

What Happens When We Do Not Have Enough Professionals to Help?

The Health and Equity Impacts of a Workforce for Mild and Moderate Behavioral Health



A Summary Report of Findings from a Health Impact Assessment Conducted in Merced County, 2018-2019

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Executive Summary

Treatable mild and moderate behavioral health (MMBH) concerns such as anxiety and depression are damaging the lives of tens of thousands of Merced County residents. Too many people lack access to effective behavioral health services that can prevent MMBH concerns from interfering with their quality of life and productivity at home, school, work, and the community. Poorer socioeconomic conditions in Merced contribute to and raise the need for MMBH services. Too few licensed MMBH professionals are available to address the population's needs now and in the projected future. Addressing workforce shortages must include attention to behavioral health needs of different cultures, ethnicities, and non-English language groups and to geographically isolated groups in Merced County.

More than 1 in 10 adults in Merced report an MMBH concern.^A About 80% of adults with depression reported difficulty with work, home, and social activities.^B

MMBH workforce shortages delay appointments for care by 2-months or longer.^c The impact of just one MMBH concern alone – depression in Merced County, \$50 million per year.^A

(1 - References)

Effective treatments for MMBH exist, but Merced County's MMBH workforce is insufficient to serve all who need help. For example, depression treated through cognitive-behavioral therapy can save a community over \$25,000 per adult in the cost of care. These benefits do not include the value of a higher quality of life and productivity of adults in the community. Other current costs include \$100's of thousands in sanctions and fines on Merced County by the California Department of Health Care Services due to the county's behavioral health staff shortages. Students are enrolled and pursuing licensure in behavioral health careers in Merced County. Yet, they face challenges to graduation and employment due to limited supervised training opportunities and adequate insurance reimbursement for behavioral health services, respectively.

¹ A) MCDPH, 2016; B) Brody et al., 2018; C) MFMRP, 2018

Local health care organizations acknowledge the community demand for behavioral health services and for increasing the workforce. Action on these recommendations can impact workforce shortages.

Recommendations for Local Advocates and Advocacy Groups for Behavioral Health

- 1. Educate family, friends, and the community to recognize the role of addressing everyday stressors for mental and behavioral health and advocate for addressing these stressors.
- 2. Advocate for acceptable insurance reimbursement for behavioral health services, both for amount and type of services and reimbursement rate for services.
- 3. Advocate for health insurance carriers to critically review and address gaps in their behavioral health provider networks serving Merced County.
- 4. Advocate for organizations that provide behavioral health services to provide supervised training hours required for licensure of new behavioral health providers (e.g., LCSWs, LMFTs).
- 5. Encourage early-career development for diverse language and cultural groups to pursue MMBH careers.

Recommendations for Health Organizations That Can Offer Supervision for Licensing Hours

- Create local training opportunities for masters-level MMBH graduates (e.g., ACSWs, AMFTs) to complete their required licensing hours quickly and advance to become licensed clinical behavioral professionals (e.g., LCSWs, LMFTs).
- 2. Attend to preparing behavioral health staff that can address the cultural and linguistic needs of Merced County as training opportunities for licensing are developed.
- 3. Use the current context created by the DCHS (i.e., county fines and sanctions for workforce shortages and the statewide committee to address the shortages) to channel administrative support, funding and other resources into policies and programs that transition ACSWs and AMFTs into fully employed LCSWs, AMFTs, and other required behavioral health positions.
- 4. Advocate for acceptable insurance reimbursement for behavioral health services with potential supplemental reimbursement to support training upcoming behavioral health providers.
- 5. Assure primary care providers can identify and address MMBH concerns, including appropriate referral to local services.

A collaborative effort to reflect and take action on the lessons from this HIA can make an impact on population health and community development of Merced County.

The Impetus for the Project: Unaddressed Concerns for Mild and Moderate Behavioral Health (MMBH)



(Dual Diagnosis, 2019)

Merced County faces severe shortages in its behavioral health workforce. These shortages have existed for at least a decade (Diringer, 2014). In May 2018, the Merced Family Medicine Residency Program initiated a Health Impact Assessment (HIA) to understand the consequences these shortages have on individual and community health and well-being. Recommendation from this HIA will direct solutions to address these shortages.

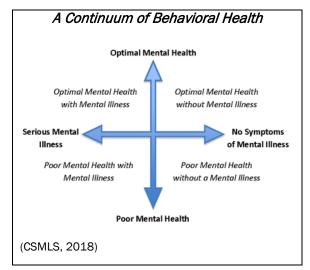
The Merced Family Medicine Residency Program (FMRP)² has been training family physicians in Merced since 1975. The program is known for preparing primary care physicians to work in lower-income, rural, and culturally diverse communities similar to Merced County. This training occurs mainly at Mercy Medical Center Merced and the Family Care Clinic. Family medicine is a critical component of primary care for Merced County, serving over 60,000

patient visits per year. Most patients are low-income, enrolled in the state-funded insurance program (Medi-Cal and Medicare), and rely on the resident physicians as their primary doctor. In addition to providing direct care to underserved communities in Merced County, the Residency Program physicians address significant regional shortages in family physicians. The 3-year training program provides 24 resident physicians that would not be in Merced without it. Each year, eight physicians graduate the program with one to three deciding to continue working in Merced and surrounding communities.



(Merced FMRP, 2018)

² A residency program is a postgraduate training program where a physician "resident" is allowed to perform as a licensed practitioner as they train under the supervision of an experienced preceptor. A resident physician is a medical school graduate (MD or DO degree) who is participating in a Graduate Medical Education (GME) program and training in a specialized area of medicine (as in family medicine). Residents are simultaneously learners and medical care providers.



In the last fifteen years, family medicine residents have participated in a weekly behavioral health clinic with both didactics and interaction with scheduled behavioral health patients. One of the goals of the behavioral health clinic is to help train residents in identifying behavioral health concerns in their patients and developing appropriate treatment plans. A major concern for both the community and the Residency Program has been the lack of resources and referral opportunities for patients diagnosed with mild to moderate behavioral health (MMBH) concerns.

Behavioral health is a state that can fluctuate along a continuum with time – during each day, week, or another period. MMBH concerns such as anxiety

and depression affect many people. Most people address these through self-help or support from family and friends, without requiring formal intervention from a health and social services provider. As the number and severity of MMBH symptoms increase, they may make daily life difficult and may interfere with daily activities. The severity and timing of MMBH symptoms may vary, making it difficult for the individual and their provider to detect and treat them.

During the clinic visit, the resident performs a thorough assessment and develops a diagnosis. Working with the patient, the resident then develops a treatment plan and continues to follow the patient in future visits. Severe behavioral health issues are addressed in a timely fashion and often include immediate hospitalization. MMBH concerns, which are often diagnosed by residents, require a lower, but still vital, level of care and attention, which is often not available in the county.

When doctors diagnose an MMBH concern, they prescribe medication (pharmacology), psychotherapy, or a combination of both. Residents can provide the necessary pharmacology interventions but have limited time and skill to implement psychotherapy effective for MMBH concerns. Often, supportive psychotherapy is offered to the patient until a behavioral health professional can take over the care.

Patients with behavioral health concerns are referred to the Merced County Behavioral Health and Recovery Services (BHRS), Beacon (the behavioral health managed care organization contracted for Medi-Cal), or the patient's private insurance for services. BHRS provides services to patients with severe behavioral health issues. If a patient is felt to have an MMBH concern, the majority of patients (given high Medi-Cal enrollment) are referred to Beacon or, for the few with private insurance, to doctors covered by their insurance.

Top 10 Diagnosed Mental and Behavioral Health Disorders in the US, 2017		
Rank	Diagnosis	
1	Generalized anxiety disorder	
2	Adjustment disorder with mixed anxiety and depressed mood	
3	Adjustment disorder with anxiety	
4	Major depressive disorder, recurrent, moderate	
5	Adjustment disorder, unspecified	
6	Anxiety disorder, unspecified	
7	Adjustment disorder with depressed mood	
8	Problems in relationship with spouse or partner	
9	Post-traumatic stress disorder, chronic	
10	Dysthymic disorder (persistent depression for at least two years)	
(Reifsneider, 2018)		

Unfortunately, as a result of the lack of behavioral health specialists – including psychiatrists, psychologists, licensed clinical social workers, and marriage and family therapists – psychotherapy is not often readily available for the patients with MMBH in Merced. Patients who need a referral to a behavioral health specialist for psychotherapy – cognitive, behavioral, or cognitive-behavioral – usually must wait eight weeks or longer for an appointment. Given this delay, the patient may forget or ignore their appointment, the MMBH concern may resolve itself, or – the worst possible outcome – the behavioral health issue may intensify and require significant intervention.

This long-time challenge of unaddressed MMBH concerns sparked the pursuit of this Health Impact Assessment (HIA) to examine the impact of increasing Merced County's MMBH workforce.

Understanding the Impact of Improving the MMBH Workforce

According to the National Academy of Sciences, Health Impact Assessment (HIA) "is a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects" (NRC, 2011). HIAs include an examination of conditions that are not always part of healthcare and public health assessments known as social determinants of health. Social determinants of health are the conditions in which people live and work that shape health. They include healthcare but only as one determinant of health. Common social determinants of health are socioeconomic status, education, neighborhood, and physical environment, employment, and social support networks (Artiga, 2018). There are six main steps for conducting an HIA (The Pew Charitable Trusts, 2014).

- 1. Screening: identifying plan, project, or policy decisions for which an HIA would be useful.
- 2. Scoping: planning the HIA and identifying what health risks and benefits to consider.

- 3. Assessment: identifying affected populations and quantifying the health impacts of the decision.
- 4. Recommendations: suggesting practical actions to promote positive health effects and minimize negative health effects.
- 5. Reporting: presenting results to decision-makers, affected communities, and other stakeholders.
- 6. Monitoring and evaluating: determining the HIA's impact on the decision and health status.

This project's HIA team included faculty and residents from the Merced Family Medicine Residency Program and community-based researchers and organizers from Merced's Community Initiatives for Collective Impact. Our experiences through the Residency Program and prior evidence focused our attention on the goal of improving the MMBH workforce.

The HIA provided a way to synthesize research evidence and the voice of local people into a set of recommendations. These recommendations can be used for broader conversations to address our goal of ensuring that Merced County can adequately address its MMBH concerns, including specific MMBH disparities, through a locally available MMBH professional workforce.



(United Way, 2019)

The HIA used primary and secondary data. Primary data sources included a short survey of Licensed Clinical Social Workers (LCSW) with an address in Merced County, community discussions with select groups to help us understand MMBH disparities, and key informant interviews with administrators and providers of service agencies and community-based organizations engaged in MMBH care. Copies of measurement tools may be obtained by the report authors listed in the Acknowledgments. Secondary data sources included print and webbased literature (e.g., peer-reviewed, academic and

professional articles, books, and reports) and data from government and academic websites (e.g., US Census, the California Health Interview Survey).

The HIA project was a wonderful learning experience. During the year-long project, our team identified and addressed numerous assumptions about how we and stakeholders in our community perceived the problem, its root causes, and potential solutions. The HIA process helped our team critically reflect on and refine the goals and approach of the HIA.

We made three decisions that influenced the implementation and recommendations of the HIA.

1. The HIA focused on the impact of the MMBH workforce serving adults (ages 18 years old and older). School personnel may address MMBH concerns for children when they occur during school hours. However, throughout our HIA process, various community stakeholders emphasized that behavioral health services for children under the age of 18 years old in Merced County are in great need. The MMBH workforce examined in this HIA would impact children. However, readers need to consider that interpretations and conclusions from this HIA are not accounting for the MMBH concerns and care specific to children.

- 2. The MMBH workforce examined in this HIA is specific to professionals licensed to provide various forms of psychotherapy commonly reimbursable by Medi-Cal/Medicare and private health insurance. The workforce formally trained and informally prepared to address MMBH concerns is vast and diverse. Spiritual leaders and healers, lay and paraprofessional counselors, and professionals online and through phone apps are just some examples of the paid and volunteer workforce. This HIA focuses on licensed professionals who most often provide non-pharmaceutical care for MMBH concerns: licensed clinical social workers (LCSWs) and licensed marriage and family therapists (LMFTs). "MMBH workforce" in this HIA refers to these professionals.
- 3. This HIA is meant to inform changes in organizational programs, practices, and policies across Merced County to increase the MMBH workforce. The HIA is not targeting any one organization or institution as the primary change agent. This decision emerged as we examined the various contributors to MMBH and the MMBH workforce. Policies, programs, and systems of care require change across our county hospital, our county behavioral health department, our various private and public providers and clinics, and many more.



(Psychologist Workforce Projections, 2019)

The HIA process improved our understanding of various limitations and weaknesses in the data and data collection related to MMBH and behavioral health overall. Two limitations are especially important to consider as one reads and interprets the findings of this HIA.

- Quantitative data on MMBH and the MMBH workforce available for this HIA were limited overall
 and very limited for Merced County. Data were often more than five years old and available at
 broader levels, such as for California and the nation. Estimates based on older and broader
 contexts may be less reliable and accurate accounts of Merced county's MMBH conditions.
- 2. Our HIA team made a conscious effort to gain input from a broad and representative segment of Merced County. The team reached out repeatedly to individuals and groups that represented known vulnerable populations (e.g., experiencing racial, ethnic, cultural, and linguistic barriers) and a wide variety of public and private providers who may offer MMBH care and train the MMBH workforce. Community ideas, input, and recommendations were collected through individual and group meetings in person and by phone, outreach through email, and by surveys completed inperson and on Internet surveys. An anonymous survey was available on the project's website. However, one should not assume that the community input in this HIA serves as a comprehensive account of ideas and recommendations of Merced County.

In particular, the voice of persons with limited English proficiency and other communication barriers may be under-represented. Persons with communication barriers may not be comfortable participating in such public assessment activities. Also, language interpreting and translation (used in the HIA) may not accurately capture the meaning of complicated terms and ideas of MMBH that may vary with culture and language.

The Importance of Addressing Merced's MMBH Concerns

MMBH and Poverty Are Tightly Linked

The decades of experiences with MMBH at the Residency Program underscored the importance of addressing MMBH concerns both as a result of and contributor to poverty. An estimated 13% of adults in Merced County reported some mental and behavioral health concerns based on the latest Merced County Community Health Assessment (MCDPH, 2016). Despite several years of economic growth and improvements, the percentage of the population living below the poverty level in Merced County is 23.8% compared to 12.3% nationwide (Sauter, 2018). Widespread regional poverty for Merced and the other seven counties of the San Joaquin Valley since the 1970s led to its comparison as the Appalachia of the West (Cowan, 2005). Females are more likely to be in poverty than males (31.6% vs. 28.7%) (USCB, 2018). Latinos have the highest rate of poverty among any racial/ethnic group (35.5%) (USCB, 2018).

Poverty affects those experiencing it directly as well as the broader community. For example, food scarcity and malnutrition in Merced are among the highest statewide for the entire population and specifically for children (MCFB, 2018). These problems directly affect adult and child physical and behavioral health and development. Poor nutrition contributes to top-ranking rates of obesity for adults and children in Merced (over 30%) and adult diabetes and pre-diabetes (over 60% combined) (MCDPH, 2016). Thirty-six percent of Merced County's adult population reports depression relative to 28% in California (MCDPH, 2016). Those living in poverty are three times more likely to suffer from depression than those above the poverty level (>200 FPL).

"How do we change the cycle? When you are poor you can't afford a house, then you're looked down upon because you are poor. This can then lead to mental health issues. So I drink or smoke to take the edge off."

- Community Discussion Participant

These statistics illustrate the well-documented cycle between poverty, its correlates, and behavioral health. Food insecurity for oneself and one's children, unemployment, limited public and private transportation, inadequate and unsafe housing, and other conditions of poverty are associated with poor physical and behavioral health (Healthy People 2020, 2018)

Poor MMBH affects one's ability to work and contribute to society by harming their physical health and contributing to early mortality.

 People living with depression and anxiety may have a more difficult time taking care of themselves, often feeling physically and emotionally tired (USDHHS-NIMH, 2015). About 80% of adults with depression reported at least some difficulty with work, home, and social activities because of their depression (Brody et al., 2018).

- Between 30% to 50% of employees suffer from one or more mental health concerns (Chapman, 2018; Harvard Health Publishing, 2010). Nevertheless, the stigma attached to mental health leads employees to hide their problems (Greenstein, 2017).
- People with depression are 45% more likely to die through a stroke (Pan et al., 2011).
- People with high psychological distress are three times more likely to die of cancer (Batty et al., 2017).
- People with diabetes and depression are up to 50% more likely to die prematurely than those with either diabetes or depression alone (Egede & Ellis, 2010).

"I know a guy who had stress, then mental issues, and he started drinking a lot. He got diabetes and lost his legs. Other people, their livers go out."

- Community Discussion Participant

MMBH and Substance Use Are Tightly Linked Barriers to Employment

Substance abuse – legal and illegal – is a significant threat to individual and community health. Behavioral health and substance abuse are often inextricably linked. Alcohol, marijuana, prescription and over-the-counter pain medications, food, and other substances are used to address anxiety, depression, and other MMBH concerns. Such usage can become addictive and hence, a behavioral health concern. For example, co-occurrence between alcohol abuse and depression is seen in 16% to 68% of people, varying with gender, age, and other conditions (USDHHS-Office of the Surgeon General, 2016).

Poverty and unemployment are critical contributors to substance use as people turn to usage to cope with life stressors. Their effect can be cyclical. For example, unemployment may increase substance use, leading to addiction, which then makes employment more difficult (Nagelhout et al., 2017). Two reviews of research spanning studies from 1990 to 2015 noted a clear progression between economic stress, substance addiction, and poor behavioral health (Henkel, 2011; Nagelhout et al., 2017). One study concluded with the following:

"The current evidence is in line with the hypothesis that drug use increases in times of recession because unemployment increases psychological distress, which increases drug use. During times of recession, psychological support for those who lost their job and are vulnerable to drug use (relapse) is likely to be important."

(Nagelhout et al., 2017)

Merced County was California's "ground zero" – the origin and among the hardest hit – of the housing crisis and economic recession of the early 2000s. To date, those conditions have not been resolved. The Merced County unemployment rate continues to be twice that of the state and among the highest in the state (July 2019 – 8.4% Merced County, 4.4% California) (Employment Development Department, 2019). During conversations with Merced County economic development staff and employers, the inability to pass drug testing was noted as a crucial barrier to employment in Merced, and behavioral health concerns are a consistent impediment to productive employment.

Estimates of behavioral health problems in the workplace suggest that one-third to two-thirds of employees are affected (Chapman, 2018; Harvard Health Publishing, 2010). However, employers overlook these problems because employees hide them to avoid stigma and loss of employment (Greenstein, 2017). Research suggests that the indirect costs of mental and behavioral health problems (especially loss of productivity) exceed companies' spending on direct costs, such as health insurance contributions and pharmacy expenses. One study estimates that mental and behavioral health costs America \$193.2 billion in lost earnings per year (Kessler et al., 2008). The low rates of behavioral health treatment among employees (between 8% to 13%) suggest that business leaders should invest in the mental health of workers both to help employees and their company's profitability (Kessler et al., 2008).



(McGauley, 2019)

MMBH Has Greater Impact On More Vulnerable Groups

Groups that experience other stressors in addition to poverty are disproportionately affected by MMBH concerns. Racism and discrimination due to gender, age, language, and sexual orientation are known contributors to MMBH concerns.

Gender

- Women are two to three times more likely to be diagnosed with a general anxiety disorder than men (McLean et al., 2011).
- Regardless of age, women are more likely to have depression than men (Brody et al., 2018).
- 1 in 5 California women suffers from depression, anxiety, or both while pregnant or after giving birth, negatively impacting the mother and the child (CDPH, 2018). Over 40% of hospitalizations of pregnant women had a behavioral health diagnosis.

"Because we don't perceive our identities as behavioral issues (it makes us not want to seek care)." - LGBTQ Community Discussion Participant

Sexual Orientation

 LGBTQ individuals are almost three times more likely than the general population to experience a mental health condition such as major depression or generalized anxiety disorder (NAMI, 2019).

Race/Ethnicity

- African-Americans in Merced experience depression and anxiety at a rate double that of the general population (MCDPH, 2016).
- Adult African Americans are 20% more likely to report severe psychological distress than adult whites (MHA, 2018).
- Adult African Americans living below poverty are three times more likely to report severe psychological distress than those living above poverty (MHA, 2018).
- Race/ethnicity can affect the diagnosis of MMBH concerns
 - Compared to white, non-Latinos, Latinos report lower rates of depression disorder diagnosis but higher rates of chronic depression symptoms, indicative of MMBH concerns (8.2% versus 7.9%) (Brody et al., 2018).

- Low-income or Hispanic/Latino residents report lower rates of depressive disorder diagnoses than their high-income or white counterparts, but higher rates of chronic depression symptoms (Brody et al., 2018).
- For Hmong Laotian refugees to the US following the Vietnam war depression is the most frequent mental health diagnosis. One study reported a posttraumatic stress disorder rate of 80% for Hmong compared to 12% for the general population (Lee, 2013).

"I think in general, we are all affected. ...[for] the children it is the shootings we see in the community that cause the most stress. Deportation is also a concern. I have my grandkids. They hear from other kids they can get deported and ask if they would get deported. Everyone has stress, and we see what is happening."

- Latino Community Discussion Participant

MMBH Needs Are Too Often Unaddressed, at a High Cost to Merced

Over 44% of adults in Merced County with a reported behavioral health concern had not addressed that concern (MCDPH, 2016). This percentage is a conservative estimate because many people who have a behavioral health concern do not report it. This statistic means that Merced County's behavioral health concerns are nearly twice as unaddressed as the national estimates (MCDPH, 2016). MMBH concerns are not acknowledged and cared for due to many reasons, often interconnected with each other. Popular attitudes and community norms have been changing to accept the importance of behavioral health. Nevertheless, stigma and fear label people with behavioral health problems as being unsafe to be around and not being capable of functioning in the community. Participants in our community discussions with Latinos, African Americans, and the

"Growing up in the projects having a mental illness was considered weak and would be worse."

- African American Community Discussion Participant

general community indicated the importance of protecting their family, especially youth, from being labeled as mentally ill or as having a behavioral health concern.

Untreated and unaddressed MMBH concerns constitute a significant drain on our community. Nationally, mental and behavioral health concerns are the most burdensome of illnesses at over \$200 billion per year (Goetzel et al., 2018). These costs exceed the costs of heart disease, stroke, cancer, and obesity. In Merced County, the single disorder of depression is estimated to cost \$50 million per year in costs related to medical care, absenteeism from work and school, and reduced productivity at work and school (MCDPH, 2016). On the other hand, depression treated through cognitive-behavioral therapy is estimated to save a community over \$25,000 per adult in cost of care, not counting the value of a higher quality of life and productivity for their community (WSIPP, 2018).

Participant comments in our community discussion reflected national statistics regarding unaddressed MMBH concerns. Participants in the African American community discussion noted that

church and faith leaders are usually sought out for MMBH concerns. Sixty-four percent of African Americans in Merced County relied on church leaders as their most trusted sources of support for stress, sadness, or anxiety (Grassi et al., 2015). Participants in the Latino community discussion indicated that that immediate family members were usually the first to turn to for those with MMBH concerns. A Merced County assessment conducted in 2015 found that 56% of Latinos reported their most trusted source of support for an MMBH concern was a family member. Family support is important for MMBH. Yet, professional support for MMBH may be less familiar and accessible. In our community discussions, participants were not sure whom to go to and where to go for clinical providers and public agencies as sources of MMBH care.

The Importance of Increasing Merced's MMBH Workforce

The Burden of MMBH Falls on Primary Care and Emergency Care

Primary care physicians, usually family medicine physicians, are usually the initial and sometimes the only source of behavioral health care. Between 20% to 40% of adult primary care visits are due to a behavioral health concern (CDC MMWR, 2014). Primary care physicians may identify behavioral health concerns as part of other patient visits (e.g., chronic illness and pain). In our small survey of family medicine faculty and residents, most reported that they address behavioral health concerns as part of other conditions, such as diabetes and heart disease. A patient's depression and anxiety may be contributing to their diabetes and heart disease. And, a patient's diabetes and heart disease may be contributing to their depression and anxiety. However, as noted earlier, non-pharmacological treatment during primary care is minimal, and referral to behavioral health providers is typical.



(HealthLine, 2019)

Similarly, emergency room physicians must treat behavioral health concerns. A statewide study in California found that at least 30% of adult emergency room visits were associated with at least one mental health diagnosis (Niedzwiecki et al., 2018). A shortage of behavioral health providers is a persistent cause of using emergency rooms to address behavioral health concerns (Zink, 2018). Along with higher costs of emergency care, patients are usually left waiting for hours before referral to even more delayed appointments with behavioral health providers.

"... the hospital emergency department isn't designed to address ongoing behavioral health issues that require personalized, psychiatric interventions. When a patient isn't an immediate threat to his or her community, they're eventually discharged but left unchanged and unaided — and essentially ready to repeat the cycle." (Zink, 2018)

Shortages in the MMBH Workforce Are Severe

A significant reason MMBH concerns remain unaddressed is an insufficient MMBH workforce. Limitations in the MMBH workforce include low numbers of MMBH professionals, the geographic distribution of MMBH professionals, and the cultural and linguistic preparation of MMBH

professionals. People do not seek professional care for MMBH concerns unless they are prompted by a crisis or by a professional during care for other reasons (e.g., health visit, prenatal/new child visit). Unfortunately, when people do seek MMBH care, their appointment may be so delayed (e.g., two months) that they may forget, find other ways to cope, or delay care until more severe needs arise. Access to MMBH staff, when and where needed, is mostly absent and insufficient to serve MMBH concerns of Merced County.

Among the agencies that most directly see the breadth and depth of impact due to the MMBH workforce shortages is the Merced County Human Services Agency. HSA serves over 100,000 people each month, making it among the most visible and connected public agencies in Merced County. HSA is responsible for addressing social, behavioral, health, and workforce needs for people of all ages struggling with poverty and related challenges. As a result, their staff both directly serve and work through referrals to address MMBH needs. HSA summarized some of the challenges for the MMBH workforce in a recent report focused on developing an LCSW career pathway for their staff as one way to address MMCH workforce shortages (Vang, 2018). The report notes:

- Merced County's rural and more remote setting makes it difficult to recruit and retain skilled Associate Clinical Social Workers (ACSWs) and Licensed Clinical Social Workers (LCSW's).
 These are unlicensed and licensed masters-level social worker, respectively.
- The Board of Behavioral Sciences (BBS) noted that Merced County only has 93 ACSWs and 67 LCSWs in Merced County in 2018. Since only LCSWs (not ACSWs) are licensed to treat patients, these staffing numbers indicate approximately three staff for every 10,000 people in the county.

Similar findings were reported in a slightly older report, "Critical Issues Affecting Behavioral Health Services in Merced County" (Diringer, 2014).

- Merced County's demand for behavioral health services was 33,514 adults, with about 10,884 being Medi-Cal adult recipients.
- Merced County needed an additional 57 core mental health providers and 17 psychiatrists to remove its Health Professional Shortage Area (HPSA) designation. An area is a mental health HPSA if the ratio of population to core mental health professionals exceeds 6,000:1.
- Merced County needed an additional 24 core mental health providers and seven psychiatrists for the Medi-Cal population.

In the years following the Critical Issues report, mental health service capacity in Merced County



(The Conversation, 2019)

dropped by 4,335 patients that could be served by available staff (8.9%) between 2013 and 2014 (from 48,462 to 44,127) (MCDPH, 2016). In 2014 the three Merced County safety-net health clinics served 21,782 patients (14.1% of all patients) with mental health concerns (MCDPH, 2016). While 12.6% of all Merced County adults in 2014 reported needing mental and behavioral health, over 4 out of 10 were not treated (MCDPH, 2016). These self-reported needs are considered under-reported relative to the actual needs.

It is important to understand that these statistics assume that all LCSW provide clinical care or directly serve MMBH needs. One study found that only 40% of LCSWs

provide behavioral health services, and 49% of MSW graduates are in a "direct or clinical practice track" (Coffman et al., 2018).

Also important to note is that the presence of an MMBH provider does not mean that the provider is capable of addressing the cultural and linguistic challenges documented in mental and behavioral health disparities. Title VI of the Civil Rights Act and professional mandates require public agencies to provide meaningful language interpreting and translation services. However, these mandates are not well monitored and enforced. Access to behavioral health services is a frequent reason that limited English proficient patients seek medical language interpreters (Patel et al., 2013). National interpreting research indicates that the complexity and sensitivity of behavioral health topics warrant providers who speak a patient's native languages (Miletic et al., 2006).

Responding to the need for culturally and linguistically prepared MMBH providers is a challenge. A statewide report by the University of California cautioned that the behavioral health workforce did not reflect California's population (Coffman et al., 2018). For example, Latinos were underrepresented in professions important to behavioral health, including social workers (24%) and counselors (23%) compared to the state population (38%). This underrepresentation in ethnicity may be higher for language needs since not all Latinos speak the various indigenous languages represented among Latino ethnicities. The San Joaquin Valley had the lowest per capita ratios for all behavioral health professions (except psychiatric technicians) compared to other California regions and the state. The report forecasted demand of all California behavioral health professionals would increase substantially by 2028, while the supply would decrease if the current patterns and unmet needs continued.

A recent event highlights Merced County's behavioral health workforce challenge. The California Department of Health Care Services (DHCS) warned counties in September 2018 that they were not retaining enough mental health providers, based on federal standards: Merced was among these (Caiola, 2019). As of April 2019, Merced County had not yet complied with these requirements. Noncompliance with staffing ratios will result in over \$500,000 in sanctions and potentially a monthly fine of \$150,000. Merced County is not alone in this situation. Seven of the ten counties facing fines are in the San Joaquin Valley. As a result, DHCS launched the California Future Health Workforce Commission (CFHWC) to address shortages in behavioral health and other health professions.

CFHWC's February 2019 report offered several recommendations regarding behavioral health shortages (CFHWC, 2019). These included the promotion of telehealth and improving the academic pipeline to behavioral health professions. However, the report's recommendations lack attention to the MMBH workforce. Behavioral health solutions included addressing shortages in primary care physicians, nurse practitioners, psychiatrists, and psychiatric-mental health nurse practitioners. Non-clinical solutions included community-based interventions such as community health workers, promotores, and peer support groups. The oversight in this report's attention to the MMBH workforce may be corrected through advocacy by providers, clients, and the broader community about the importance of MMBH and the MMBH workforce.

Discovery of a Key Barrier: Lack of Sufficient MMBH Training Opportunities

The HIA included formal interviews and discussions with key staff in healthcare, behavioral health, and human services. These included county agencies providing care, regional training institutions

preparing LCSWs, and people with a master's degree working toward their licensure in social work and related MMBH fields. The results helped to clarify the role of a well-known training barrier in the broader scope of MMBH workforce shortages.

The components of this barrier include the following.

- 1. Students completing a master's degree in social work, family therapy, and related fields for clinical behavioral health positions must complete an estimated 3,000 hours of supervised training to receive their license. The number of required hours may vary depending on the degree and license.
- 2. Organizations that provide behavioral health services can hire someone seeking to complete these licensing hours. This individual can provide fee-for-service care. But, they can only be hired if the organization can provide a licensed supervisor to complete a certain number of supervision hours each week (e.g., 10 hours).
- 3. Very few organizations provide supervised training opportunities because maintaining supervisors is costly and challenging to set up and to sustain. A primary reason for this problem is the limited health insurance reimbursement for behavioral health services. Public and private health insurance companies limit both the number of services covered and the rate of reimbursement.

Most organizations cannot generate enough funds to pay for the supervisor and the trainee despite a large community demand for behavioral health services. One organization assisting with the HIA offered an example. Medi-Cal (state insurance) will pay \$25 for one behavioral therapy session while the direct and indirect costs of the supervision and the trainee for that hour exceed \$200.

Conversations with regional training institutions, students seeking behavioral health careers, and trainees in the process completing their licensing hours (e.g., ACSWs) did not indicate a shortage of interest in behavioral health careers. In November 2018, the State Board of Behavioral Sciences website listed nearly 250 ACSW, LCSW, AMFT, and LMFT available in Merced County. However, although we tried, we were not able to identify their work status, indicating that few of those who had their degrees were currently practicing. Students and trainees consistently noted that they had little to no support to identify the required supervision and to complete their required licensing hours. It was difficult to find organizations that would supervise them. When supervision was available, it was not stable to complete the 3,000 required hours. We met four individuals that ended their pursuit of licensure after three to six years of attempting to complete their required hours.

One promising program to address this concern is the Merced County HSA's Pathways to LCSW program. Pathways is an internal program to "home grow" MSW and LCSW for HSA by providing supervised training and incentives for training completion. HSA staff complete at least one year of MSW internship at Merced County, earn their MSW, complete the clinical internship program at HSA, and remain employed at HSA.



(Inc.com, 2019)

Pathways to LCSW program has contributed to these results since starting in 2017:

- 39 individuals have participated in the program
- 10 individuals were active as of March 2019
- 5 individuals have become licensed through the program
- 5 individuals have completed their hours and are ready to test for licensure
- 15 individuals have collected all or part of their hours and have transitioned to work in other agencies/departments (most in behavioral health services to Merced County)

HSA emphasizes that it is vital that "homegrown" MSW/LCSW staff are also "local" residents of Merced County or its surrounding area during the completion of the MSW and LCSW. Some of the program's graduates have left HSA but continue to serve Merced County through BHRS and other behavioral health agencies. HSA's client volume (i.e., over 100,000 visits per month) may make it unique in its ability to operate such an internal training and staff development program. Nevertheless, this program offers one model of a potential solution to addressing MMBH workforce shortages.

Conclusions and Recommendations

Conclusions

Treatable mild and moderate behavioral health (MMBH) concerns such as anxiety and depression are damaging the lives of tens of thousands of Merced County residents. Too many people lack access to proven behavioral health services that can prevent MMBH concerns from interfering with their quality of life and productivity at home, school, work, and the community. Poorer socioeconomic conditions in Merced contribute to and raise the need for MMBH services. Too few licensed MMBH professionals are available to address the population's needs now and in the projected future. Addressing workforce shortages must include attention to behavioral health needs of different cultures, ethnicities, and non-English language groups and to geographically isolated groups in Merced County.

The conditions for actions to address MMBH workforce shortages are in place in Merced. Immediate indicators and costs due to behavioral health workforce shortages are known, as with the California DHCS sanctions and fines on Merced County due to these shortages. People are enrolled and pursuing licensure in behavioral health careers. Local organizations acknowledge the community demand for behavioral health services. Fundamental system-level changes and policies as related to training, supervision costs, and insurance reimbursement for behavioral health are known. At least one model program to "home grow" Merced County licensed behavioral health staff exists with evidence of early success. A collaborative effort to reflect and take action on the lessons from this HIA can make an impact on Merced County's health and development.

Recommendations

The following recommendations emerged through individual and community discussions to reflect on the HIA results. Most of these recommendations evolved through multiple opportunities to share and hear from community stakeholders.

Recommendations for Local Advocates and Advocacy Groups for Behavioral Health

1. Educate family, friends, and the community to recognize the role of addressing everyday stressors for mental and behavioral health and advocate for addressing these stressors.

All of us can do more each day to recognize MMBH concerns. Some opportunities may be specific to our home and family life, and some to our work and community life. If more of us can become better at recognizing the signs and consequences of MMBH, then we can also advocate for professional services and staff to address those concerns.

2. Advocate for acceptable insurance reimbursement for behavioral health services, both for amount and type of services and reimbursement rate for services.

A common poster advocating for behavioral health says, "Pain Isn't Always Obvious." This message hopes to raise awareness that pain resulting from mental and behavioral health hurts as much as pain experienced from more noticeable physical problems like a broken arm or heart attack. As the evidence from this HIA shows, mental and behavioral health concerns cost individuals and the community as much or more than physical or more apparent diseases. Also, poor behavioral health contributes to and makes worse existing physical disease.

Unfortunately, health insurance coverage for behavioral health services tends to be insufficient for many daily stressors (Johnson & Meyer, 2017). Moreover, reimbursement rates to providers for mental and behavioral health services are too low to reinforce their provision. These limitations hurt both the provision of services and the sustainability of training programs for future behavioral health providers. Public and private insurance reimbursement for behavioral health is too low to support the supervision of training hours required to license new behavioral health providers.

Health insurance consumers and health access advocates must collectively call on insurance companies to increase reimbursement for behavioral health services. Advocacy should include and consider ways to support the training of behavioral health staff in areas with shortages in health professionals.

3. Advocate for health insurance carriers to critically review and address gaps in their behavioral health provider networks serving Merced County.

Health insurance carriers are required to have provider networks with enough providers to ensure that their members can received their planned services without an unreasonable delay. Health insurance carriers establish their provider networks by defining and adjusting the number, qualifications, and quality of the providers in their network. The findings from this HIA suggest that the provider networks among health insurance plans serving Merced County may lack the capacity to serve members adequately, especially members who may have linguistic and cultural barriers to behavioral health services. Advocates for behavioral health must help health insurance carriers to critically review and address policies for qualifying behavioral health providers in their networks to ensure a sufficient number of providers to address behavioral health disparities. This policy review process must include assessment of insurance plan sufficiency in providers qualified to serve populations with linguistic and cultural barriers to behavioral health services.

4. Advocate for organizations that provide behavioral health services to provide supervised training hours required for licensure of new behavioral health providers (e.g., LCSWs, LMFTs).

The HIA pointed out a critical disconnection. Behavioral health training supervisors and trainees understand the challenges of completing the 3,000-plus licensing hours. Behavioral health consumers and advocates are not aware of the bottleneck caused by the lack of opportunities to complete licensing hours. Consumers and advocates must ask the behavioral health providers that they work with about how they can provide licensing hours.

5. Encourage early-career development for diverse language and cultural groups to pursue MMBH careers.

The workforce shortages in behavioral health overall are more severe for non-White, non-English-speaking populations. For behavioral health services, clients need providers who speak their language and who understand their customs and traditions relevant to behavioral health. Such providers are most often homegrown, where communities nurture and support their youth and young professionals to pursue these careers.

Recommendations for Health Organizations That Can Offer Supervision for Licensing Hours

 Create local training opportunities for masters-level MMBH graduates (e.g., ACSWs, AMFTs) to complete their required licensing hours quickly and advance to become licensed clinical behavioral professionals (e.g., LCSWs, LMFTs).

The Merced County HSA Pathway to LCSW program is one model to address the need for licensing hours. Early program results show that it does produce LCSWs that serve Merced County, both through HSA and other behavioral health agencies. Other county agencies and larger health organizations (who serve a larger number of patients) may be able to learn from this program and adapt it to their needs.

Merced County's public and private agencies that serve a larger number of clients with potential MMBH concerns can replicate the Pathway to LCSW program. These agencies should ensure that at least one clinical supervisor dedicates at least half of their time to provide direct supervision for training other behavioral health staff – ideally those seeking licensing hours. This approach would not only provide a constant flow of support and communication to seasoned staff with larger caseloads but would also allow for the time dedicated to supervising, leading, and fine-tuning new or associate (interning) staff. The direct supervision time built into managers' required duties will enable interning staff to achieve the hours required for licensure. Also, the behavioral health agencies would have associate staff that could step in during periods of full-time staff turnover (i.e., retirement, resignations, or termination). Increasing managers' mandatory allocation of time in supervision would thus ultimately increase access to care at all levels, including MMBH cases.

2. Attend to preparing behavioral health staff that can address the cultural and linguistic needs of Merced County as training opportunities for licensing are developed.

The shortages in behavioral health staff that represent the cultural and linguistic diversity of Merced County deserve direct attention. Agencies must plan for the recruitment and supervision of MMBH staff that serve specific cultures and languages. They should not assume culturally and linguistically appropriate MMBH care will occur just because some staff represent other cultures and speak non-English languages. For example, supervision for Spanish-speaking trainees should include supervision by at least some Spanish-speaking supervisors. Behavioral health staff that understands and can be responsive to Merced's Hmong and Punjabi communities are also needed.

3. Use the current context created by the DCHS (i.e., county fines and sanctions for workforce shortages and the statewide committee to address the shortages) to channel administrative support, funding and other resources into policies and programs that transition ACSWs and AMFTs into fully employed LCSWs, AMFTs, and other required behavioral health positions.

The proposed fine of \$150,000 per month on Merced County contingent on addressing the state's requirements for behavioral health staff ratios may present a critical opportunity for collaboration and action. Community advocates and agencies with a stake in resolving this problem should meet with the BHRS administration to examine ways in which policy and or practice changes could help ensure that numbers of clinicians stay within the appropriate range.

4. Advocate for acceptable insurance reimbursement for behavioral health services with potential supplemental reimbursement to support training upcoming behavioral health providers.

This recommendation follows the same one made for consumers and advocates. Health and human services organizations that address behavioral health can organize and collectively negotiate for changes in reimbursement. Systems and policy changes regarding reimbursement may target county insurers or larger state and national firms. The power of such action increases when multiple organizations within Merced County join in this request for changes in reimbursement.

5. Assure primary care providers can identify and address MMBH concerns, including appropriate referral to local services.

We began this HIA from our perspective as family medicine physicians and faculty for training family medicine physicians. Every day, all primary care physicians have multiple opportunities to help

patients identify and take action on their behavioral health concerns. Primary care physicians and other primary care staff are often the first people that patients encounter who may provide guidance and referral to appropriate behavioral health services. Residency programs and other education and training programs have a responsibility to prepare primary care providers to attend to MMBH concerns.



(Explore Health Careers, 2019)

References

- Artiga, S. & Hinton, E. (2018). Beyond health care: The role of social determinants in promoting health and health equity. Retrieved from https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/
- Batty, G. D., Russ, T. C., Stamatakis, E., & Kivimäki, M. (2017). Psychological distress in relation to site specific cancer mortality: pooling of unpublished data from 16 prospective cohort studies. BMJ 2017; 356:j108. Retrieved from https://www.bmj.com/content/356/bmj.j108.bbbbbbb
- Brody, D.J., Pratt, L.A., & Hughes, J. (2018). Prevalence of depression among adults aged 20 and over: United States, 2013–2016. NCHS Data Brief, no 303. Hyattsville, MD: National Center for Health Statistics.
- Brown, P., Gonzalez, M., & Sandhu, R. (2015). Economic burden of chronic diseases in California. Retrieved from http://cbcd.ucmerced.edu/Health/
- Caiola, S. (2019). California may withhold millions of dollars from counties for being short on mental health providers. Capital Public Radio. Retrieved from http://www.capradio.org/articles/2019/07/23/california-may-withhold-millions-of-dollars-from-counties-for-being-short-on-mental-health-providers/
- California Department of Public Health. (2018). Symptoms of depression before and after pregnancy. Retrieved from https://www.cdph.ca.gov/Programs/CFH/DMCAH/CDPH%20Document%20Library/Communications/Data-Brief-MIHA-2018-01.pdf
- California Employment Development Department, Labor Market Information Division. (2010-2016). Supply and Demand Tool. Retrieved from https://www.labormarketinfo.edd.ca.gov/geography/supply-and-demand-tool.html
- California Future Health Workforce Commission. (2019). Meeting the Demand of Health: Final Report of the California Future Health Workforce Commission, California Future Health Workforce Commission, February 2019, https://futurehealthworkforce.org/.
- Canadian Society for Medical Laboratory Science. (2018). What is mental health and mental illness?

 The Mental Health Toolkit. Retrieved on February 2018 from

 https://mentalhealth.csmls.org/i-am-an-individual/
- Centers for Disease Control and Prevention. (2014). QuickStats: Percentage of Mental Health–Related* Primary Care† Office Visits, by Age Group National Ambulatory Medical Care Survey, United States, 2010. Morbidity and Mortality Weekly Report (MMWR). November 28, 2014 / 63(47);1118. Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6347a6.htm
- Chapman, A. (2018). Mental health issues and its effects on productivity. Cake HR. Retrieved from https://blog.cake.hr/mental-health-issues-and-its-effects-on-productivity/.

- Chisholm, D., Sweeny, K., Sheehan, P., Rasmussen, B., Smit, F., Cuijpers, P., & Saxena, S. (2016). Scaling-up treatment of depression and anxiety: a global return on investment analysis. The Lancet Psychiatry, 3(5), 415-424.
- Coffman, J., Bates, T., Geyn, I., & Spetz, J. (2018). California's current and future behavioral health workforce. Healthforce Center: University of California, San Francisco.
- Cowan, T. (2005). California's San Joaquin Valley: A region in transition. Rural and Regional Development Policy Resources, Science, and Industry Division. Retrieved from http://congressionalresearch.com/RL33184/document.php?study=Califorinias+San+Juaquin+Valley+A+Region+in+Transition
- Diringer, J. (2014). Critical Issues Affecting Behavioral Health Services in Merced County: Assessing the Shifting Landscape. Retrieved from http://www.co.merced.ca.us/DocumentCenter/View/10333/Merced-BH-brief-final-9-22-14?bidld=.
- Dual Diagnosis. (2019). History of Mental Health Treatment | Dual Diagnosis. [online] Available at: https://www.dualdiagnosis.org/mental-health-and-
- Egede, L. E., & Ellis, C. (2010). Diabetes and depression: global perspectives. Diabetes research and clinical practice, 87(3), 302-312.
- Employment Development Department, State of California. (December 2019). Unemployment rate, Merced Metropolitan Statistical Area (MSA), Merced County. Retrieved from https://www.labormarketinfo.edd.ca.gov/file/lfmonth/merc\$pds.pdf
- ExploreHealthCareers.org. (2019). A New Take on Marriage & Family Therapy. [online] Available at: https://explorehealthcareers.org/a-new-take-on-marriage-family-therapy/ [Accessed 21 Sep. 2019].
- Goetzel, R. Z., Roemer, E. C., Holingue, C., Fallin, M. D., McCleary, K., Eaton, W., ... & Braga, M. (2018). Mental Health in the Workplace: A Call to Action Proceedings from the Mental Health in the Workplace: Public Health Summit. Journal of occupational and environmental medicine, 60(4), 322.
- Grassi, K., Oestman, K., Linkins, K., & Brya, J. (2015). Merced County Primary Care and Behavioral Integration Project: Consumer Engagement Survey. Retrieved from https://www.co.merced.ca.us/2146/Merced-County-Health-Care-Consortium.
- Greenstein, L. (2017). Can stigma prevent employment? National Alliance on Mental Illness. Retrieved from https://www.nami.org/Blogs/NAMI-Blog/October-2017/Can-Stigma-Prevent-Employment.
- Harvard Health Publishing. (2010). Mental health problems in the workplace. Harvard Mental Health Newsletter. Retrieved from https://www.health.harvard.edu/newsletter_article/mental-health-problems-in-the-workplace.
- Healthline. (2019). Emergency Rooms: Why So Many People Use Them. [online] Available at: https://www.healthline.com/health-news/medical-care-in-emergency-rooms#1 [Accessed 21 Sep. 2019].

- Healthy People 2020. Leading health indicators (LHI), 2020 LHI topics, mental health. Retrieved on May 2018 from https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhitopics/Mental-Health/determinants.
- Henkel, D. (2011). Unemployment and substance use: a review of the literature (1990-2010). Curr Drug Abuse Rev. Mar;4(1):4-27.
- Inc.com. (2019). 7 Things You Have to Do to Build a Powerful Community. [online] Available at: https://www.inc.com/kevin-daum/7-things-you-have-to-do-to-
- Kessler, R. C., Heeringa, S., Lakoma, M. D., Petukhova, M., Rupp, A. E., Schoenbaum, M., ... Zaslavsky, A. M. (2008). Individual and societal effects of mental disorders on earnings in the United States: results from the national comorbidity survey replication. The American journal of psychiatry, 165(6), 703–711. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2410028/
- Lee, S. (2013). Mental health of Hmong Americans: A metasynthesis of academic journal article findings. Hmong Studies Journal, 14: 1-31. Retrieved from http://hmongstudies.org/LeeHSJ14.pdf
- LeViness, P., Bershad, C., & Gorman, K. (2017). The Association for University and College Counseling Center Directors Annual Survey. Retrieved from https://www.aucccd.org/assets/2017%20aucccd%20survey-public-apr17.pdf
- McGauley, J. (2019). John Malkovich Recreated 31 Of The Most Iconic Photos In History. [online] Thrillist. Available at: https://www.thrillist.com/home/john-malkovich-recreates-iconic-photos-with-photographer-sandro-miller [Accessed 21 Sep. 2019].
- McLean, C. P., Asnaani, A., Litz, B. T., & Hofmann, S. G. (2011). Gender differences in anxiety disorders: prevalence, course of illness, comorbidity and burden of illness. Journal of Psychiatric Research, 45(8), 1027–1035. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3135672/
- Merced County Department of Public Health. (2016). Merced County 2016 Community Health Assessment. Retrieved from https://www.co.merced.ca.us/DocumentCenter/View/12213/CHA-FINAL---V1?bidId=
- Merced County Food Bank. Summary of statistics on county website. Retrieved on February 2018 from https://mmcfb.org/learn/hunger-in-our-community.html
- Merced Family Medicine Residency Program (MFMRP). (2018). Observations from Residency Program faculty on the HIA project during their experiences in serving patients with MMBH.
- Melek, S. P., Norris, D. T., Paulus, J., Matthews, K., Weaver, A., & Davenport, S. (2018). Potential economic impact of integrated medical-behavioral healthcare: Updated projections for 2017. Milliman Research Report.
- Mental Health America (Retrieved May 2018). Black and African American communities and mental health. Retrieved from https://www.mhanational.org/issues/black-african-american-communities-and-mental-health#Source%203
- Miletic, T., Piu, M., Minas, H., Stankovska, M., Stolk, Y., & Klimidis, S. (2006). Guidelines for working effectively with interpreters in mental health settings. Victorian Transcultural Psychiatry Unit

- (VTPU). Retrieved from https://vtmh.worldsecuresystems.com/LiteratureRetrieve.aspx?ID=37634
- Nagelhout, G.E., Hummel, K., De Goeij, M., De Vries, H., Kaner, E., & Lemmens, P. (2017). How economic recessions and unemployment affect illegal drug use: A systematic realist literature review. International Journal of Drug Policy, 44:69-83. Retrieved from http://www.sciencedirect.com/science/article/pii/S0955395917300877
- National Alliance on Mental Illness. (2019). LGBTQ. Retrieved from https://www.nami.org/Find-Support/LGBTQ
- National Research Council. 2011. Improving Health in the United States: The role of health impact assessment. Washington, DC: The National Academies Press. https://doi.org/10.17226/13229.
- Niedzwiecki MJ, Sharma PJ, Kanzaria HK, McConville S, Hsia RY. (2018). Factors associated with emergency department use by patients with and without mental health diagnoses. JAMA Netw Open. 2018;1(6):e183528. Retrieved from https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2707424
- Pan, A., Sun, Q., Okereke, O. I., Rexrode, K. M., & Hu, F. B. (2011). Depression and risk of stroke morbidity and mortality: a meta-analysis and systematic review. JAMA, 306(11), 1241–1249. doi:10.1001/jama.2011.1282
- Patel, S. G., Firmender, W. M., & Snowden, L. R. (2013). Qualitative evaluation of mental health services for clients with limited English proficiency. International journal of mental health systems, 7(1): 27. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4174905/
- Professional Research Consultants, Inc. (2016). Merced County Community Health Needs Assessment. Retrieved from https://www.sutterhealth.org/pdf/for-patients/chna/mhlb-2016-chna.pdf
- Psychologist Workforce Projections. (2019). Psychologist Workforce Projections from 2015-30: Addressing Supply and Demand. [online] https://www.apa.org/workforce/publications/supply-demand/index
- Reifsneider, D. (2018). The most frequently used ICD-10 Codes in behavioral health in 2017. Retrieved from https://www.simplepractice.com/blog/top-icd-10-codes-behavioral-health-2017/.
- Johnson, S.R. & Meyer H. (2017). Behavioral health: Fixing a system in crisis. Modern Healthcare. Retrieved from https://www.modernhealthcare.com/reports/behavioral-health/#!/#addressing-behavioral-health-to-improve-all-health
- Sauter, M.B. (2018). Low income, high unemployment contribute to these US cities high poverty rates. USA Today. Retrieved from https://www.usatoday.com/story/money/economy/2018/09/19/poverty-rates-americacities-highest-levels/37799947/

- The Conversation. (2019). Is your 10:30 medical appointment really for 11:15?. [online] Available at: http://theconversation.com/is-your-10-30-medical-appointment-really-for-11-15-90061 [Accessed 21 Sep. 2019].
- The Pew Charitable Trusts. (2014). The HIA Process. Retrieved from https://www.pewtrusts.org/en/research-and-analysis/articles/2014/08/28/the-hia-process
- UCLA Center for Health Policy Research. (2011-2017). California Health Interview Survey. Retrieved from http://ask.chis.ucla.edu
- United Way. (2019). 5 unique ways to get involved with your community United Way. [online] Available at: https://www.uwlm.ca/news/5-unique-ways-get-
- University of Wisconsin Population Health Institute. (2018). County Health Rankings & Roadmaps, 2018. Retrieved from http://www.countyhealthrankings.org/
- U.S. Census Bureau (2018). American Community Survey 1-year estimates. Retrieved from Census Reporter Profile page for Merced County, CA. Retrieved from http://censusreporter.org/profiles/05000US06047-merced-county-ca/>
- U.S. Department of Health and Human Services, Health Resources and Services Administration. (2016). HPSA Find. Retrieved from https://data.hrsa.gov/tools/shortage-area/hpsa-find
- U.S. Department of Health and Human Services, National Institutes of Health, National Institute of Mental Health. (2015). Depression (NIH Publication No. 15-3561). Bethesda, MD: U.S. Government Printing Office. Retrieved from https://www.nimh.nih.gov/health/publications/depression-what-you-need-to-know/index.shtml
- U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health. Washington, DC: HHS, November 2016. Retrieved from https://addiction.surgeongeneral.gov/sites/default/files/surgeon-generals-report.pdf
- Vang, K. (2018). Pathway to the LCSW: A plan for professionalization of Social Work Cadre at HSA.

 Merced County Human Services Agency (HSA) report.
- Walker, E. R., McGee, R. E., & Druss, B. G. (2015). Mortality in mental disorders and global disease burden implications: a systematic review and meta-analysis. JAMA Psychiatry, 72(4), 334-41.
- Washington State Institute for Public Policy. (2018). Benefit-Cost Results: Adult Mental Health. Retrieved from http://www.wsipp.wa.gov/benefitcost
- Zink, A. (2018). Mental health patients, with nowhere else to go, are overwhelming emergency departments. STAT. Retrieved from https://www.statnews.com/2018/10/18/mental-health-care-emergency-departments/Appendix 1 Picture and Graphic Attributions