to SDOH. Slides 76 to 79 will review SDOH and summarize the impact of SDOH on Mr. Miller and his family.

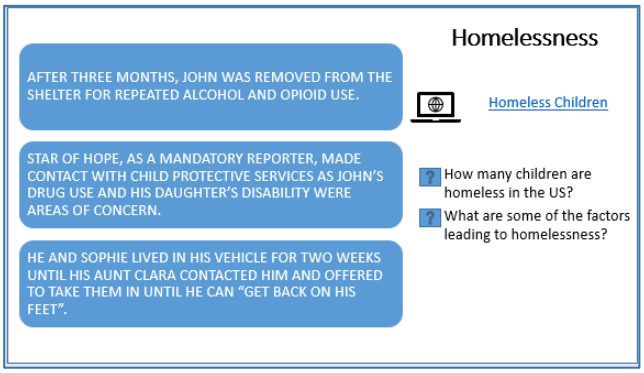
Slide 16

As Mr. Miller's journey continues, he loses his home due to injury and loss of income. He is living in a local shelter and has started physical rehabilitation and treatment for substance abuse. Homelessness is when a person or family lacks a fixed, regular, and adequate nighttime residence. This includes those living in shelters, hotels, cars, parks, and other public places. Approximately 552,830 people are homeless in the US with nearly half of all homeless people being in California. Washington DC, Boston, and New York City have the next highest rates of homelessness. The cities with the highest rates of homelessness also have the highest housing costs in the US. Over 70% of homeless persons are men and 33% of homeless are families with children (National Coalition for the Homeless, 2019).



Slide 17-18

Star of Hope and the Sobering Center are two local resources in Houston. The links to each resource relate information regarding services provided. Mr. Miller's substance abuse worsens, and he is removed from the shelter. Mr. Miller and his daughter are now homeless.



Over 2.5 million children are homeless.

Approximately 4 in 10 homeless persons have a mental illness and/or a substance abuse disorder. Health problems and homelessness are linked. Just as health disorders can cause homelessness, health disorders cannot readily be addressed if an individual is homeless. The cost of housing in most major cities have been rising resulting in more homelessness. Many victims of domestic violence become homeless as they leave violent relationships. Approximately 37,000 veterans are homeless. The largest cohort of homeless veterans are Vietnam veterans with approximately 70% of these homeless veterans having mental illness. Approximately 89% of homeless veterans have an honorable discharge (National Coalition for the Homeless, 2019).

This slide provides an opportunity for discussion regarding abuse of opioids in your community. This may include rates of opioid abuse or mortality, any changes in health policy, local responses, and interventions for the opioid abuse. A discussion regarding impact of the COVID-19 and/or another regional crisis and impact on opioid abuse can take place here.

Slide 19

This slide provides background information on Mr. Miller's Aunt Clara. The leading causes of death for non-Hispanic black women between the ages of 65 and 84 years of age are cancer, heart disease, stroke, diabetes, and chronic lower respiratory disease. Cancer and heart disease account for almost half of the deaths in this population (CDC, November 20, 2019). These top causes of death are potentially preventable. Many of these conditions are associated with lifestyle factors such as smoking, poor diet, obesity, sedentary lifestyle, and alcohol use (CDC, December 19, 2019).

Health promotion teaching for Aunt Clara would include the importance of screenings, checkups, exercise to keep her weight in check and to increase her mobility, and eating a nutritious diet high in fruit and vegetables (National Center for Chronic Disease Prevention and Health Promotion, September 25, 2019). Managing hypertension is critical to prevent heart disease and stroke, so Aunt Clara would need information regarding the role hypertension plays in these conditions. She would also need to be encouraged to return to the doctor to reassess her blood pressure. At this point could discuss how SDOH impacts Aunt Clara, and how to assess these barriers and assets Aunt Clara may have to following the health promotion activities. An activity to brain storm ways for Aunt Clara to integrate health promotion into her life and overcome barriers is a good exercise. Aunt Clara's health literacy level would be important to consider and health literacy is discussed on Slide 46 and with a link to the CDC (https://www.cdc.gov/healthliteracy/learn/Understanding.html). Also

see the supplemental case study application that will introduce the United States Prevention Services widget which provides personalized client recommendations (based on age, weight and other factors) that can help to focus and guide health promotion and health education.

Grandparents are the primary caregivers for about 3 million children in the US with 2.7 million grandparents raising grandchildren. Many of these grandparents have low incomes and tend to sink lower into poverty as they raise their grandchildren. Grandparents usually step in to raise grandchildren in response to a crisis in the family such as incarceration, death, mental health disorders, or abandonment. Grandparents must navigate a complex maze of state agencies to access support services. The grandparents who desire to seek custody of their grandchildren must go to court to do so, which can be an expensive and stressful experience (GeriatricNursing.Org, 2018).

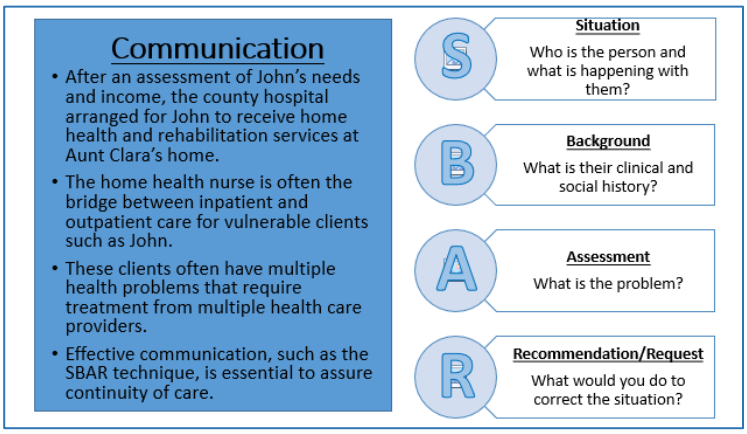
Slide 20

This slide provides information on Mr. Miller's declining health. County or public hospitals are funded by taxes from the residents of the county where the hospitals are located. Individuals who live outside of the county that funds the county hospital must be transferred to the nearest public hospital for care. State-funded hospitals accept every resident of the state where they are funded and located; however, these hospitals are not accessible for residents living a distance away due to lack of transport to the hospital. If a resident requires outpatient therapy or treatment such as dialysis, the resident must locate a provider near their home where they can access care based on income or short-term benefits such as worker's compensation or Medicaid. Both county and state hospitals are also paid by Medicare, Medicaid, and private insurance if a client is covered by any of these entities (Brousseau & Chang, 2013).

What is the difference between cost, charges, and payments? Regarding hospitalization, cost includes the direct cost of client care and indirect costs such as overhead. Charges are the individual list prices that are set for items and services. Charges may have no direct relation to copayments or out-of-pocket expenses and may not have direct relationship to Medicare payment amounts. Payment is the actual amount the hospital receives for providing the care. Payment may vary between the amount that uninsured and insured clients are expected to pay, and payment amounts for services may vary widely (Federation of American Hospitals, 2015).

Slides 21-22

The home health nurse is often the bridge between inpatient and outpatient care for vulnerable clients such as Mr. Miller. These clients often have multiple health problems that require treatment. A community health nurse may work in a variety of positions or systems, a few examples include, a hospital - based nurse doing discharge follow ups or home visits, a home health nurse, a public health nurse assigned to home visits, a hospice nurse doing home visits. The community health nurse is familiar with the various resources available to vulnerable populations and can provide referrals and care hand-offs to assure continuity of care. The community health nurse is often familiar with many of the most vulnerable residents in the community and often has the trust and respect of the community residents. All of these assets are essential in ensuring that vulnerable populations receive not only appropriate care, but care that is acceptable to them.

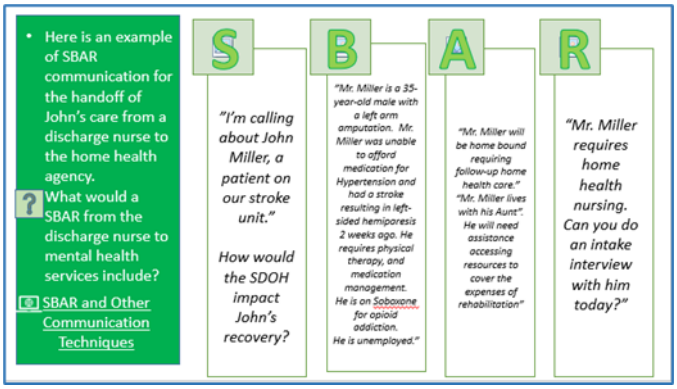


In order for a treatment plan to be successful, the client must be involved in its development. The client must feel that he or she can be successful in achieving the goals in the treatment plan and that the treatment will improve his or her health. The client must feel that he or she has more to gain than to lose by following the treatment plan. The community health nurse has the advantage of caring for clients in their homes and communities. Seeing how the client really lives allows the nurse to assess for and address any barriers to the success of the treatment plan (Jones et al, 2014). See this link for information on the Health Belief Model (LaMorte, 2019), and see this link for examples of applications of the Health Belief Model. (Rural Health Information Hub, 2020). This model was developed by the public health service to explain why some people participate in health screening and others do not. It is a valuable tool in developing effective community health interventions for clients and communities.

To consider the larger picture of the community and impact of the SDOH on Mr. Miller and his family, another useful model is the social-ecological model. Social-ecological models provide an ecological perspective that highlights the interaction between and across multiple levels including individual factors, interpersonal factors, organizational factors, community factors and public policy and laws (Rural Health Information Hub, 2002-2021). See this link for information on ecological models (Rural Health Information Hub, 2002-2021), this link provides examples of ecological models (Rural Health Information Hub, 2002-2021), and this link provides application of social-ecological model by the CDC (2021).

TeamSTEPPS is an evidence-based framework to optimize team performance and has five key principles: team structure, communication, leadership, situation monitoring, and mutual support. The TeamSTEPPS pocket guide at this link (Agency for Healthcare Research and Quality, 2019) lists the steps that assists a team member to clearly provide accurate information

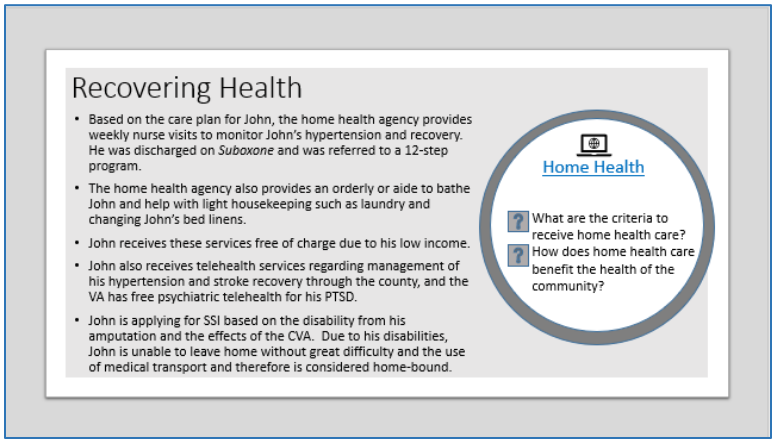
regarding a client. In the case study, the SBAR is presented to provide the student an opportunity to practice this process. The four steps of the SBAR are: situation, background, assessment, recommendation, and request.



When the case study is used in either a synchronous or asynchronous environment, the instructor can include additional scenarios to allow the students to practice additional communication elements: SBAR, call-out, check-back, or handoff. Examples of other places in the case study to practice communication elements are: slide 11 (workplace injury), slide 16 (start of rehabilitation), and slide 18 (mandatory report). Additional communication elements can be added at any point during the case study.

Slide 23

In order to receive home health care, one must be considered "home bound" or unable to leave home at all or without great difficulty. One must also require skilled nursing care. Collecting blood and other specimens for lab, performing infusions, wound care, assessing a client's response to an intervention, and assessment of the client's progress toward recovery are examples of skilled nursing care. Home health services are important to the health of the community at large. Neither Medicaid nor Medicare provide long-term care unless one is



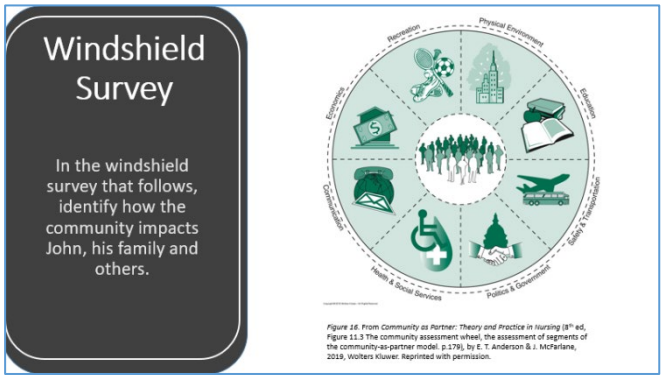
destitute and living in a facility such as a nursing home. Home health services allow people to age in place and to recover in their homes, which improve health outcomes for individual residents and the community. If residents are able to remain in their homes as they age, neighborhoods are more stable and less likely to fall into disrepair than if many homes are empty. Residents living at home support local businesses such as pharmacies, grocery stores, and delivery services. Residents living at home also contribute to local taxes as they shop, pay property taxes and state income tax. These funds provide schools, roads, and emergency services for the community at large (Hawkins, 2019).

Slide 24-26

The unfolding case study is set in Baytown, Texas, a suburb of Houston. Baytown is a study in contrasts. It sits on the Galveston bay with lovely water views, surrounded by abundant natural beauty. Baytown is also home to many petroleum refineries that pollute the air and water and detract from the visual appeal of the area. Mr. Miller and his family's health and socioeconomic well-being are impacted by their place of residence in both positive and negative ways.

Getting to know Baytown

The first step in assessing the health of a community is the windshield survey. The windshield survey of Baytown includes all of the elements from the assessment wheel. The elements of the windshield survey in this case study are physical environment; education; safety and transportation; politics and government; health and social services;



communication; economics; and recreation. While there are other guides for windshield surveys, this case study uses the model from Anderson and McFarlane (2019).

There are questions and links to information throughout the windshield survey to guide the student through the process. Focused on population health, the windshield survey includes concepts from environmental health, emergency preparedness, socioeconomics, health promotion, and the health care system. As students move through the components of the windshield survey, they must analyze the data presented in charts, graphs, and illustrations regarding Baytown.

Slide 27

This slide focuses on the demographics of Baytown. The students find this information in the weblinks provided. Its population is approximately 75,000, mostly Hispanic, female, and middle age or younger. Baytown's poverty rate of 17.3% is higher than the US poverty rate of 11.8%. Poverty is linked to health in many ways. People living in poverty have higher morbidity and mortality rates, are more likely to be overweight, and have fewer doctor's visits than people who have higher incomes. People living in poverty are less likely to have health insurance and are more likely to live in unsafe or substandard housing conditions. The census data linked to the slide present ways that poverty impacts health.

Slide 28

Many people are surprised to discover that marital status can have in impact on health. Research has found that healthy people are more likely to marry while individuals with chronic health conditions are more likely to divorce. Why do you think this is the case? The death rate for widowed persons is higher than the death rates for all other marital status groups while the death rate for married persons is lower than all other marital groups. Happy marriages tend to

have a protective effect while unhappy marriages have been found to correlate with poor health. Married persons are more likely to receive informal caregiving and support from a spouse that can lead to longer life expectancy while the stressors of divorce or widowhood may lead to a deterioration in health, especially among men. Marriage also impacts economic status with married persons having higher incomes than divorced or widowed persons. What conclusions can you draw about the impact of marital status on the health of Baytown residents (Robards et al., 2012)?

Slide 29 and 30

These slides have pictures of Baytown's diversity and activities. Discussion topics: How does racial diversity benefit a community? How does racial diversity challenge a community? There is more than one correct answer to these questions, and current issues may be valuable to include in a discussion. Consider local history and current events that may relate to racial diversity and equity and their impact on health.

Slide 31

Physical environment includes environmental hazards. Though an industry may be essential to the economic health of a community, it can also be a detriment. An oil refinery converts crude oil into useable products such as fuel oil, gasoline, and diesel fuel. The production of these refined substances is essential to fuel the many factories and vehicles that supply many parts of the nation's food and utility chains. Without these refined products, items such as food, medical

supplies, and other essentials of daily life could not be distributed to the communities across the country.

Oil refineries can cause air, water, and soil pollution. Hazardous and toxic compounds are released into the air and water around a refinery. These toxins can cause cancer, exacerbate asthma and other respiratory illnesses, and cause developmental delays in children. Refinery workers are exposed to toxic chemicals, and they are exposed to injury from heavy equipment, falls, and explosions (Hazardous Substance Research Center/ South & Southwest Outreach Program, June 2003).

Slide 32

Recreation is an important component of health promotion. Regular physical activity prevents obesity, diabetes, and heart disease. Recreation is also important to maintaining good mental health. Physical activity has been found to reduce anxiety and improve cognition and learning. Regular physical activity increases mobility in older adults (CDC, 2009). The recreational opportunities in a community must be accessible to all members of the community. In Baytown, one must have a boat to enjoy some activities on the water, which excludes those who cannot afford a boat or boating equipment. Everyone does have easy access to walking and bike trails, fishing piers, and community green spaces. Recreational activities provide opportunities for families to spend time together. Accessible recreational activities improve the health of a community through encouraging community members to be more physically active.

Slide 33

No matter where one lives, there is always the possibility of a disaster. Each person should prepare for emergencies by preparing a bag of emergency essentials such as water, food, medication, and other supplies to last for at least 3 days. In the event of a disaster, it can take at

least 3 days for help from local and federal governments to arrive. Families should also have a plan for evacuation and acquisition and storage of food, water, and essential supplies. Homeowner's insurance does not cover flood damage. Rental insurance may or may not cover damage due to flooding so homeowners and renters in areas at risk of flooding will need to purchase separate flood insurance through the federal government. Information on flood insurance can found at this link (FEMA, n.d.).

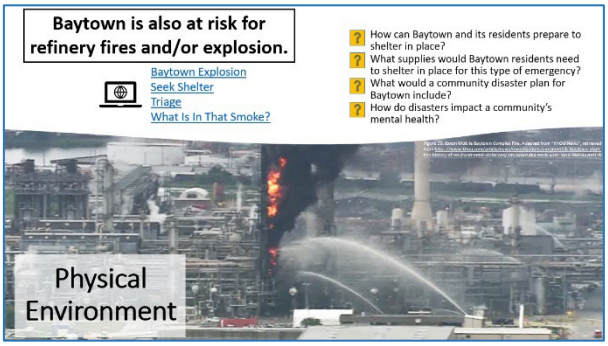
Just as individuals must be prepared for a disaster, communities must also be prepared. Communities prepare for disasters by training and equipping emergency responders. Depending on the type of disaster, communities may need to acquire equipment such as boats, water-rescue vehicles, tents, fuel, medical supplies, PPE, and food. Additionally, first responders must be trained in the use of specialized equipment and trained on the community's emergency response plan. It is essential that all levels of government work together to provide relief during and after the disaster event. The main burden of providing disaster relief falls to state and local governments with the federal government providing support (Department of Homeland Security, n.d.).

Disasters can be a traumatizing event for many community members. During a disaster one may not be in control of many aspects of life. This loss of control added to the many stresses implicit to a disaster such as loss of property, injury, loss of income, deaths of loved ones, and disruption of daily life often leads to an inability to process complex information from the media or other information sources. This inability to process information may lead to

behaviors such as hoarding supplies, inappropriate responses to directives such as evacuation and curfew orders, and may contribute to civil unrest (CDC, 2019). Community leaders must consider both the long-term and short-term impacts of the disaster on the community members. Community leaders must provide for the health and safety of the community in the immediate wake of the disaster while determining the long-term needs of the community such as financial assistance, a stable health work force, mental health services, and replacement of damaged or lost community services such as schools, hospitals, and essential businesses such as grocery stores, pharmacies, and public transport.

Slide 34

In the event of a disaster, residents may be told to shelter in place. To shelter in place means that one must stay where they are located when the disaster occurred. Residents may have to shelter in place for only hours or days. In the event of an explosion at a refinery, sheltering in place is appropriate to protect the residents from exposure to toxic substances in the air (US EPA, December 31, 2019). Residents may also be asked to shelter in place during a disease outbreak to avoid exposure to the disease (CDC, 2019). Additional discussion may include what disasters are frequently found in your location, what potential environmental threats are associated with those disasters, and what the nurse's role is in responding to a disaster.



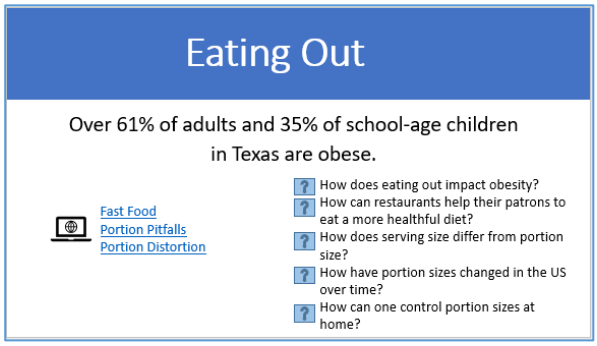
Slides 35-40

The majority of Baytown residents make between approximately $75,000 and $100,000 per year with a substantial number earning $20,000 annually. To qualify for a mortgage, typically housing costs cannot exceed one third of one's monthly income. For example, if a family has a gross income of $100,000 about 25% of that income will used for taxes, insurance, and other payroll deductions leaving $75,000 to spend on housing and other expenses. Most financial advisers recommend against spending more than one-third of one's net income on housing including mortgage payments, property taxes, insurance, and expected maintenance costs. If a family has a $75,000 annual net income, their housing costs should not exceed approximately $2,100 per month. If the average home in Baytown costs $150,000; one must make a gross income of approximately $4,000 per month to afford an average home (DaveRamsey.com, n.d.). Many residents of Baytown cannot afford to own a home; therefore, many residents will be renters. Residents who live in substandard housing can face health risks from lead poisoning, mold from water leaks, lack of smoke detectors, and pest infestation.

Slide 41-43

Research has found that people who eat out two or more times per week have a higher prevalence of being overweight and obese than those who eat meals away from home one time per week or less. Food is an important part of the social life of Americans; when we eat out, we eat more than when we eat at home. Food prepared by restaurants is higher in fat and calories than food prepared at home. Many restaurants put the calories found in each item on the menu to

help consumers to control their calorie intake (Bleich, et al., 2020). A serving size is a standard measurement of how much of a food item should be consumed at one time. The portion is how much one chooses to eat at one setting. Portion sizes have increased greatly in the past few years. Click on the Portion Distortion link to compare today's portion sizes with those of the past (National Heart, Lung, and Blood Institute, April 1, 2015).



Controlling portion size is an essential part of both weight loss and maintenance. One can control portions by reading the label on a food item to determine how many servings are in a package. Most snack size bags of potato chips contain at least two servings, yet most people eat the entire bag at one sitting. Using smaller plates and measuring the amount of food to be eaten are two good tools in controlling portions.

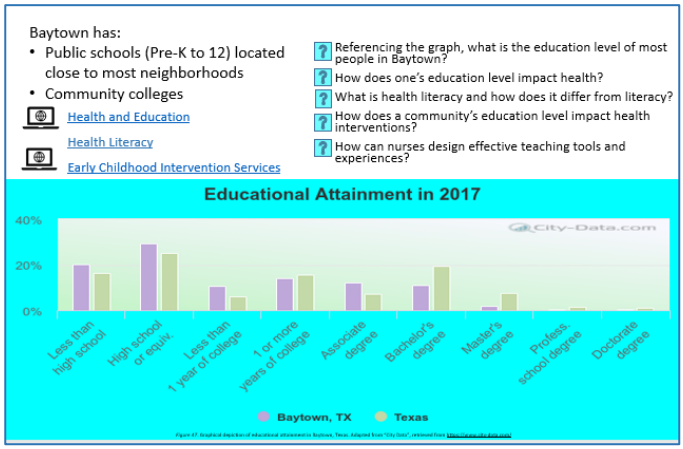
Slide 43

Grocery stores are an important part of a community's health. When a community is a "food desert" or one that does not have any grocery stores, the health of the community suffers. A food desert is an area where there is no availability or access to healthy and affordable food. People in poverty and minorities are more likely to live in a food desert. Areas that are food deserts tend to lack other services such as banks, healthcare, and parks. Residents in these areas often pay more for healthy food. Residents living in food deserts have higher rates of obesity and other chronic food-related illnesses such as diabetes and heart disease. Replacing calorie-dense foods with fresh fruit, vegetables, and whole grains can aid in weight loss. Larger grocery stores tend to have a greater selection of healthy foods and are less expensive than are smaller

stores with a limited variety of food. Food deserts are found in lower-income, inner-city, and rural areas (Move for Hunger, n.d.). Baytown has a wide variety of grocery stores and a year-round farmer's market, as southern Texas has a year-round growing season.

Slides 44-46

Most Baytown residents have a high school education. Baytown's average education level is lower than that of Texas. Education level and health correlate in many ways. Higher education can lead to better jobs with higher salaries. In the US, most workers obtain health insurance coverage through their job, making employment an essential component of good health. Better educated people are also more likely to possess critical thinking, self-awareness, decision-making, and other cognitive skills. These skills enable them to analyze and use health information. Health is also an important component of obtaining an education. People must be healthy in order to learn. The basic needs of food, shelter, and safety must be met before one can concentrate on learning or for learning to be a priority. Literacy is one's ability to read and write (Hahn & Truman, 2015). Determining a community's literacy level can be difficult. In general, the further one progresses in school, the higher their literacy level, but this may not always be accurate. We cannot assume that one has a twelfth-grade literacy level because they have graduated from high school. Education level only tells us how many years one spent in school. Health literacy is the ability to obtain, process, and understand health information and use that information to make decisions regarding one's health.



Low health literacy is more prevalent among:

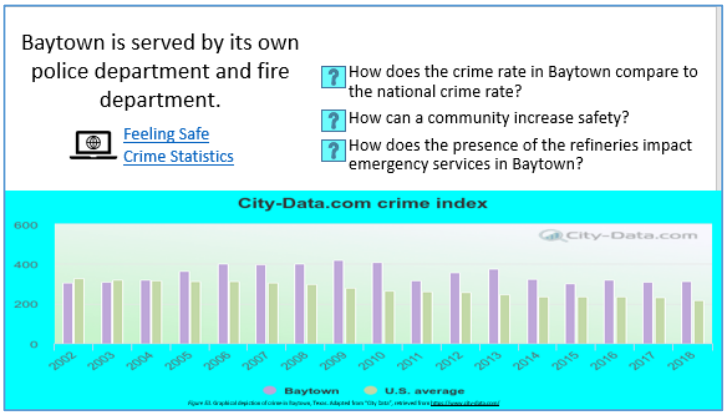
- Older adults
- Minority populations
- Those who have low socioeconomic status
- Medically underserved people

Effective teaching for all literacy levels (Health Resources & Services Administration, August 13, 2019):

- Use simple language and avoid acronyms, technical terms, or slang
- Use a combination of teaching modalities such as videos, online modules, and pamphlets
- Offer educational modalities in the client's primary language
- Repeat important information several times
- Use demonstration with return demonstration to teach psychomotor skills such as injections or wound care

Slides 47-48

The crime rate is higher in Baytown than for the nation. Crime happens in all neighborhoods, and any resident can be a crime victim. Knowing the types of crime that are prevalent in one's community is an important tool in preventing crime. Non-violent crimes such as burglary, theft, and property crime account for the vast majority of crime in Baytown. Violent crime such

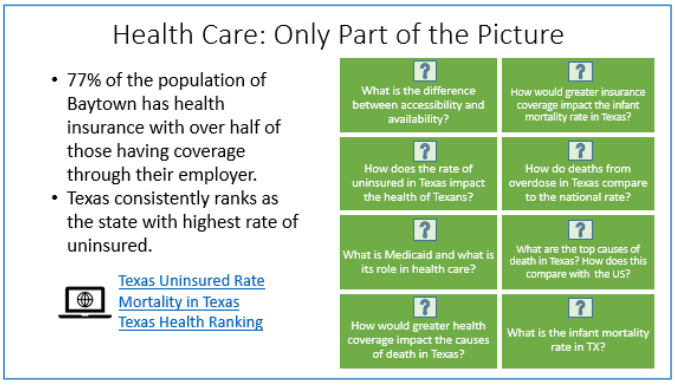


as assault, rape, murder, and robbery are in the minority of crimes. With property crime in Baytown being double that of the national average, one is most likely to be a victim of theft or burglary rather than a violent crime. Crime prevention interventions in Baytown include organizing neighborhood watch groups, installing adequate lighting in public areas and around homes, encouraging residents to install and to use security alarms, and keeping plants, bushes, or other forms of cover to a minimum to reduce places where thieves can hide. Locking all doors and windows, parking cars in a secured garage, and keeping valuables out of sight are simple but effective means of crime prevention (Houston Police Department, n.d.).

The refineries in Baytown are an important consideration in the safety of the community. First responders must be trained to deal with the complex and often massive effects of a refinery explosion. Resources such as air evacuation, field triage and treatment, and containment and mitigation of contamination are essential to providing a quality emergency response.

Slides 49-50

It is often said that America has the best health care in the world. While it is true that health care is available to everyone, it is not always accessible to everyone. Availability means that health care exists in a community and is able to be used. Accessibility means that those who need health care can receive it. Though Baytown has several hospitals and many doctors available, are these services accessible to all of the residents of Baytown? Health insurance coverage is an essential component in accessibility. The majority of Baytown residents have health insurance making health care accessible to them. Other aspects of accessibility include timing--



are there medical clinics open for after-hours care? Location is another factor in accessibility. Though Baytown is near the Texas Medical Center, due to traffic, commuting to the medical center may take an hour or more. Another aspect of accessibility is the amount of paperwork or red tape involved in getting and keeping insurance coverage. See link for an example (Shi et al., 2009). Medicaid is a federal program that pays for health care for low-income individuals. Children under 18, pregnant women, disabled individuals, and the elderly are eligible, depending on income in Texas. Texas is one of the 14 states that did not expand Medicaid, leaving about 5 million people without health coverage in Texas. Most Texans who are uninsured are the "working poor." This population either makes too much to qualify for Medicaid and/or they do not have a qualifying health condition. The infant mortality rate in Texas is almost 6 per 1,000 live births, which is equal to the US rate. Texas ranks 34th in health rankings of the US states. Prenatal visits are essential to assuring the health of both the pregnant woman and her unborn child. Women without insurance are less likely to have prenatal care and are more likely to deliver a low-birth-weight baby (Code Red Task Force, 2015).

Health insurance is critical in helping people to receive preventative and acute care, including prenatal care. Uninsured adults have higher mortality and morbidity rates than do insured adults. The uninsured have fewer doctor's visits and are more likely to be seen in the emergency room. Uninsured adults have higher mortality rates for conditions that respond well to medical management such as HIV, diabetes, and hypertension. These conditions are also among the top causes of mortality in Texas. Decreasing the mortality rate from these conditions would decrease the overall mortality rate in Texas (America's Health Rankings, 2019).

Slide 51

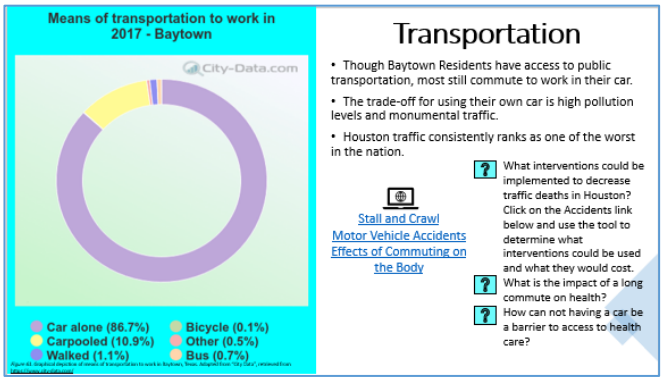
The most effective way that community residents can be involved in government is by voting. Though voting is a privilege and a duty, few Texans vote. Only about 12% of Texans vote in elections in odd numbered years when there is no race for President or Congressional representative. By contrast, 59% of Texans voted in the last presidential election. Voters tend to be older, better educated, wealthier, and more likely to be white than non-voters. Young people aged 18-29 are far less likely to vote than are older people. Women are also more likely to vote than are men. Community involvement in government can be difficult to determine. Billboards and yard signs in support of various candidates is one indicator of government involvement. Other indicators are attendance at city council and school board meetings. Community response to important community issues such as protests and letter–writing campaigns are other forms of community involvement. People who are minority, non-English speaking, young, disabled, or low income are more likely to be underrepresented in the democratic process. See link on ways to encourage community members to vote (Fairvote.org, 2019). Nurses are represented in the government via professional organizations and nursing unions.

Slides 52-54

Getting to and from medical appointments can be difficult to impossible without transportation. Though there are many options from public transport to ride sharing, obtaining transportation adds one more layer to the process of obtaining medical care. Paying for transport can also be a barrier to obtaining health care for many.

Texas can benefit the most from increased use of seat belts. Implementing interventions to increase awareness of the benefits of using seat belts and increasing enforcement of seat belt laws could save 131 lives per year. Adding required in-person renewal of driver's license and

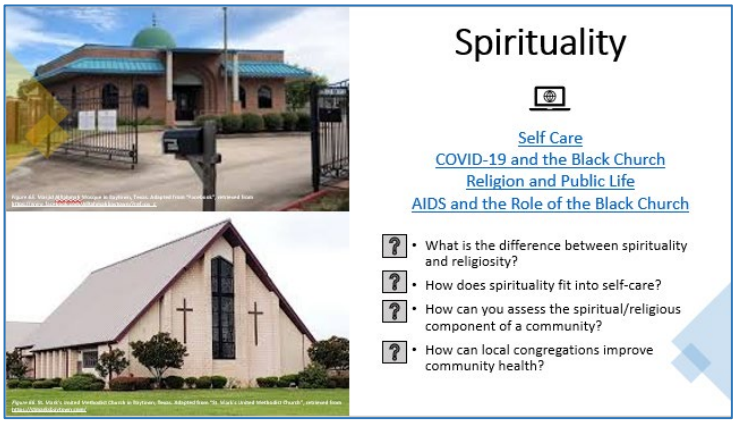
impounding the license plates of persons convicted of drunk driving would increase the lives saved to 194 lives per year. If fees and fines were applied to pay for these interventions, there would be no cost to the residents of Texas (Centers for Disease Control and Prevention, Motor Vehicle Safety, 2019).



Numerous studies have found that long commutes can negatively impact health. Stress from commuting causes stress hormones to be released causing blood glucose, anxiety, heart rate, and blood pressure to increase. People with long commutes also reported being more tired and having difficulty sleeping.

Slides 55-56

Approximately half of the residents of Harris County report a religious affiliation. Spirituality or one's connection to something higher than oneself is an important component of community health. While religiosity or the outward expression of spirituality is a personal experience, spirituality is a shared concept among human beings. While not everyone is religious, most everyone is spiritual to some extent. Research has shown that spiritual practices improve health. Nurturing your spiritual outlook does not have to include religion but can include any activity that helps you to



gain a deeper understanding and sense of meaning of yourself and your connection to the universe. Spirituality has been linked to better health in the following ways:

- Less hypertension
- Less stress, even during difficult times
- More positive feelings
- Less depression
- Greater psychological well-being
- Superior ability to handle stress

Caring for one's self spiritually is an important component of self-care. The number and types of religious institutions in a community can indicate a community's religiosity, but how can we measure spirituality? Well-maintained gardens, yards, and public spaces can be an indication of spirituality as are the presence of walking trails, nature preserves, and volunteer community service organizations (VeryWellMind, 2020).

Church congregations and other religious entities can be a great advantage in community health. Black congregations have become very active in educating the community regarding HIV/AIDS (Mr. Miller does not have HIV/AIDS or any sexually transmitted disease). Black congregations can be a valuable resource for the community and individuals. These congregations often invite local health experts to speak to the congregation and offer health screenings at church. Congregations may hold health fairs for the community offering health education and screening (Smith et al., 2005).

The Pew Research Center is a nonpartisan fact tank that informs the public about the issues, attitudes and trends, including religion and public life (Pew Research Center, 2021). The section on religion has the most recent demographic and social science research collected by

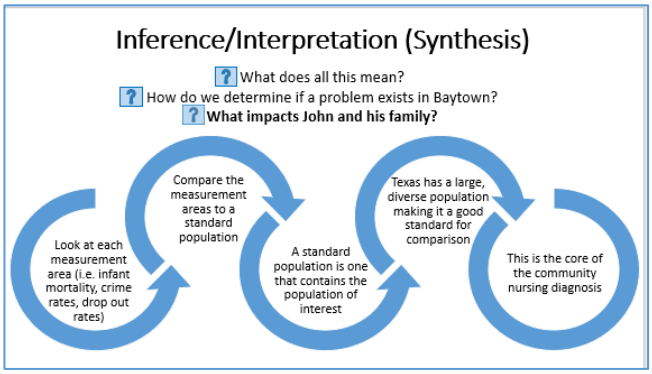
public opinion polling, media content analysis. As this information is current, this is a site with which students should familiarize themselves.

Slide 57

Communicating with a community is an important component of public health. During emergencies many communities send text messages or email alerts to residents. Television and radio are also important tools in community communication. Social media is a growing modality for health communication since it can reach audiences that may not watch local television news or read newspapers. Approximately 72% of adults use social media with Facebook being the most widely used social media platform. Snapchat and Instagram are especially popular among those aged 18-24. Social media can provide social support for individuals who have a chronic disease, who are caregivers, or who are making life changes such as recovery from addiction. Older residents are more likely to access traditional television and newspapers for information than are younger people. Though younger people use text and email, older people are learning to use these tools as well. Baytown is a diverse community. Communicating important information will need to be done in Spanish as well as English and will need to embrace a variety of modalities to reach residents of all income levels. Lower income residents may not have cell phones or access to the internet (Habibi et al., 2017).

Slides 58-65

After gathering data on a community, the nurse must analyze it for problems, patterns, and assets. In order to determine if a problem exists in a community, the nurse must compare the extent of the problem found in the community to the extent of the problem in another or "standard" population. The standard population is a population that contains a community such as a county, state, or nation. It is important to compare like data; compare percentages to percentages, rates to rates, etc. One cannot compare raw numbers of diseases, births, or deaths, in one community to raw numbers of the same events in another community or population. Numbers do not compensate for the size of the populations in the way that rates or percentages do.

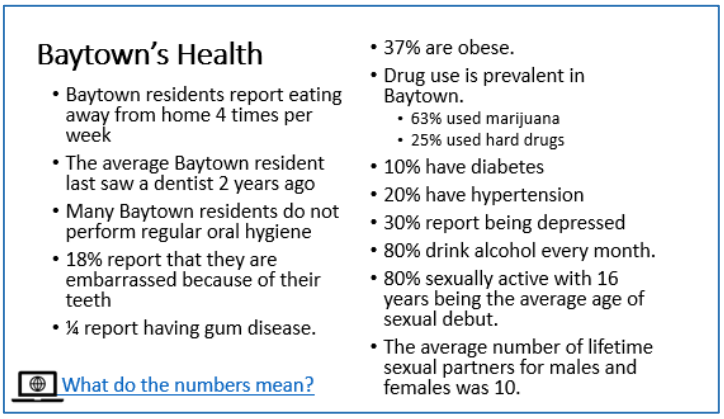


The problems in a community are prioritized by considering which problem is the most serious threat to health, the number of people affected by a problem, and the community's felt needs, or what the community states is the priority problem. The community assets, and input from community stake holders, grass roots groups, and community residents should be included in the assessment, planning and implementation of any interventions. Input from all community groups is essential and support from all of the community will help to address issues and problems.

Baytown Community Problems:

- Access to care
- Air pollution
- At risk for injury

- Early sexual debut
- Education equity
- Food availability
- High prevalence of smoking
- High rate of overweight and obesity
- High prevalence of illicit drug use
- Lack of dental care
- Large number of lifetime sexual partners
- Long, stressful commutes



Baytown's Top 3 Problems for Veterans:

1. Access to care
2. Environmental air pollution
3. Drug use and crime

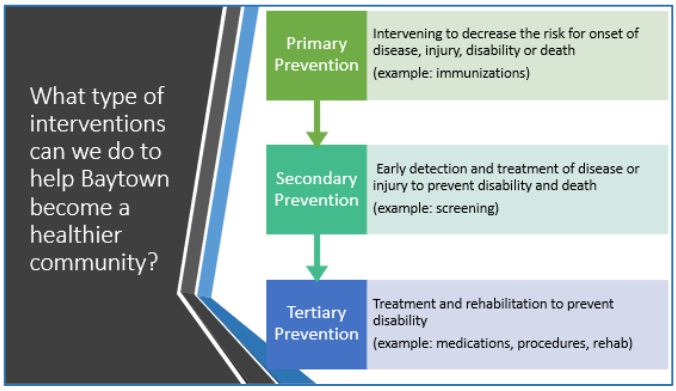
Slides 66-69

After collecting and analyzing the data along with a list of the communities' assets and barriers, reviewing input from community stakeholders and groups, develop a problem list and after prioritize and choose the problem, will develop a community health nursing diagnosis. The four parts of the community health nursing diagnosis are the health problem/risk, affected aggregate or community, cause or etiology, and the evidence of the health problem. There frequently are multiple causes and types of evidence found for the health problem/ risk. Slide 68 provides an example of a community diagnosis. What other community health nursing diagnosis

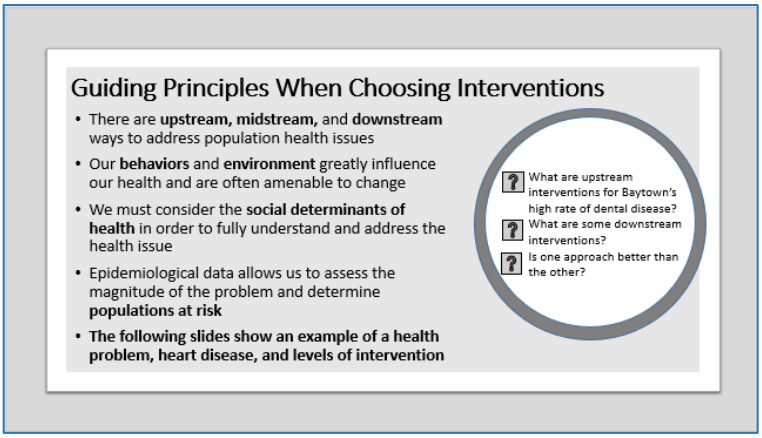
can you think of that would be appropriate for Baytown? The figure on Slide 69 (Anderson & McFarlane, 2019, p.174, Reprinted with permission) provides an overview of the process that has just been described starting with the assessment, analysis of the data, formulating the diagnosis.

Slides 70-72

Slides 70 to 72 present types of interventions at the primary, secondary and tertiary levels of prevention and guiding principles to apply when choosing interventions. The nurse must develop interventions to solve or ameliorate the problems noted in the community. The levels of prevention are useful in developing interventions at the community level. Review the interventions listed for Baytown. What interventions would you add?



Some upstream interventions for the problem of poor dental health in Baytown would include working with local dentists and dental schools to provide free screening and dental sealants to preschool children to prevent dental caries. These interventions would also include teaching preschool and elementary school students the importance of daily dental care such as brushing and flossing. Parents with children who qualify should be encouraged to enroll them in



Medicaid to pay for dental care and to take their children to the dentist for regular checkups. According to Castrucci and Auerbach (2019) who provide a model for social determinants and social needs, moving beyond midstream, must move beyond interventions aimed at individuals. The model is pictured here. Full size graphic is available at https://www.debeaumont.org/wp-content/uploads/2019/04/social-determinants-and-social-needs.pdf. Midstream interventions address an individual's social needs. This would include screening patients for SDOH and using the information to education regarding care and to provide referrals to meet needs.

Downstream interventions are providing the care to treat the health issues once they have manifested. This would include developing resources so that adults without dental insurance could access dental care. Developing collaborations with dentists and dental schools to provide restorative care to adults with severe dental disease is an example of a downstream intervention at the tertiary level of care. Providing care to adults with dental emergencies would be important downstream intervention.

While upstream interventions are important as they prevent negative health effects from taking place, downstream interventions are also essential to solve problems once they do happen. Upstream interventions can decrease many costs to communities. Preventing health problems or treating them early can decrease drug use, decrease years of life lost related to illness and accidents, and prevent chronic diseases in vulnerable populations. Upstream initiatives should

include an evaluation of the socioeconomic influences on the population such as the level of unemployment, ascertaining the primary method of health care delivery and source of payment to assess upstream, midstream and downstream priorities and pathways. Upstream initiatives such as considering policy that influences health care access and the wellness and safety of the population of Baytown should also be integrated into the discussion as students can be directed to determine the state and local legislators who represent this community.

Other interventions at the primary, secondary or tertiary levels, and upstream, midstream or downstream could be explored. A review to re-direct students' attention to the physical environment's potential impact on health (Refinery-Slide 31) and the socioeconomic influences on the community including construction as the major employer (Slide 39) and the levels of unemployment. Focus also should be directed to the population's smoking (Slide 61) as potentially requiring intervention at all levels of prevention. For example, when discussing primary prevention for this community, large scale smoking cessation programs and public service announcements to eliminate the culture of smoking could be discussed. Secondary prevention strategies for this population may include screening for cardiovascular disease and hypertension at local grocery stores to identify cases or coordinating efforts for screening through refinery public health nurses. Emphasis on smoking cessation and identification of contributory or co-morbidities as a result of smoking should be presented. Tertiary prevention strategies may include an assessment of the prevalence of hypertension and cardiovascular disease within the zip code to further examine treatment approaches and interventions to help smokers to stop smoking.

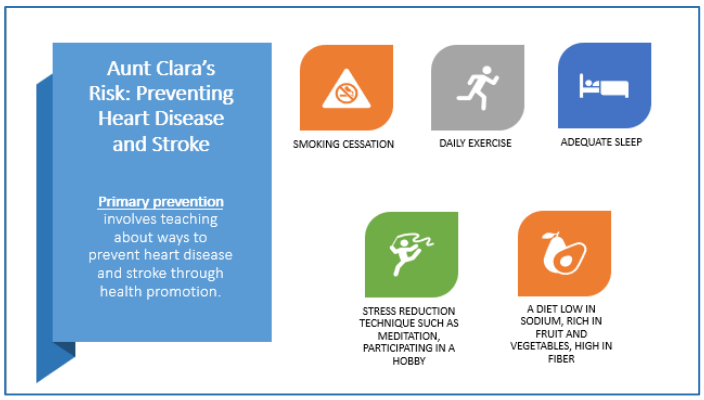
Another area to evaluate could include greenspace such as parks and recreational access, demographic density and environmental influences of air quality-all which may be influenced by

sound policy. Students could use google maps and explore greenspace areas. Midstream interventions are addressed by facilitating discussions pertaining to individual characteristics of Baytown residents that impact their health such as available housing, food availability and those organizations who may directly support wellness efforts or have a presence within the community that match the prevalence of disease for Baytown. As previously discussed, downstream interventions are initiated based on data from the windshield survey and include an emphasis on oral health, occupational safety, employment, and smoking cessation.

Slides 73-75

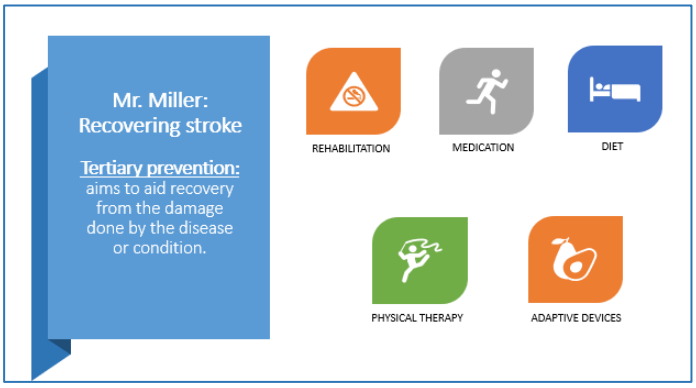
Slides 73 to 75 provide examples at the primary, secondary and tertiary levels of prevention. After students have considered a macro application with the population of Baytown, they will apply those same strategies to Clara Miller (primary and secondary levels of prevention) and John Miller (tertiary level of prevention). Primary prevention strategies for Clara Miller include a focus on stress reduction, exercise and adequate sleep. Because Clara Miller refers to "one pill" each morning, the student should be prompted to consider patient education regarding timing and side effects of antihypertensive medications, eating a diet that is low in sodium, and how to monitor blood pressure. Aunt Clara will need education on where to purchase and how to use equipment to monitor her blood pressure.

Review Slide19 to prompt critical thinking for secondary prevention. Prompts may include- "Where will Aunt Clara go if she experiences a hypertensive crisis or a stroke?" This may prompt students into thinking about her source of health care. Students may plan to help Aunt



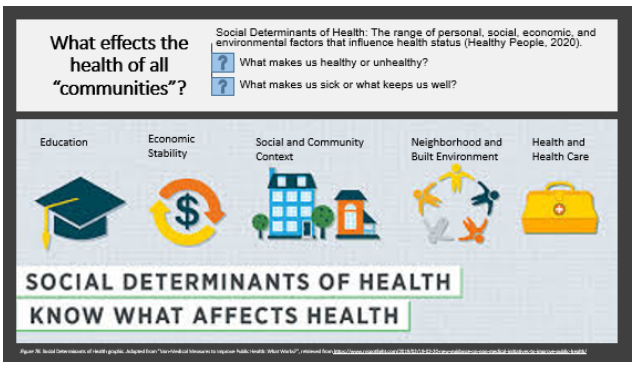
Clara to schedule her next appointment, or if Aunt Clara does not have a usual source of care this would need to be addressed to assure that she is on the proper type and dose of antihypertensive medication. Secondary prevention would be focused on facilitating Aunt Clara's finding a resource for and obtaining an appointment with a cardiologist or primary care physician that can manage her care as well as obtaining a blood pressure cuff for regular home monitoring of blood pressure and journaling daily results.

For Mr. John Miller, at the tertiary level of prevention, students should consider continued maintenance of medication as prescribed, blood pressure monitoring, maintenance of a low sodium diet, rehabilitation, physical therapy, and recognition of stroke symptoms and management. A case study application that provides an additional opportunity for students to prioritize health education needs and review health literacy is included under Health Promotion for Aunt Clara and United States Prevention Service.



Slides 76-79

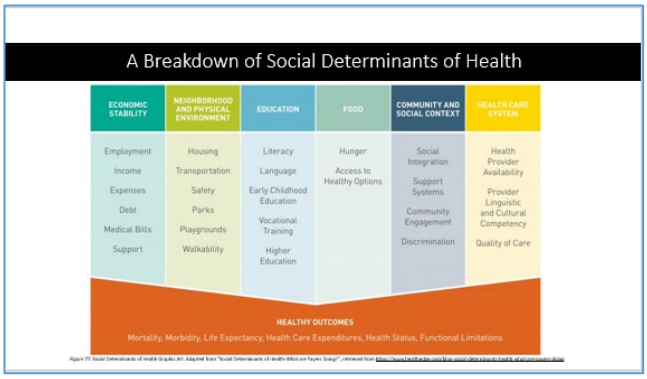
A population's health is impacted by the determinants of health. The social determinants of health include: economic stability, education, social and community context, health and health care, neighborhood/built environment (Healthy People, 2020). The windshield survey of Baytown provides information for



each determinant of health. This section allows the student "to put it all together."

Slide 77 presents the questions to which there are a variety of correct answers, and this would be an appropriate time to discuss regional or local SDOH.

Slide 78 outlines the SDOH, provides examples for each SDOH, and shows their relationship to health outcomes. A community's economic stability is a key component of that community's health. Baytown's economic stability measures include its employment rate, its cost of living, its poverty rate, and its resources mobilized to address social and physical problems related to the economy. Baytown's high poverty rate, lack of housing, medical care, and support services for low-income residents puts Mr. Miller and his family at risk for food insecurity, homelessness, illness, and death.



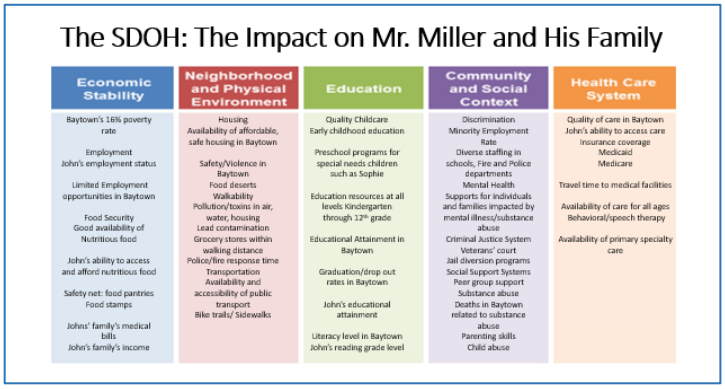
Community health nurses can ameliorate the negative effects of a community's economy through advocating for the development of resources to serve at-risk populations such as the elderly, disabled, children, and families living in poverty. Community health nurses can also work with individuals and groups to provide referrals to existing resources that may be able to offer assistance such as faith-based organizations, veteran service organizations, and publicly-funded health clinics. Further information on competencies of community/ public health nursing and examples can be explored with students (Quad Council Coalition Competency Review Task Force, 2018).

Many external forces can impact the economy of a community; for example, natural disasters, disease outbreaks, and economic recession can cause the loss of many jobs and

resources. Parenting skills, mental health, discrimination, and the criminal justice system are constructs in the community and social context. These factors can impact whether or not residents feel a sense of belonging and connection to the community. Without a sense of connection and involvement, crime rates rise, and the community can decline. The relationship between law enforcement organizations and community residents is an important element. Residents who do not trust law enforcement are not likely to seek out their help or to offer assistance to police when needed.

Slide 79 links the SDOH to Mr. Miller and his family. Mr. Miller experiences mental illness, and Baytown does not have a support system to help people with mental illness or their families. As a caregiver, Aunt Clara may feel overwhelmed and isolated. There are no support systems to assist her such as case management services or social groups especially for elder caregivers. Sophie is a special-needs child who requires speech and occupational therapy. These services are not available in Baytown, requiring this family to travel almost an hour one way to access these services. This commute can be stressful and expensive for the family forcing them to choose between therapies for Sophie and paying other bills.

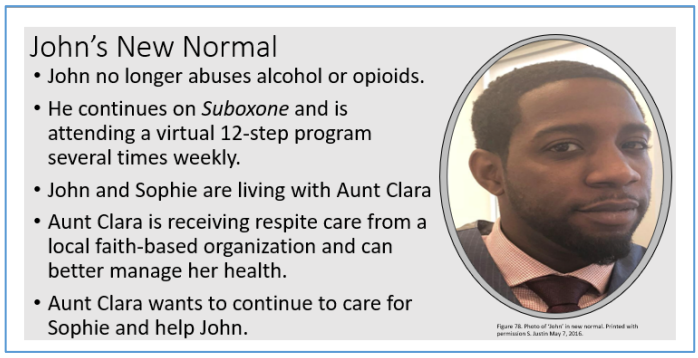
Both Sophie and her father are at risk of discrimination based on their disabilities and race. The community as a whole suffers when some of its residents cannot contribute to the community due to discrimination. Low-income families often live in areas with high crime rates, fewer amenities such as parks and transportation, and subpar roads and buildings. Quality of care in Baytown can be measured through factors such as the percentage of eligible residents who



receive Medicare, Medicaid, or children's services. Quality-of-care indicators in a community include measures such as the percentage of the population with a medical home or primary care provider versus the percentage who seek care through emergency departments or urgent care clinics, availability of specialized care, and the availability of medical services.

Slide 80

Slide 80 provides a summary of Mr. Miller's condition at the end of the case study. Mr. Miller no longer abuses alcohol or opioids. He has been discharged on Suboxone and is attending a virtual 12-step program several times weekly. Mr. Miller and Sophie are living with Aunt Clara in Baytown, and Aunt Clara is receiving respite care from a local faith-based organization. Aunt Clara is now able to better manage her health. Aunt Clara wants to continue to care for Sophie and help John. Mr. Miller is currently stable.



Questions for Students at End of Case Study

The correct answers are highlighted in yellow or marked. Question 5 and 6 have no correct answer and are eliciting the student's personal perceptions.

1) What are the top three health problems for the veteran population in Baytown?
   a. Environmental air pollution (#2)
   b. Access to care (#1 Highest)
   c. At risk for injury
   d. Drug use and crime (# 3 Lowest)
   e. Food availability
   f. Education equity
2) Which health problem has the highest priority for the veteran population?
   a. Environmental air pollution
   b. Access to care (#1 Highest)
   c. At risk for injury
   d. Crime and drug use
3) Choose the best community health nursing diagnosis to address the disabled Veteran population's (such as Mr. Miller's) long term needs:
   a. Increased risk of negative of health effects from exposure to air and ground pollution and other chemical substances among Baytown veteran residents related to the close proximity of chemical/gas/oil manufacturing plants and chemical storage units in Baytown as demonstrated by higher rates of asthma, respiratory diseases, and cancer among Baytown residents than among the residents of the state of Texas.

b. Increased risk of substance abuse among Baytown veteran residents related to a lack of accessible mental health and substance abuse treatment as evidenced by the high rates of addiction, smoking, and alcoholism in the city of Baytown.

c. Increased risk of homelessness among veterans residing in Baytown related to lack of affordable housing as evidenced by the cost of housing and a lower than average amount of income-based housing for veterans in Baytown.

4) As Mr. Miller's nurse case manager, you are calling the VA to find psychiatric services for Mr. Miller after he is discharged (slide 21). Using the SBAR (situation, background, assessment, recommendation and request) you have given **Situation**: Mr. Miller is being discharged from the hospital. Which of the following would be the best choice for **Background**?

a. Mr. Miller is a combat veteran with diagnosed PTSD who served in the Army in Iraq and was deployed to New Orleans for Hurricane Katrina.

b. Mr. Miller has been very frustrated lately and will need services for psychiatric issues.

c. Mr. Miller has a service-connected PTSD disability and while homeless with addiction issues, he had a stroke.

d. Mr. Miller is a combat veteran and was in the Army infantry in the 1st Armored Division, he has a daughter with autism.

For the remaining questions: On a scale of 1 to 5 with 1 being strongly disagree, 3 being undecided, and 5 being strongly agree, choose the number that best represents your level of agreement with the statement. Any of the below are correct.

5) Was the case study useful to understand Disparities and Social Determinants of Health (SDOH) in a vulnerable population such as veterans?

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

6) As a result of participating in this case study,

a. You can describe your role as a nurse.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

b. You can find resources available for vulnerable populations.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

c. You can advocate for a vulnerable population.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

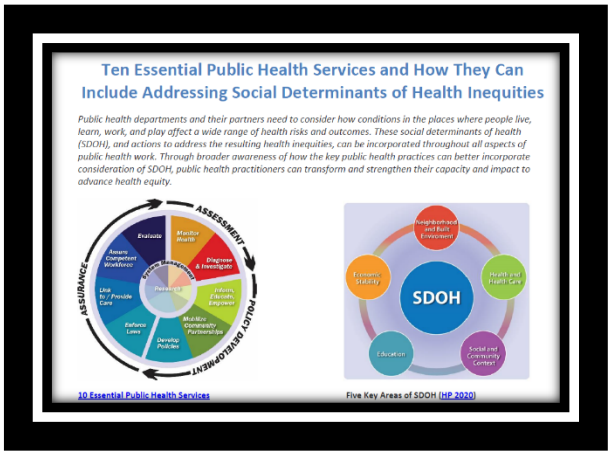
Supplemental Case Study Applications

Prior to Starting Case Study: Introduce Poverty

Before beginning the unfolding case, you could introduce students to the challenges faced by clients living in poverty. Students could play the online game SPENT. SPENT is a game that provides an understanding of the everyday struggles and challenges faced by people living in poverty. It takes 15 to 30 minutes to play SPENT and there is no fee. In the game each person is given $1,000 for the month and must provide for their families. They will make decisions which impacts their income and often there is not a good decision or solution. Each decision is connected to a dilemma (such as changes in employment, medical costs, housing) which influences health, education and ability to provide the basic needs of the family. The game is played till you run out of money before 'the month ends' or you make it to the 'end of the month'. Students can get real life experience of living check to check and dealing with poverty. The link to the game is: http://playspent.org/

Discussion of SDOH and Mr. Miller and His Family

Assign a discussion for students to review the SDOH concepts presented in unfolding case study or focus on SDOH in your area. Discussion could take place in class, in an online discussion or in a clinical group. Tailor the format according to where the discussion will be taking place. The example that follows is for an online discussion. Three different questions are provided that could be used or adapted.



(CDC, n.d., https://www.cdc.gov/socialdeterminants/tools/index.htm)

Instructions: Provide 1-2 short paragraphs, answering the assigned question. Review the from the CDC the 10 Essential

public health services and how SDOH can be addressed. Use Mr. Miller's story (the case study) and consider how the SDOH and impacts Mr. Miller, his family and the community. Post your answers to your discussion group. Then, reply to 1-2 persons and compare and contrast your responses. See grading rubric to earn full points.

Examples of Discussion Questions:

1) Describe how one SDOH impact Mr. Miller and the community? Then describe how an essential public health service could be used to address this. Refer to CDC At-a-Glance: 10 Essential Public Health Services and How they Can Include Addressing Social Determinants of Health Inequities

2) How has SDOH impacted health outcomes of those with COVID-19 in different social economic groups, different levels of health care available, and different minority groups? (for example: impact of obesity, male outcomes, treatment inequalities, impact of smoking, and availability of health care. Also see https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html)

3) Considering what you have learned about SDOH and COVID-19, as a nurse, what would be important to educate Mr. Miller and Aunt Clara on regarding COVID-19 currently? (1 short paragraph)

Grading Rubric Example:

Example Discussion Rubric: Using question 1	
Criteria	Points
Thoughtful and clear position: SDOH and John's Story (case study).	25
Thoughtful and clear position: 1 Essential Public Health Service to address the SDOH.	25
Exceptional use of supportive data and literature (cited and references in APA) to support and answer questions.	25

Compare and contrast your responses, 1 paragraph response, with 2-4 sentences.	25
	Total Points: 100

Health Promotion for Aunt Clara and United States Prevention Services

Students can prioritize health promotion for Aunt Clara, using the U.S. Preventive Services Task Force (USPSTF) widget (https://www.uspreventiveservicestaskforce.org/apps/widget.jsp) which assists with identification of the screening, counseling, and preventive medication services that are appropriate. The USPSTF current recommendations are data based and updated regularly. It is important for nurses to be aware of the current recommendations for their clients. The USPSTF can be searched by specific patient characteristics. When using this tool please read the specific recommendations to determine if the preventive service is appropriate for Aunt Clara.

In Houston one in five adults is functionally illiterate (Barbara Bush Houston Literacy Foundation, 2014). Aunt Clara is a retired teacher and has a higher-than-average health literacy. However, for Mr. Miller and his daughter their health literacy needs to be assessed and appropriate information provided. Health literacy goes beyond being able to read the information but also includes the ability to find, understand and use the information for their health. The Agency for Healthcare Research and Quality is a good resource for health literacy measurement tools (https://www.ahrq.gov/health-literacy/research/tools/sahl-e-keys.html) and the CDC

provide information on understanding your audience (https://www.cdc.gov/healthliteracy/developmaterials/understandaudience/index.html). Also ensuring that your materials are accurate, accessible and actionable (CDC, n.d., https://www.cdc.gov/healthliteracy/developmaterials/index.html) will enable the Miller family to understand and follow the health information you provide.

1) Student will look up Aunt Clara using the U.S. Preventive Services Task Force (USPSTF) widget. (Aunt Clara is 70, weight 130 lbs., 5 feet 6 inches, female, not pregnant, does not smoke, is not sexually active). *Note that Mr. Miller or his daughter could also be reviewed with changes in age/ weight/ and other factors to review the recommendations.
2) Student will review and prioritize the recommendations and choose the highest priority to provide health promotion.
3) Student will plan how to assess the level of health literacy of Aunt Clara.
4) Find appropriate evidence-based health promotion materials.
5) May have student video tape or record the teaching or provide a teaching plan.

Immunization Status and Mr. John Miller's Family

Another important component of health promotion is immunization. Children must receive immunizations in order to be enrolled in school but every state has laws allowing families to opt out of immunization. What are the laws in your state regarding immunizations and school enrollment? Adults also need immunizations though many neglect this aspect of their health. What immunizations would be appropriate for Mr. Miller? What immunizations would be appropriate for Aunt Clara? How might Sophie's diagnosis of autism impact whether or not she receives immunizations? Go to this link and use the chart to determine what immunizations the Millers require.

https://www.cdc.gov/vaccines/index.html.

Policy and Advocacy Assignment

As a nurse you are ideally positioned to promote health equity in your community and further, to state and national levels. Nurses will be called on to advocate and be involved in policy development (Lathrop, 2013). Nurses have an integral role in leadership and are often called on to provide testimony and information. Nurses often act as advocate for individuals and for communities, and nurses also support and guide policy. You must understand the issue at hand thoroughly and be prepared and ready to share when able.

Write and a 60 second elevator speech to provide your stance as an advocate about a current issue in your community.

Grading Rubric Example:

Policy Presentation Rubric	
Criteria	Points
Engagement: Present self as a community health nurse. Introduced self as nurse and engaged audience. Professional dress and behavior.	30
Clarity: State your position. Development of Policy is clear through use of specific and appropriate examples.	30
Exceptional use of supportive literature, statistics, high quality references to support view.	30
Presented within the allotted time of 1 minute.	10
	Total Points: 100

Discussion on Structural Racism

Read the articles below then you will have a discussion with your group. Listen to each other with respect and demonstrate professionalism during the discussion.

Summarize the articles listed and discuss what you see in your community regarding systemic racism. What are the health impacts in your community? How can you advocate for

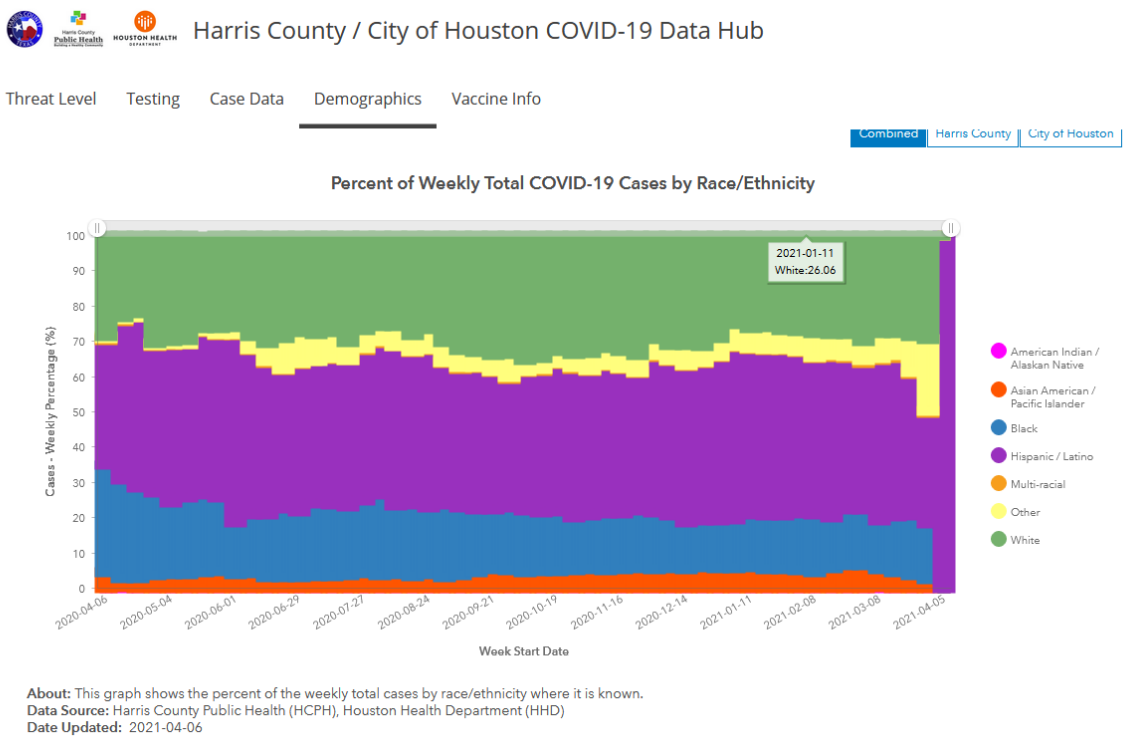
vulnerable populations? Who are the marginalized in your community? What successful community intervention you have witnessed in your community? (In Houston a successful intervention has been a Division that focus' on homeless with community policing: increase in mental health training, mental health professional and the police officer answer all the mental health calls. This has decreased violence and shootings in the community. Another successful intervention has been clinics that specialized in health care for LGBTQ, such as the Montrose Center, Thomas Street Clinic, and Legacy: a senior living center for LBBTQ the Law Harrison Senior Center: and a hospice center, the Omega House that focuses on end-of-life care for LGBTQ community.)

Reading list for systemic racism:

1. Cahn, P. S. (2020). How interprofessional collaborative practice can help dismantle systemic racism. *Journal of Interprofessional Care, 34*:4, 431-434. https://doi.org/10.1080/13561820.2020.1790224
2. Johnson, T. J. (2020). Intersection of bias, structural racism, and social determinants with health care inequities. *Pediatrics*, *146*(2) e2020003657. https://doi.org/10.1542/peds.2020-003657
3. APHA. (2021). *Advancing racial equity.* Retrieved April 8, 2021from http://nphw.org/NPHW-2021/Racial-Equity

Integrating COVID-19

Minorities have been disproportionally impacted by COVID-19. In the county where the Millers live approximately 18% of COVID-19 cases are among black people with blacks being 19% of the county population (Harris County, 2021). Explore the current demographics of the impact of COVID-19 on Harris County by race, age or other variables at the Harris County/City of Houston COVID-19 Data Hub (https://covid-harriscounty.hub.arcgis.com/).



https://covid-harriscounty.hub.arcgis.com/datasets/cb5928f3685944098e2b5c297c0b5fe9_0?geometry=-97.752%2C29.417%2C-93.118%2C30.250&showData=true

The CDC provides information on COVID-19 and health disparities at https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/index.html

and

https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html

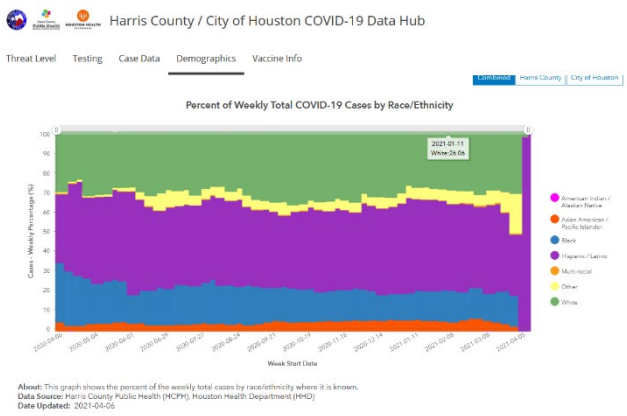
There are many factors driving the severe effects of COVID in minority communities.

- **Crowded housing conditions**. It is not possible to allow for distancing or isolation when many family members live in a small residence.

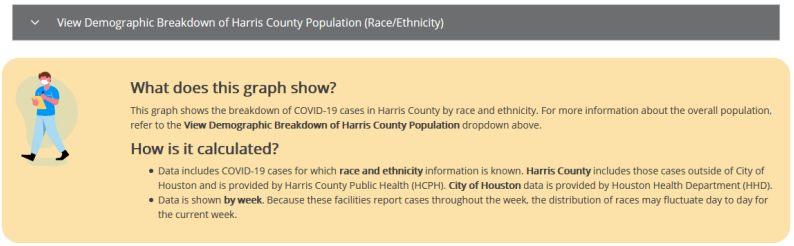
- **Working in essential fields.** Many minorities work at jobs that cannot be done remotely and are essential services. Environmental services, food services, the transportation sector and home health care workers are in close contact with others.
- **Inconsistent access to health care** due to lack of insurance or underinsurance. A patient with badly controlled diabetes or asthma due to inconsistent treatment is more at risk for severe coronavirus infection.
- **Chronic health conditions.** People of color have a higher burden of chronic health conditions associated with a poor outcome from COVID-19, including diabetes, heart disease and lung disease.
- **Stress and immunity**. Stress has a physiological effect on the body's ability to defend itself against disease. Income inequality, discrimination, violence and institutional racism contribute to chronic stress in people of color that can make them more vulnerable to infectious disease.
- https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/covid19-racial-disparities (John Hopkins Medicine, 2020).

The Millers are impacted by factors putting them at higher risk for COVID-19. Both Aunt Clara and Mr. John Miller have comorbidities which can lead to a poor outcome from COVID-19. Aunt Clara and Mr. John Miller may not have access to the COVID-19 vaccine if they do not have a regular source of health care or a medical provider to advise them and advocate for them to be immunized. The Millers have also had many sources of stress impact them from health concerns to homelessness and unemployment. The Millers live together in a small home making spread of illness likely.

1) What demographic groups are impacted by COVID-19 from the graph below? Review the information at https://covid-harriscounty.hub.arcgis.com/ On this day the threat level is Level 1: Stay at home.



Note also the website provides the demographic breakdown of the County, seen in boxes like this.



2) What are some of the unintended effects of COVID-19 mitigation factors on the Millers? https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/disparities-impact.html

3) What can be done to address the inequities that put the Millers and others at increased risk for illness and death? https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/what-we-do.html

Extra Credit Reading List CDC SDOH Programs and COVID-19

For extra credit read, each of the items below, follow the directions for each and provide a short summary. Include a reference list following APA.

1. This link will take you to a CDC resource page on COVID-19 for health care providers. Skim over the resources presented and choose one that is applicable to your community. Describe how you will utilize this resource in your practice?

   https://www.cdc.gov/coronavirus/2019-nCoV/hcp/index.html

2. Review CDC Programs Addressing Social Determinants of Health (https://www.cdc.gov/socialdeterminants/cdcprograms/index.htm). Choose one program that would address a SDOH issue in your community. Describe the program and how it would help in your community. How would you as a nurse help to connect your clients with this program.

References

AACN. (2021). AACN Essentials. https://www.aacnnursing.org/Education-Resources/AACN-Essentials

Agency for Healthcare Research and Quality. (2019). Pocket Guide: TeamSTEPPS. https://www.ahrq.gov/teamstepps/instructor/essentials/pocketguide.html#sbar

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