Mercy
MEDICAL CENTER

Our mission is to heal. Our passion is to care.

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September 27, 2013

David Seltz, Executive Director
Massachusetts Health Policy Commission
Two Boylston Street
Boston, MA 02116

RE: Testimony for Annual Health Care Cost Trends Hearing - October 1 and 2, 2013

Dear Mr. Seltz:

In response to your letter of August 28, 2013, Mercy Medical Center submits the attached written testimony. Mercy and Sisters of Providence Health System share a compelling mission to be a transforming, healing presence in the communities we serve. With Mercy serving as the hub, SPHS is committed to continued development of a high-value, integrated, patient-centered network. This network utilizes the full SPHS continuum of care, including acute care, behavioral health, primary care, rehabilitation, long-term care, home care, lab services and end-of-life care. The SPHS network includes:

- *Mercy Medical Center*: A 182-bed, acute care hospital located in Springfield. Mercy's hallmark programs include the Sister Caritas Cancer Center, specialized neurosurgery, the Family Life Center for Maternity, a newly-expanded Emergency Department and the state-of-the-art ICU.
- *Weldon Rehabilitation Hospital:* A 60-bed hospital-based rehabilitation center located at Mercy.
- *Providence Behavioral Health Hospital:* The 126-bed behavioral health campus of Mercy, located in Holyoke, is one of the largest providers of acute behavioral health services in the Commonwealth. Services include inpatient and outpatient psychiatric care for children and adults, inpatient substance abuse treatment, outpatient Methadone treatment and Suboxone treatment.
- *Brightside for Families and Children:* Offers a range of social support services for families with psychiatrically distressed children. Services include home-based family stabilization and treatment, community support programs, as well as specialized neuropsychological evaluations.
- *Mercy Internal Medicine Service:* Mercy's pioneering hospitalist program is a group practice composed of Board-Certified hospitalists devoted to providing hospital care, 24/7.
- *Mercy Home Care:* One of the largest home health providers in Western Massachusetts.
- *Mercy Hospice*: patient-centered, culturally-competent, end-of-life care.
- *Mercy Continuing Care Network:* Comprised of six long-term care facilities (including *Farren Care Center* – a specialized facility for individuals who are medically involved and mentally ill), an adult day health program and a soon-to-be-launched PACE program.

I am legally authorized and empowered to represent Mercy Medical Center for the purposes of this testimony. I hereby certify under the pains and penalties of perjury that Mercy has made a diligent effort to respond to the foregoing questions, and that, to the best of my knowledge and reasonable belief, the foregoing answers are true and correct.

Sincerely,

Thomas Robert
Sr. Vice President of Finance and CFO
Sisters of Providence Health System

Mercy Medical Center - EXHIBIT B: HPC Questions and Written Testimony

1. ***Chapter 224 of the Acts of 2012 (c.224) sets a health care cost growth benchmark for the Commonwealth based on the long-term growth in the state's economy. The benchmark for growth between CY2012-CY2013 and CY2013-CY2014 is 3.6%.***
   a. ***What are the actions your organization has undertaken to reduce the total cost of care for your patients?***

Mercy is currently engaged several initiatives to reduce the total cost of care for our patients, including the implementation of the Achieving Clinical Transformation (ACT) program, the Delivery System Transformation Initiatives (DSTI) program, and Mission Critical.

ACT initiatives are focused on improving clinical outcomes and enhancing quality and patient safety. ACT underscores the Mercy commitment to high quality patient care and patient satisfaction. Elements of ACT involve gathering information that identifies clinical and patient safety processes that improve outcomes, efficiency and financial performance. Currently, efforts are focused on reducing or eliminating five hospital-acquired conditions as a way to effect the desired clinical transformation. Specifically, these conditions are:

- Catheter-associated urinary tract infections
- Falls resulting in injuries
- Central line infections
- Ventilator-associated pneumonia
- Stages II, III and IV, deep tissue injury and pressure ulcers

Along with these clinical and patient safety processes, the ACT initiative also systematically looks for opportunities to improve operating and financial performance. Examples of activities or processes that will be revised and analyzed include:

- Utilization Management - Length of stay, operating room utilization, readmission within 30 days of discharge, payment denials
- Comprehensive Care Management - Movement through the Continuum of Care
- Clinical Improvement - Prevention of hospital acquired conditions
- System-wide Opportunities - Productivity improvements, information technology enhancements, supply costs and other savings

Mercy's DSTI projects build on and are aligned with the ACT initiatives. The projects are like puzzle pieces converging to shape a vision for the future. Mercy is actively implementing the following DSTI Projects:

- *Enhance Primary Care Capacity and Access*: This project includes a primary and specialty care building expansion on the Mercy Medical Center campus that helps to further develop Mercy's integrated care network with physician groups, enhance patient access and improve care transitions for hospital patients. With a physician-led effort to develop and implement a PCP recruitment and retention strategy for Greater Springfield, combined with a new affiliation agreement with UMASS Medical School, this project is attracting new primary care physicians to the area.
- *Integrate Physical and Behavioral Health Care in Mercy's ED*: This project developed and implemented a new model operational plan that integrates physical and behavioral health care for

patients that present with significant mental health and substance abuse issues (MH/SA) in Mercy's ED. This project has expanded clinical assessment resources into the newly-renovated "Psych Pod" in the Mercy ED. The project has also collected qualitative and quantitative baseline measures for MH/SA patients and is implementing a rigorous quality improvement process to reduce ED length of stay, lower costs, increase ED patient flow and improve the quality of care.

- *Re-engineer care coordination and management (Care Connect)*: This project designed and implemented a new, patient-centered, care coordination and management system that integrates departmental and hospital system workflows to reduce the time it takes to place patients in available beds, treat them effectively and discharge them safely to the next appropriate level of care. The project included the development of the CareConnect Hub that utilizes new IT system architecture, real time applications and new staffing to track all inpatients and ED patients in real time. This project will transform the current state of care management at Mercy Medical Center to reduce case costs, average length of stay, patient flow times, discharge process times, readmission rates, ED holds and the rates of ED patients who leave without being seen, while boosting quality measures and patient satisfaction
- *Patient-Centered Care Transitions for Patients at the Highest Risk of Readmission*: This project designed a patient-centered care management model and intervention for "high-risk" patients with the highest rates of 30-day hospital readmissions, using the STAAR Chart Review Tool. The project will re-engineer the hospital discharge process for all admitted patients and develop a home-based disease management program for all patients identified as "High Risk."
- *Develop Capacities to Alternative Payments (ACO):* This project formalized and attempts to bring to scale the existing, PCP-driven, "virtual ACO" of Mercy and a large physician group into a free-standing legal entity that will as a model for developing relationships with payers for global payment systems. A major focus of the project is to increase HIT connectivity for Health Information Exchanges (HIE) between Mercy Medical Center and collaborating physician groups, to deliver expanded care management, disease management and case management services for larger groups of complex patients/beneficiaries.
- *Develop Capacities to Manage the Care of Complex Patient Populations (PACE)*: This project is increasing a variety of organizational operating and learning capacities to serve complex patient populations in value-based purchasing and alternative payment systems. From site selection, physical infrastructure development, service mix and employee skills training for managing patients and resources in new payment systems, to new care coordination, cost management and accounting systems.
- *DSTI Learning Collaborative*: Mercy is collaborating with other DSTI hospitals in a Learning Collaborative. DSTI projects have the potential to significantly transform the care experience for Massachusetts residents served by safety net hospitals. As important as individual hospital efforts will be, there is even greater potential value in leveraging the hospitals' efforts for delivery system transformation through the sharing of best practices. Participation in the learning collaborative is providing a forum for DSTI hospitals to learn from other providers that share similar goals and to capitalize on potential synergies in their efforts.

Mercy's Mission Critical is focused on reducing operating expenses and has been ongoing fat Mercy for several years. In recent years, Mercy utilized Mission Critical to reduce operating costs by more than $10 million. The goal of these measures has been to improve the financial performance in order to continue to serve the most important needs of the greater Springfield community. Behavioral health is one of those significant and under-met community needs.

b. What are the biggest opportunities to improve the quality and efficiency of care at your organization? What current factors limit your ability to address these opportunities?

Within its Delivery System Transformation Initiative plan, Mercy is engaged in a wide-range of activities aimed at reducing the total cost of care, improving quality and boosting operational efficiencies. One of the biggest opportunities to improve quality and efficiency of care is Mercy's *Re-engineer care coordination and management (Care Connect)*. A Cross-departmental Hub is now tracking all inpatients and ED patients in real-time. To accomplish this goal, Mercy contracted with Care Logistic™ to develop, with considerable hospital staff input, the new operating system internally known as CareConnect. CareConnect integrates departmental and hospital system workflows, providing actionable data, to both clinical staff and patients, on key performance indicators, such as, but not limited to, length of stay (LOS), patient flow times (e.g., the time it takes to get a patient's bed ready or the time it takes to obtain an MRI), discharge process times, re-admission rates, the number of ED patient holds (ED patients awaiting hospital beds), and patient satisfaction levels upon discharge.

To implement the new CareConnect model, the hospital hired twenty-four new care coordinators and trained more than 300 hospital staff to work within the new and improved model of care management. Since CareConnect went live in April of 2013, hospital staff members in all departments are able to follow each patient throughout his or her stay on a visual board. In the CareConnect Hub there are large-screen monitors displaying each patient's identifier, DRG, risk status and real-time tracking of all scheduled tests and procedures. The underlying objective is to significantly reduce or eliminate the white space in a patient's hospital stay-the time the patient spends simply waiting for a bed or for transportation to radiology. With a transformative care coordination and management system such as CareConnect, hospital staff members are now be able to see how much time has been allotted for each ordered departmental service for each patient.

Mercy is at the beginning of the CareConnect process, but there is growing evidence that the CareConnect will help to reduce average LOS, increase operational capacities, lower case costs, boost quality metrics and improve patient satisfaction scores. Reductions in LOS can be a prime driver to lowering health care costs and increasing operational efficiencies. Other hospitals using the Carelogistics model have reported marked reductions in LOS, reductions in infection rates, such as, central line-associated BSI, ventilator-associated pneumonia and Foley-related urinary tract infection, and surgical site infections.

Financial challenges are the most significant factor limiting Mercy's ability to address transformational opportunities such as CareConnect. With payer mix dominated by Medicaid and lower than average commercial payments, Mercy is low cost provider that also provides high quality care. The most significant challenge that Mercy faces is generating a sufficient operating margin to make the investments necessary to continue transformation.

c. What systematic or policy changes would encourage or help organizations like yours to operate more efficiently without reducing quality?

Reimbursement policies related to government and government funded payers should be addressed to assure that payment levels cover the cost of care. Adequate reimbursement rates from MassHealth, MMCOs and Health Safety Net would provide the resources for hospitals like Mercy to operate more efficiently and improve quality.

Reimbursement policies specific to behavioral health services are a significant challenge to more efficient operation for Mercy / Providence Behavioral Health Hospital. A recent analysis conducted by the Public Consulting Group for the Massachusetts Behavioral Health Partnership indicated that for acute care hospitals within the MBHP network rates of reimbursement covered less than 70% of the cost of care. The report used the 403 Cost Reports to quantify cost and it also found that the 403 Reports did not capture all the costs of providing care. The PCG Report validates the experience of Mercy and Providence Behavioral Health Hospital. In 2012, Providence Behavioral Health Hospital had an operating loss of approximately $11.8M prior to supplemental funding (DSH & DSTI). The operating loss on services provided to children and adolescents, included in the total loss, was $4.2M. Adequate rates of reimbursement for behavioral health services would help behavioral health care providers to operate more efficiently and improve quality.

Other policy changes that would encourage efficiency without reducing quality include, include: effectively using community based care for non-emergent and mental and/or substance abuse conditions to provide 24/7 care, and an increased emphasis on the development of strategies for PCP recruitment in urban areas.

d. What steps are you taking to ensure that any reduction in health care costs is passed along to consumers and businesses?

Mercy has taken several steps to assure that reductions in healthcare costs are passed on to consumers and businesses. Mercy is one of the most cost effective hospitals in Massachusetts as evidenced by the Center for Health Information and Analysis Report, "Health Care Provider Price Variation in the Massachusetts Commercial Market" (February 2013), which showed Mercy to have a blended relative price that is significantly lower than the average relative price for hospitals in Massachusetts. Mercy has also been nationally recognized for delivering high-value care. Cleverly and Associates, a leading health care financial consulting firm specializing in operational benchmarking and performance-enhancing strategies, recognized Mercy as both a "Community Value Top 100" and "Community Value Five-Star" hospital in both 2010, 2011, 2012 and 2013. We are actively engaged in discussions with employers and insurers regarding the development of selective network products which would leverage the Mercy value proposition. These networks would pass along savings to consumers and businesses through lower premiums.

Mercy's accountable care initiatives also pass along costs savings to consumers and businesses. Mercy's Medicare Advantage participation ("virtual ACO") provides that consumers share in the savings associated with accountable care through reduced premiums. Additionally, the Medicare ACO Shared Savings Program, which Mercy is participating in through ACONE, provides that 50% of the savings created through the MSSP would be retained by Medicare. Ultimately, these savings will accrue to tax payers and consumers.

2. ***The 2013 Examination of Health Care Cost Trends and Cost Drivers by the Attorney General's Office found that growth in prices for medical care continues to drive overall increases in medical spending. What are the actions your organization has undertaken to address the impact of the growth in prices on medical trend and what have been the results of these actions?***

Mercy Medical Center faces financial challenges that are unique to Massachusetts "Safety-Net Hospitals" because of the hospital's significantly higher percentages of Medicaid patients and significantly lower percentages of patients covered by commercial insurance payers (approximately 28% of Mercy's payments are from Medicaid and Medicaid-like payers and approximately 25% are from commercial payers) Converting a potential liability into an asset, Mercy has used this challenging payer mix to become one of the most cost-effective, acute care hospitals in the Commonwealth. As evidenced by the Center for Health Information and Analysis Health Care Provider Price Variation Reports and the Attorney General Examination of Cost Trends Cost Driver Reports Mercy has prices that are below the relative average for hospitals in Massachusetts. At the same time, Mercy and the Sisters of Providence Health System have pursued a number of strategies as part of our DSTI projects (sited in response to Question 1a.) that target the "triple aim," better care for individuals; better health for populations; and reduced per capita costs.

Mercy has utilized the work of the Center for Health Information and Analysis and the Office of the Attorney General to highlight its value proposition in negotiations with payers. We have also engaged in discussions with payers, businesses and consumers regarding strategies to utilize Mercy and to create more competition to lower prices.

3. ***C.224 seeks to promote the integration of behavioral and physical health. What are the actions your organization has undertaken to promote this integration?***
   a. ***What potential opportunities have you identified for such integration?***

Mercy's main focus for integrating behavioral and physical health has been in the hospital's Emergency Department (ED). From an organizational perspective, integrating physical and behavioral clinical domains into the ED provides an appropriately-scaled focal point to develop and transfer significant organizational learning for future integration applications throughout the health system and with other partners in the community. Although they share the same hospital license and exist within the same health system, Mercy and its behavioral health campus in Holyoke, Providence Behavioral Health Hospital, this effort integrates the considerable capacities and cultures of both entities within a single physical location. In joining forces with the Mercy ED, Providence Behavioral Health Hospital leverages its formidable array of mental health and substance abuse resources, which include a clinical assessment center, inpatient psychiatric treatment facilities for children, adolescents, adults and older adults, inpatient substance abuse unit, two outpatient Methadone Maintenance Treatment clinics, and other outpatient treatment programs for mental health and substance abuse.

In 2012, the hospital contracted with HealthMETRICS. HealthMETRICS collected and analyzed patient-centered baseline data from a sample of ED patients who presented with significant mental health and/or substance abuse conditions (MH/SA). With baseline data in hand, the project team focused on interventions that aimed to reduce the time a MH/SA patient spends in the Mercy ED. The average ED length of stay baseline for MH/SA patients was 15 hours, 24 minutes. MH/SA patients who were discharged to inpatient settings spend an average of 20 hours, 16 minutes in the Mercy ED. In marked

contrast, ED patients who did not present with MH/SA conditions cycled through the ED in 3 hours, 24 minutes, on average. With these and other baseline measures in mind, the project team focused on interventions that aimed reducing the time to get MH/SA patients to the next appropriate level of care. Project team members devised a "Psychiatric Provider of the Day" and a schedule for on call guidance from Providence Behavioral Health to the clinical team in the Mercy ED. The SBIRT (Substance Abuse Brief Intervention and Referral to Treatment) social worker was reassigned for clinical supervision to a Providence Behavioral Health Hospital care manager. Another significant accomplishment was contracting with the a community-based crisis and mental health organization, for onsite clinical evaluation of MH/SA clients in the Mercy ED, 16 hours-a-day, seven days a week. Providence Behavioral Health Hospital also developed a plan to expand the Clinical Assessment Center to 24/7, providing greater access to MH/SA patients who are seeking inpatient treatment. The Mercy ED and Providence Behavioral Health Hospital clinical teams have also identified the data elements for a MH/SA patient registry. When completed, the MH/SA Patient Registry will be assist ED providers as well as the clinical team at Providence Behavioral Health to more effectively coordinate care for ED patients with significant mental health and substance abuse conditions. Future plans include continuing the integration to optimize performance processes for integrating physical and behavioral health care and to increase the percentage of ED patient "High-End Utilizers" who are assessed for behavioral health issues and referred for appropriate treatment.

b. What challenges have you identified in implementing such integration?

Several challenges were identified in implementing the integration. One challenge involves bridging the "boundaries" that frequently separate physical and behavioral health care. The deployment of behavioral health case workers in the Mercy ED represented a step forward in integrating care and transcending institutional silos. This integration provided the opportunity to operationalize evidenced-based practices in managing psychiatrically distressed patients in the ED.

Another challenge in implementing this integration involved the difficulty of engaging behavioral health patients in the ED to participate in a patient satisfaction survey process. Behavioral health patients typically present in the ED with moderate to severe distressed conditions. The clinical team in the ED continues to experiment with methodologies to engage ED behavioral health patients in the satisfaction survey process to assure that the patients' needs are being met.

c. What systemic or policy changes would further promote such integration?

Several systemic and policy changes could further promote the integration of physical and behavioral health, including: Integrating primary care services into acute care behavioral health settings for person with complex physical conditions; developing in-home behavioral health services for individuals discharged from inpatient behavioral health settings; and, utilization of psychiatric community health workers.

There is evidence to consider a policy and alternate payment system for integrating primary care services into acute care, behavioral health settings for persons with serious mental illnesses and complex physical conditions. The development of integration models that take into account the degree of complexity and relative risk in patients' behavioral health and physical health status would promote such integration. This integration framework uses four distinct quadrants to differentiate the complexity

of patient needs:[1] Quadrant I - Patients with low behavioral health-physical health complexity/risk; Quadrant II - Patients with high behavioral health-low physical health complexity/risk; Quadrant III - Patients with low behavioral health-high physical health complexity/risk; Quadrant IV - Patients with high behavioral health-high physical health complexity/risk.

One focus for systemic/policy change would be a focus on Quadrant IV: Adults with serious mental illness and co-occurring primary care conditions and chronic diseases. A one-stop health care center with a team of physical and behavioral health specialists may provide a more cost effective alternative to the current system. Adults challenged with serious mental illnesses have significantly higher rates of high blood pressure, asthma, diabetes, heart disease and stroke than adults with no mental illnesses.[2] Not only does the diagnosis of diabetes double the prospect of comorbid depression, but also, with their coexistence, the severity of diabetes generally increases.[3] Depression or other mental health conditions frequently interfere with self-management of chronic diseases. For example, a person who has both diabetes and depression is more likely to engage in poor self-management of the disease, in particular, medication non-compliance, physical inactivity, poor nutrition, and smoking.[4] The strong linkage between depression and hyperglycemia[5] has also been confirmed to lead to serious, diabetic complications, such as retinopathy, nephropathy, neuropathy, sexual dysfunction, and macrovascular disease.[6]

Health care utilization patterns are different for adults with serious mental illness. Nearly 48% of adults with serious mental illnesses sought care in hospital Emergency Departments compared with 30.5% of adults without serious mental illness. [7] Inpatient hospital utilization rates nearly doubled for this vulnerable population, with 20.4% of adults with serious mental illness becoming hospitalized, compared to an 11.6% hospitalization rate for adults without serious mental illness. [8]Monthly Medicaid expenditures for beneficiaries with one or more physical conditions are significantly higher for patients treated for mental health or substance abuse issues, compared to Medicaid beneficiaries who do not receive mental health or substance abuse services.[9]

Another systemic change that would promote this type of integration would be the further development of in-home mental health services patients discharged from inpatient psychiatric settings. Discharged behavioral health patients frequently face challenges to obtain access to the next level of care at community mental health centers or outpatient behavioral health departments and group practices.

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[1] Maurer, B. (2006). Behavioral Health Primary Care Integration: The Four Quadrant Model and Evidence-Based Practices. National Council for Community Behavioral Healthcare. Rockville, MD.

[2] Center for Behavioral Health Statistics and Quality. (2011). Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings (NSDUH Series H-41, HHS Publication No. SMA 11-4658). Rockville, MD: Substance Abuse and Mental Health Services Administration.

[3] Anderson, R.J., Freedland, K.E., Clouse, R.E., Lustman, R.E. (2001), "The Prevalence of Comorbid Depression in Adults with Diabetes: A Meta-Analysis," *Diabetes Care* 24 (6): pages 1069-1078.

[4] Lin, E.H., Katon, W., Von Korff, W.J., *et. al.* (2004), "Relation of Depression and Diabetes Self-Care, Medication Adherence, and Preventive Care." *Diabetes Care 27: pages 2154-2160.*

[5] Lustman, P.J., Anderson, K.E., *et. al.* (2000), "Depression and Poor Glycemic Control: A Meta-Analytic Review of the Literature." *Diabetes Care* 23 (7): pages 934-942.

[6] De Groot, M., Anderson, R., Freedland, K.E., *et. al.* (2001), "Association of Depression and Diabetes Complications: A Meta-Analysis." *Psychosomatic Medicine* 63 (4): pages 619-630.

[7] *Ibid.*

[8] *Ibid.*

[9] SAMHSA. (2010). Mental Health and Substance Abuses Services in Medicaid, 2003.

Providence Behavioral Health Hospital is now actively engaged with a number of stakeholders, including the Massachusetts Behavioral Health Partnership (MBHP) and its Care Management Region 2 Emergency Service Providers (ESPs) and MassHealth Managed Care Organizations to boost the quality of behavioral health care for MassHealth and other consumers, especially in their transitions from inpatient psychiatric care back to the community setting. Though the discharge guidelines[10] are clear to facilitate immediate access, within seven (7) days, to psychiatric appointments in the community, patients and providers typically face numerous barriers to complete and sustain a strong and timely care transition. If a discharged patient misses the first scheduled psychiatric appointment and then runs out of medication, psychiatric symptoms are likely to worsen. When psychiatric symptoms worsen, in the absence of community-based mental health treatment, psychiatric hospital and/or skilled nursing facility re-admissions are more likely.

This type of initiative would provide patients who are discharged from inpatient psychiatric hospitalization with home-based, mental health "bridging services" to ensure strong and sustained care transitions to community-based mental health treatment and support services. Immediate goals include stabilizing psychiatric symptoms, providing medication management and deliver training for caregivers. Long term goals, include avoiding preventable inpatient psychiatric hospitalization and/or nursing home placement and sustained access to community-based mental health and supportive services. The range of services provided to each patient would be individualized, based upon a comprehensive, in-home assessment. Experienced, Advance Practice Psychiatric Nurses could coordinate bridging efforts with primary care physicians, psychiatrists, other care providers and family members to establish or reestablish a strong and sustainable connection with community-based psychiatric, mental health and supportive services.

Another systemic/policy change that would promote this type of integration would be the utilization of Community Health Workers (CHWs). CHWs could be a missing link for lowering costs and improving health outcomes for vulnerable patient populations, especially those with serious mental illnesses and co-morbid chronic physical conditions. Costs associated with CHWs could be factored into alternative payment methods. There is growing evidence that CHWs serve as the essential "glue" to help vulnerable patients to navigate and develop stronger connections within a complicated health care delivery system,[11] and to reduce the utilization of hospital EDs and costly specialty services.[12] CHWs could extend the healing influences of physical and behavioral health providers, beyond their office and hospital settings, into neighborhoods, homes and everyday lives of patients, promoting preventive health and wellness interventions, helping newly-discharged patients understand the dynamic interdependence of their physical and behavioral health conditions and comply with the various elements prescribed in their individualized medical and behavioral health plans.

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[10] National Committee for Quality Assurance (NCQA). HEDIS 2012: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2011. various p.

[11] Rahman, A. *et. al.* (2008). Cognitive behavior therapy-based interventions by community health workers for mothers with depression and their infants in rural Pakistan: a cluster-randomized controlled trial. *The Lancet,* 372, 902-09.

[12] Nemcek, M. and Sabatier, R. (2003). State of evaluation: community health workers. *Public Health Nursing,* 20(4), 260-270.

4. **C.224 seeks to promote more efficient and accountable care through innovative care delivery models and/or alternative payment methods.**
    a. **Describe your organization's efforts to promote these goals.**

Mercy counts itself among the early adapters of accountable care through innovative delivery models and alternate payments. Driven by growing concerns over spiraling health care costs and the uneven quality of care for unmanaged Medicare patients, Mercy, in partnership with Hampden County Physician Associates (HCPA), developed, what Eliot Fisher and others have referred to as a "virtual ACO." The goals were: to improve care and reduce costs; improve the management of chronic disease; reduce hospital admissions and preventable readmissions; boost patient satisfaction; and manage financial risk for performance under a global payment arrangement. Performance incentives were aligned so that health cost savings were shared by patients, physicians, the hospital and the insurance payer, but only if quality and cost effectiveness benchmarks were achieved.

This "virtual ACO" instituted, in a "real world" urban setting, what the Brookings Institute recommended for "bending the health care curve," by integrating care management, care delivery and disease management into a single, high-performance network. This network reduced hospital admissions and readmissions and optimally managed chronic disease to improve care and reduce costs. Mercy and HCPA entered into a risk arrangement with a Managed Medicare plan and assumed care coordination and financial responsibility for 6,000 members. A structural framework was designed and key competencies developed by the physician group and community hospital to closely manage care, deliver disease management services to the top 3% (160) "high-risk" patients and provide quality oversight and medical direction, while effectively managing costs.

Quality results were exemplary. For example: utilization decreased to 173 admissions per thousand, compared to 380 admissions per thousand in a comparable, unmanaged Medicare population; hospital length of stay averaged 5.8 days compared to 6.2 days in an unmanaged population; the percentage of patients readmitted within 30 days in the program population was 9.8%, compared to 16.4% in other Managed Medicare systems and 20% in unmanaged Medicare; and patient satisfaction was high, with over 86% rating the program excellent or very good in overall satisfaction. Financial performance was equally exemplary, with overall, spending for the program population 12.8% lower than an unmanaged population of the same size.

Over the next several years, a highly integrated care management system was developed and refined as part of two Medicare Advantage programs. This innovative – patient centered – healthcare delivery system has delivered to its Medicare Advantage members a high value health care experience: out-of-pocket cost savings, added benefits not covered by Medicare, improved quality outcomes (using HEDIS and severity adjusted mortality measurements), and improved satisfaction. It has also provided the physicians (PCPs and specialists) and hospitals with added information about their patients improved quality. It has helped that two insurance intermediaries involved in the program maintain NCQA national top five in class quality rankings – while reducing annual healthcare expenditures by approximately 15 to 20% when compared to unmanaged Medicare metrics in the Greater Springfield area.

Building upon these innovative care delivery and alternative payment organizational experiences and infrastructure, Mercy is now into its third full-year of implementing a project for the Commonwealth's Delivery System Transformation Initiative program. Project activities aim to develop governance, administrative and operations capacities to accept global payments and alternate payments. The thrust of project activities centered on formalizing the legal status of a PCP-driven, accountable care

organization, as a collaboration of Mercy, Hampden County Physician Associates, Accountable Care Associates, LLC, Noble Hospital and Independent Practice Associates into a free-standing legal entity - Accountable Care Organization of New England (ACONE). Recent accomplishments include:

- Mercy collaborated with CareEvolution™, a developer of a proprietary Health Information Exchange (HIE) platform, services and related products. The HIE project scope includes linking the electronic health records (EHRs) of ambulatory, acute and post-acute care health care providers, thus allowing patient data to move with each patient through the continuum of care.
- Mercy's HIE platform now includes a data warehouse that powers multiple tools and applications, including a patient portal, payer source data, clinical source data and an array of online analytics processing features.
- Mercy continues to work with ACONE to build new reporting capacities for the hospital's Emergency Department. Expanded reporting applications include "flagging" the admission screen, whenever a future ACONE beneficiary is admitted to the hospital's ED, to allow for improved care coordination following hospital discharge.
- CareEvolution™ is now live in several physician groups in Greater Springfield.
- Accountable Care Organization New England members have successfully collaborated in developing quality and cost metrics and reporting mechanisms that have been the cornerstone of successful clinical quality, appropriate utilization and cost management in the Medicare Advantage program.
- On January 20, 2013, Accountable Care Organization of New England was selected by the Centers for Medicare and Medicaid as one of 106 new Accountable Care Organizations (ACOs) in Medicare.

b. What current factors limit your ability to promote these goals?

A central challenge in ACO project implementation is to identify a sufficient number of common goals among a diverse group of current and potential collaborators and partners. Most community-based physician groups tend to be independent in employing and managing their physicians. However, Mercy's experiences with ACO development indicate that new health reform policies and requirements for greater value and higher quality are beginning to attract many physician groups in Greater Springfield toward greater alignment, connectivity and collaboration with hospitals to leverage better health outcomes for their patients and to meet more stringent payer requirements. Still, a recent Massachusetts Medical Society Satisfaction Survey Report[13] found that only 32.5% of survey respondents "strongly agree" or "agree" that they are ready to enter into new contracts with hospitals and other physician groups under a global payment contract—a marked decrease from the 2012 survey results, when 56.3% of survey respondents indicated readiness. A likely challenge for many physicians appears to be the issue of risk. A majority of physicians responding to the survey were "very concerned" about risk adjustment and the ability of an integrated delivery system or ACO to manage risk.[14]

c. What systemic or policy changes would support your ability to promote more efficient and accountable care?

Several systemic and policy changes could support our ability to promote more efficient and accountable care, including: reducing risk for providers to develop accountable care delivery for Medicaid and complex patient populations; increasing the supply of PCPs in Western Massachusetts;

[13] Accessed from: http://www.massmed.org/News-and-Publications/Research-and-Studies/2013-Member-Satisfaction-Survey-Report/
[14] *Ibid*

and incentivizing Medicaid beneficiaries to access primary care through PCPs and diminish hospital emergency department utilization.

Utilization data indicate that Medicaid beneficiaries often have significant challenges related to relatively poor health status, poverty, behavioral health issues, health habits and numerous access barriers that frequently undermine treatment plans. When some adult, Medicaid beneficiaries finally obtain access to primary care, health care utilization costs may trend upward because of new diagnoses and previously untreated conditions. Additionally, there is an insufficient supply of PCPs, especially for Medicaid beneficiaries. Many physicians in the Greater Springfield area, for example, are reluctant to accept more Medicaid patients, partly because of what they perceive to be relatively low reimbursement rates. Compounding this market dynamic, access to PCPs in Greater Springfield is particularly restricted by relatively long average wait times (especially for new patients) and MassHealth acceptance. In 2013, average new patient wait times in Hampden County were 48 days for Internal Medicine and 58 days for Family Medicine.[15] By default, hospital Emergency Departments are now providing what most MassHealth beneficiaries perceive to be "primary care," as it is accessible when they need it for little or no co-payment. Since 2005 the volume in Mercy's ED has increased from approximately 45,000 annual visits to approximately 78,000 visits, with nearly one-half of those visits being for non-emergent care.

Future systemic or policy changes that would support the promotion of more efficient and accountable care, include: reducing the risks for providers to develop accountable care delivery for Medicaid and complex patient populations; increasing the supply of PCPs in Western Massachusetts; and incentivizing Medicaid beneficiaries in future accountable care plans to access primary care through PCPs and diminish hospital ED utilization.

5. **What metrics does your organization use to track trends in your organization's operational costs?**
    a. **What unit(s) of analysis do you use to track cost structure (e.g. at organization, practice, and/or provider level)?**

Mercy utilizes several statistics when analyzing cost structures within all operating units. The global statistics Cost per Adjusted Discharge and Cost per Adjusted Day are used to determine the overall cost structure of the organization as related to volume. Additional statistics are utilized that further breaks down the costs by type. These include: Salary & Benefits as a Percent of Total Revenue, FTEs per Adjusted Occupied Bed, Benefit as a Percent of Salaries and Wages, Overtime Percent of Total Salaries, Salary per FTE, Supply Expense as a Percent of Net Patient Revenue, Drug Expense as a Percentage of Net Patient Revenue, Bad Debt as a Percent of Gross Revenue, and Purchased Services, Professional Fees and Other Expenses as a Percent of Total Expenses. Further all costs at the sub-account level are reviewed as compared to budget and prior years. These measures are reviewed for the hospital as a whole and for each operating unit within the hospital.

Also, all units of the hospital utilize a productivity tool called Visionware which measures the number of productive hours within a designated time period as a ratio with the units of service provided during

[15] Massachusetts Medical Society. (July 2013). *Massachusetts Medical Society Patient Access to Care Study*, 6. Retrieved July 18, 2013, from http://www.massmed.org/patientaccess.

that time period. This tool is used to adjust staffing for lower levels when volume is low and higher levels when volume is above expected levels.

All cost and productivity measures include a similar analysis of quality measures designed so that patient care levels are maintained during swings in volume.

b. How does your organization benchmark its performance on operational cost structure against peer organizations?

Mercy utilizes a benchmarking firm called Premier which compares the previously mentioned units of measure with hospitals offering similar services and size across the country. Premier takes the data provided by hundreds of hospitals across the country and calculates a range of performance which member hospitals can benchmark against. Mercy has a current goal for each operational unit to meet the benchmark of the 25th percentile for staffing and cost with a stretch goal of meeting the 10th percentile. In addition Mercy is measured on the previously mentioned units against other hospitals in the CHE Trinity Health System.

c. How does your organization manage performance on these metrics?

Mercy managers are challenged to be owners of their units in all aspects including cost control. The management team received the relevant data timely in order to manage their costs to their current volumes. Managers are accountable to explain all variances from expected each month. Managers meet monthly with the CFO, CNO and Director of Finance to review the productivity results. This promotes accountability and a forum for managers to share ideas regarding cost control.

6. Please describe the actions that your organization has undertaken or plans to undertake to provide patients with cost information for health care services and procedures, including the allowed amount or charge and any facility fee, as required by c.224.

Chapter 224 requires payers and providers to disclose the allowed amount or charge of an admission, procedure, or service to patients upon request. For providers, this requirement is effective January 1, 2014, Payers will also have to be able to provide this information via a toll free number and a website. SPHS is reviewing options for the best reimbursement calculator now to enable staff to determine the allowed amounts in order to assist the patient and comply with the law. We will be training admission and customer service staff on the process, and will be working with the payers to assist patients by helping them access their insurance websites and toll free numbers.

7. After reviewing the reports issued by the Attorney General (April 2013) and the Center for Health Information and Analysis (August 2013), please provide any commentary on the findings presented in light of your organization's experiences.

The Attorney General (April 2013) and the Center for Health Information and Analysis (August 2013) Reports build upon the findings from previous reports of health care cost trends reports from the Attorney General (June 2011 Report - Examination of Health Care Cost Trends and Cost Drivers), Center for Health Information and Analysis (November 2012 and February 2013 Reports - Health Care Provider Price Variation in the Massachusetts Commercial Market). The recent reports highlight several significant findings that reflect the experience of Mercy, including:

- Commercial health plans continue to pay providers widely different amounts to care for patients of comparable heath.
- The majority of Massachusetts commercial health plan payments continue to go to high priced providers. In recent years, the highest prices 25% of providers received 50% of commercial payments.

These reports highlight Mercy as among the lower reimbursed hospitals by commercial insurers in the Massachusetts. Additionally, as referenced in Question 2, Mercy is challenged a payer mix that includes a significantly higher percentages of Medicaid patients and significantly lower percentages of patients covered by commercial insurance payers. Mercy's payer mix and its status as one of the lower reimbursed hospitals by commercial payers have challenged Mercy to become one of the most cost-effective, acute care hospitals in the Commonwealth. It also highlights the need for payer rate improvements for organizations like Mercy that are paid significantly below the statewide average. This low payment status will create additional challenges current rates of payment are used as a baseline for participating in new alternative payment models.

Mercy Medical Center - EXHIBIT C: OAG Questions and Written Testimony

1. **For each year 2009 to present, please submit a summary table showing your operating margin for each of the following three categories, and the percentage each category represents of your total business: (a) commercial business, (b) government business, and (c) all other business. Include in your response a list of the carriers or programs included in each of these three margins, and explain and submit supporting documents that show whether and how your revenue and margins are different for your HMO business, PPO business, or your business reimbursed through contracts that incorporate a per member per month budget against which claims costs are settled.**

The analysis below was performed at a high level using the Mercy's overall cost-to-charge ratio applied to all payers and contains the margins by payer group.

	2009		2010		2011		2012	
	Operating Margin	Percent of Total	Operating Margin	Percent of Total	Operating Margin	Percent of Total	Operating Margin	Percent of Total
Commercial	$ 3,422,830	19%	$ 4,325,311	23%	$ 5,254,412	18%	$ 5,134,101	18%
Government	$ (6,635,856)	73%	$ (10,757,030)	67%	$ (9,670,016)	74%	$ (2,135,867)	73%
All Other	$ (1,407,247)	8%	$ (3,127,986)	10%	$ (928,495)	8%	$ 831,033	10%
	$ (4,620,273)	100%	$ (9,559,705)	100%	$ (5,344,100)	100%	$ 3,829,268	100%

Notes:

(1) The above includes margins only for revenues classified as patient service revenue.

(2) Supplemental governmental funding such as DSTI and Essential Community Provider Trust funds is recorded in other operating revenues and not included above. Those amounts total $10,567,345 in 2010; $7,767,345 in 2011; and $15,213,334 in 2012.

(3) *All Other* includes workers compensation and margins related to Medicare Advantage (MA) patient revenues. It does not include the hospital fund settlements and other settlements related to the MA plans. Those amounts total $888,781 in 2009; $3,707,513 in 2012; $1,883,713 in 2011; and $876,404 for 2012.

(4) The above includes the impact of the Nantucket rural floor wage reclassification that was effective October 1, 2011. The additional reimbursement in 2011 related to this change was $2,249,889 in 2011 and $12,146,384 in 2012.

(5) Payer Groupings:

Commercial	Government	All Other
BC ELECT PPO	COMMONWEALTH CARE	BLUE CARE 65
BC INDEMNITY	DMH	OTHER MANAGED MEDICARE
BC OUT OF STATE	DPH	TUFTS MEDICARE PREFFERRED
BLUE HMO	HEALTH NET	WORKERS COMP
CIGNA	HEALTH SAFETY NET	
OTHER COMMERCIAL INSURANCE	MBHP	
HEALTH NEW ENGLAND	MEDICAID/OTHER GOV'T	
OTHER HMO/PPO	MEDICARE	
TUFTS COMMERCIAL	MEDICARE PSYCH	
	MEDICARE REHAB	
	OTH GOVT/VETERANS SVCS	
	OTHER MANAGED MEDICAID	

2. **If you have entered a contract with a public or commercial payer for payment for health care services that incorporates a per member per month budget against which claims costs are settled for purposes of determining the withhold returned, surplus paid, and/or deficit charged to you, including contracts that do not subject you to any "downside" risk (hereafter "risk contracts"), please explain and submit supporting documents that show how risk contracts have affected your business practices, including any changes you have made, or plan to make, to care delivery, operational structure, or to otherwise improve your opportunities for surpluses under such contracts, such as any changes to your physician recruitment or patient referral practices. Include in your response any analysis of the impact of changes in your service mix, payer mix, or patient member type (e.g., HMO v. PPO, fully-insured v. self-insured) on your opportunities for surpluses.**

Mercy Medical Center and Hampden County Physician Associates (HCPA) entered into a risk arrangement with a Managed Medicare plan and assumed care coordination and financial responsibility for Medicare beneficiaries. A structural framework was designed and key competencies developed to closely manage care and utilization, deliver disease management services to the top 3% (160) "high-risk" patients and provide quality oversight and medical direction, while stringently managing costs. To manage risk effectively, an integrated care system was devised that reduced overall utilization of inpatient admissions, SNIFs and hospital readmission rates. The model of care delivery shifted from hospital-based service to network PCPs, giving PCP more responsibility to manage effective care in a timely fashion. A key element in the design is to assign a Risk Adjustment Factor (RAF) to each covered patient. RAF scores are severity ratings and are based upon spending/utilization histories and actuarial calculations. Adaptability is a vital feature of our integrated care model, enabled by real-time EHRs powered by *CareScreen™* software and a robust HIE, connecting home nurses with PCPS and PCPs with Mercy Medical Center Hospitalists.

Nurses on the case management team track all communication and utilization with ACO members and are able to notify a PCP, for example, that a patient has been discharged from Mercy Medical Center to her home or a skilled nursing facility. In another example, a case manager will alert the hospital-based rounding teams from the physicians group that a patient has just been admitted to Mercy. Case managers make use of *CareScreen*™ and McKesson software that have built-in InterQual and NCQA standards. With the guidance of the clinical team, utilization management relies on evidence-based medical criteria for gauging the medical necessity of ED visits, hospital admissions and obtaining test results from patients. Tracking patient data with metrics from National Committee for Quality Assurance, CMS and other best practice guidelines for quality measures, the new care management model utilizes data warehousing reports to alert PCPs and nurse managers about lapses in test tracking. For example, when a patient with diabetes misses an HbA1c testing interval, an electronic notice will go to the patients PCP and endocrinologist, prompting a reminder to the patient.

With its emphasis on wellness and prevention, our integrated care model includes a robust emphasis on disease management, especially for patients who manage such chronic and frequently costly conditions as CHF, COPD and Diabetes. Both caregivers and patients with these and other serious conditions will receive a steady stream of personalized, disease management instruction so they will be able to better manage these serious challenges and avoid complications that require hospital stays. For many patients and care givers, these disease management instructional sessions will take place in their homes or prior to discharge. Once the patient and his or her caregiver are alert to key warning signs of a worsening condition, they will understand when to call their doctor or nurse immediately. Some patients and caregivers will be equipped with telemedicine devises to report key diagnostic-specific metrics such as

weight, salt intake and blood pressure. Nurse case managers will monitor patient data sets in real-time and, as downward trends indicate, dispatch a home nurse to the patient's home to prevent an avoidable hospital admission. Once in a patient's home, the nurse can assess the patient's condition and consult with the patient's primary care physician.

Data warehousing drives continuous medical monitoring of all patient claims data for monthly claims and compares aggregate claims data with test results, medication data and other clinical information entered from PCP Electronic Medical Records and paper charts, as well as with data entered by the hospital. Data mining and rigorous analysis are key elements in controlling costs due to improper utilization and deviations from evidence-based practices and quality targets.

This proven infrastructure, developed for the "virtual" ACO programs is now being used for the Accountable Care Organization of New England, LLC (ACONE) which is participating in Medicare Shared Savings Program. ACONE represents a partnership between a physician IPA, Mercy Medical Center, Accountable Care Associates (ACA), and Noble Hospital. ACONE is focused on five transformative goals: to improve care and reduce costs; advance the management of chronic disease; reduce hospital admissions and preventable readmissions; boost patient satisfaction; and manage financial risk for performance under a global payment arrangement. This integrated model of care delivery and payment reform is precisely what leading authorities like Fisher have pointed to as a remedy for the overuse, high-cost and low-value of medical care in a fragmented health care system. ACONE is operating in urban, suburban and rural settings of Hampden, Hampshire and southern Franklin Counties and will integrate care management, care delivery and disease management into a single, high-performance network that reduces hospital admissions and readmissions and optimally manages chronic disease to improve care and reduce costs for 40,000 or more Medicare beneficiaries.

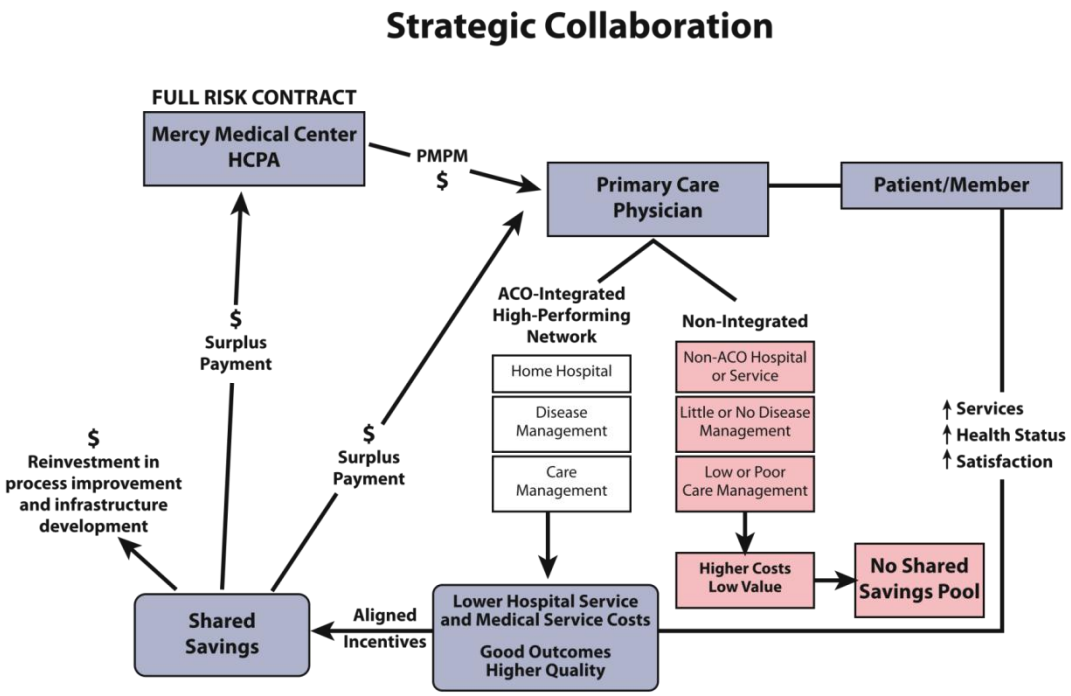
ACONE's innovative approach to care delivery and its operational competencies make it capable of achieving the goals of the "triple aim" and incorporates several key features:

- Physician-driven, PCP-driven
- Delivers evidence-based, patient-centered care
- Emphasizes wellness and prevention
- Provides disease management for patients and caregivers
- Designed to benefit both the Medicare member and the larger community
- Utilization management approaches to ensure appropriate hospital admissions
- Features medical home-type activities like test tracking and referral tracking
- Focus on patient satisfaction
- Tracks and reports quality data on patients' medical conditions via data warehouse
- Automated monitoring of patients' claims data and clinical information
- Alerts PCPs with real-time reports so patients whose medical conditions are trending downward get immediate interventions from a home-based clinical team.
- Integrated care with strong transitions from provider to provider, and across both inpatient and outpatient settings.

ACONE infrastructure includes: claims and clinical data management, case management, complex disease management, contracting support, network development, network maintenance, risk assessment, reinsurance recoveries, dedicated hospital rounding, dedicated rehabilitation and nursing home rounding, quality oversight, medical director and other physician leadership, web-based clinical information sharing, member satisfaction reporting, multilevel provider trending and education,

utilization monitoring, financial monitoring, and regulatory compliance oversight components. Key features of this infrastructure include the integration of patient care rounding services, case management, and disease management services – and the further integration of these services with the PCP practices using unique physician consultations. The implementation of this infrastructure has led to expertise in: chronic disease management, psychosocial and other member needs assessments, end-of-life care, quality of care measurements, acute and chronic care value assessments, facility value assessments, provider practice pattern evaluation, and member satisfaction. An innovative set of physician co-management and consultative services has been developed for hospital, outpatient, and home environments. Case management and disease management programs, developed locally, are highly proactive, use an innovative and validated set of clinical protocols, utilize specially trained Mercy in-home providers in combination with specially trained physicians, and follow all NCQA guidelines.

The diagram below provides a representation of the structure of the Mercy contracts that incorporate per member per month budget against which claims are paid**.**



3. **Please explain and submit supporting documents that show how you quantify, analyze, and project your ability to manage risk under your risk contracts, including the per member per month costs associated with bearing risk (e.g., costs for human resources, reserves, stop-loss coverage), solvency standards, and projections and plans for deficit scenarios. Include in your response any analysis of how your costs or risk-capital needs would change due to changes in the risk you bear on your commercial or government business.**

Mercy's exposure on risk contracts is limited to its participation in Medicare Advantage ("virtual ACO") plans. These plans cover approximately 6,000 members and Mercy has risk associated with member utilization (direct cost) and ineffective cost control (excessive "out-of-network "referrals for example)

depleting the hospital surplus fund or medical service fund pools. Initial per-member/per-month payments somewhat mitigate financial risk but would not sustain the model if either variable was not well-managed. Baseline historical revenue and utilization data is analyzed on an annual basis for the member population. Revenue projections are compared to projected administrative and clinical costs to determine financial risk, prior to care coordination interventions. A sensitivity analysis related to the impact of care coordination interventions on the cost of care is also conducted on an annual basis. Reinsurance is purchased to mitigate unanticipated costs.

4. **Please describe and submit supporting documents regarding how, if at all, you track changes in the health status of your patient population or any population subgroups (e.g., subgroups by carrier, product, or geographic area**

In 2010 and 2013, Mercy Medical Center conducted Community Health Needs Assessments that served to establish baselines measures for demographic and health status indicators in its primary service area. The data encompass a broad range of sources, including results from the University of Wisconsin/Robert Wood Johnson Foundation "County Health Rankings" for Hampden County, Massachusetts Department of Public Health, Behavioral Risk Factors Surveillance System, ZIP Code-Level Analyses of Ambulatory Care Sensitive Conditions, Pioneer Valley Planning Commission, among several others. Significantly, the 2013 Community Health Needs Assessment was designed and conducted in collaboration with the Coalition of Western Massachusetts Hospitals (Mercy Medical Center, Baystate Medical Center, Baystate Franklin Medical Center, Baystate Mary Lane Medical Center, Cooley Dickinson Hospital and Wing Memorial Hospital. Listed among the major findings for Mercy Medical Center's primary service area population is a prioritized list of Community Health Needs. A copy of the 2013 Community Health Needs Assessment is enclosed.

In related population health activities, Mercy Medical Center annually develops and reports on its Community Health Improvement Plan and submits to the Massachusetts Attorney General its report of Community Benefits. Copies of our 2013 Community Health Improvement Plan and the 2012 Community Benefits Report to the Attorney General are enclosed.

5. **Please submit a summary table showing for each year 2009 to 2012 your total revenue under pay for performance arrangements, risk contracts, and other fee for service arrangements according to the format and parameters provided and attached as AGO Exhibit 1 with all applicable fields completed. Please attempt to provide complete answers. To the extent you are unable to provide complete answers for any category of revenue, please explain the reasons why. Include in your response any portion of your physicians for whom you were not able to report a category (or categories) of revenue. Responses must be submitted electronically using the Excel version of the attached exhibit. To receive the Excel spreadsheet, please email HPC-Testimony@state.ma.us.**

Please see attached Mercy Exhibit C – Question 5

6. **Please identify categories of expenses that have grown (a) 5% or more and (b) 10% or more from 2010 to 2012. Please explain and submit supporting documents that show your understanding as to the factors underlying any such growth.**

Response:

	2010	2011	2012	Variance	% Change
Salaries	84,124,452	87,762,624	94,160,617	10,036,165	11.9%
Benefits	15,917,579	16,942,738	17,736,608	1,819,029	11.4%
Physician Fees	1,916,238	1,889,460	2,250,933	334,695	17.5%
Prof Fees & Purch Services	23,718,487	25,002,866	28,719,442	5,000,955	21.1%
System Assessment	21,135,329	21,803,274	23,452,560	2,317,231	11.0%
Medical Supplies	19,106,555	18,101,798	19,323,927	217,372	1.1%
Drug Cost	7,267,788	7,646,919	12,381,888	5,114,100	70.4%
Depreciation	8,109,971	8,256,777	8,555,523	445,552	5.5%
Interest	1,711,173	1,644,787	1,639,240	(71,933)	-4.2%
Bad Debt	6,739,868	3,831,179	(1,510)	(6,741,378)	-100.0%
Insurance	2,063,902	2,324,436	2,024,814	(39,088)	-1.9%
Other Expenses	12,512,924	12,824,263	12,494,581	(18,343)	-0.1%
Total Expenses	204,324,266	208,031,121	222,738,623	18,414,357	9.0%

- Salaries increased 11.9% due to cost of living increases and additional personnel for program expansions and implementation of the *Care Connect* care management implementation.
- Benefits increased 11.4% which is in line with salary increases.
- Physician fees increased 17.5% due to contract renewals with Emergency Physicians, ICU Intensivists and Behavioral on-call physicians.
- Professional fees increased 21.1% due mostly to the expansion of cardiology and oncology services serviced through professional contracts; costs associated with the electronic medical record system and increased service contract costs.
- System Assessment relates to fees paid to Sisters of Providence Health System (SPHS) for support services such as finance, IT, human resources, risk, quality, compliance, billing, etc. There was a change in the allocation methodology that increased the assessment for The Mercy Hospital, Inc. The actual costs for these functions within SPHS decreased from 2010 to 2012.
- Drug costs increased by 70.4% due to the increase in infusions from the significant expansion of Mercy's oncology services

- Depreciation increase relates to the capital improvements made during this period netted with assets that became fully depreciated.
- Bad Debt was reclassified to net patient revenue during this period.

7. **Please describe and submit supporting documents regarding any programs you have that promote health and wellness (hereinafter "wellness programs") for (1) patients for whom you are the primary care provider; (2) patients for whom you are not the primary care provider; and (3) employees. Include in your response the results of any analyses you have conducted regarding the cost benefit of such wellness programs.**

Mercy Medical Center features a number of ongoing programs that promote health and wellness for patients for whom the hospital is the primary care provider, patients for whom it is not the primary care provider and for our employees. Here are some notable examples:

- HealthyDirections: Mercy Medical Center and Sisters of Providence Health System recently partnered with Health New England to bring the HNE HealthyDirections employer wellness program to Mercy/SPHS. The outcomes-based program promotes a culture of health and allows for the availability of premium differentials available under the ACA and other incentives under the Massachusetts Tax Credit Incentive program. Program highlights include a kickoff event, biometric health screenings, online personal health records and activity challenges that promote healthy lifestyles.
- Healthy Balance Events: a public listing on the hospital's web site (www.mercycares.com) of Health and Wellness Programs offered by the Sisters of Providence Health System for Western Massachusetts' citizens. The September 2013 listing features a number of wellness programs and classes, including: CPR, Diabetes Education, Diabetes Exercise, Cholesterol and Blood Glucose Screening, A *Baby Café*-Breastfeeding Promotion and Support, Breastfeeding Class, Childbirth Class, Prenatal Exercise Class, Postnatal Exercise Class and Pregnancy Exercise Class.
- Mercy Wellness Center: a new partnership between Mercy and Healthtrax® Fitness & Wellness. Within the East Longmeadow location is the newly renovated fitness facilities of Healthtrax as well as a satellite Weldon Physical Rehabilitation clinic, and a community health education classroom. Merging health care and fitness services within the existing Healthtrax facility will better serve the surrounding community of East Longmeadow. All regularly scheduled SPHS employees are eligible for a substantial discount at Healthtrax® Fitness & Wellness and membership dues can be set up as a payroll deduction.
- MyHealth Patient Portal: The MyHealth patient portal provides all Mercy patients online access to their health information, whenever it is needed. Patients can use MyHealth to access their health information, including laboratory and imaging results.
- Health Coach: An ongoing health promotion and education series sponsored by Mercy, featuring physician-led presentations on a variety of health topics.
- *Balance Magazine*: A publication of the Sisters of Providence Health System, featuring a number of health and wellness topics. *Balance Magazine* is published in the Spring and Fall and mailed to all households in Mercy's primary service area, as well as other locations throughout the region.

Community Health Needs Assessment

Prepared for
MERCY MEDICAL CENTER

By
VERITÉ HEALTHCARE CONSULTING, LLC

And
COMMUNITY HEALTH ADVISORS, LLC

May 28, 2013

VERITÉ HEALTHCARE CONSULTING

ABOUT VERITÉ HEALTHCARE CONSULTING

Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Alexandria, Virginia. The firm serves as a national resource that helps hospitals conduct community health needs assessments and develop implementation strategies that address priority needs. The firm also helps hospitals, associations, and policy makers with community benefit reporting, planning, program assessment, and policy and guidelines development. Verité is a recognized, national thought leader in community benefit and in the evolving expectations that tax-exempt healthcare organizations are being required to meet.

The CHNA prepared for Mercy Medical Center was directed by the firm's president and managed by a senior-level consultant. Associates and research analysts supported the work. The firm's president, as well as all senior-level consultants and associates, hold graduate degrees in relevant fields. Mark Rukavina of Community Health Advisors, LLC, based in Chestnut Hill, MA, conducted all community interviews.

More information on the firm and its qualifications can be found at www.VeriteConsulting.com.

Verité Healthcare Consulting's work reflects fundamental concerns regarding the health of vulnerable people and the organizations that serve them

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INTRODUCTION

This community health needs assessment (CHNA) was conducted by Mercy Medical Center (Mercy or the hospital) because the hospital wants to understand better community health needs and to develop an effective implementation strategy to address priority needs. The hospital also has assessed community health needs to respond to community benefit regulatory requirements.

Mercy is a member of the Coalition of Western Massachusetts Hospitals (Coalition) which also includes Baystate Medical Center, Baystate Franklin Medical Center, Baystate Mary Lane Hospital, Cooley Dickinson Hospital, Holyoke Medical Center, and Wing Memorial Hospital. The Coalition hospitals collaborated in preparing their CHNAs.

Federal regulations require that tax-exempt hospitals provide and report community benefits to demonstrate that they merit exemption from taxation. As specified in the instructions to IRS Form 990, Schedule H, community benefits are programs or activities that provide treatment and/or promote health and healing as a response to identified community needs.

Community benefit activities or programs seek to achieve objectives, including:

- improving access to health services,
- enhancing public health,
- advancing increased general knowledge, and
- relief of a government burden to improve health.[1]

To be reported, community need for the activity or program must be established. Need can be established by conducting a community health needs assessment.

The 2010 Patient Protection and Affordable Care Act (PPACA) requires each tax-exempt hospital to "conduct a [CHNA] every three years and adopt an implementation strategy to meet the community health needs identified through such assessment."

CHNAs seek to identify priority health status and access issues for particular geographic areas and populations by focusing on the following questions:

- ***Who*** in the community is most vulnerable in terms of health status or access to care?
- ***What*** are the unique health status and/or access needs for these populations?
- ***Where*** do these people live in the community?
- ***Why*** are these problems present?

The question of ***how*** the organization can best use its limited charitable resources to address priority needs will be the subject of the hospital's separate Implementation Strategy.

This assessment considers multiple data sources, including secondary data (regarding demographics, health status indicators, and measures of health care access), assessments prepared by other organizations in recent years, and primary data derived from a community survey and from interviews with persons who represent the broad interests of the community, including those with expertise in public health.

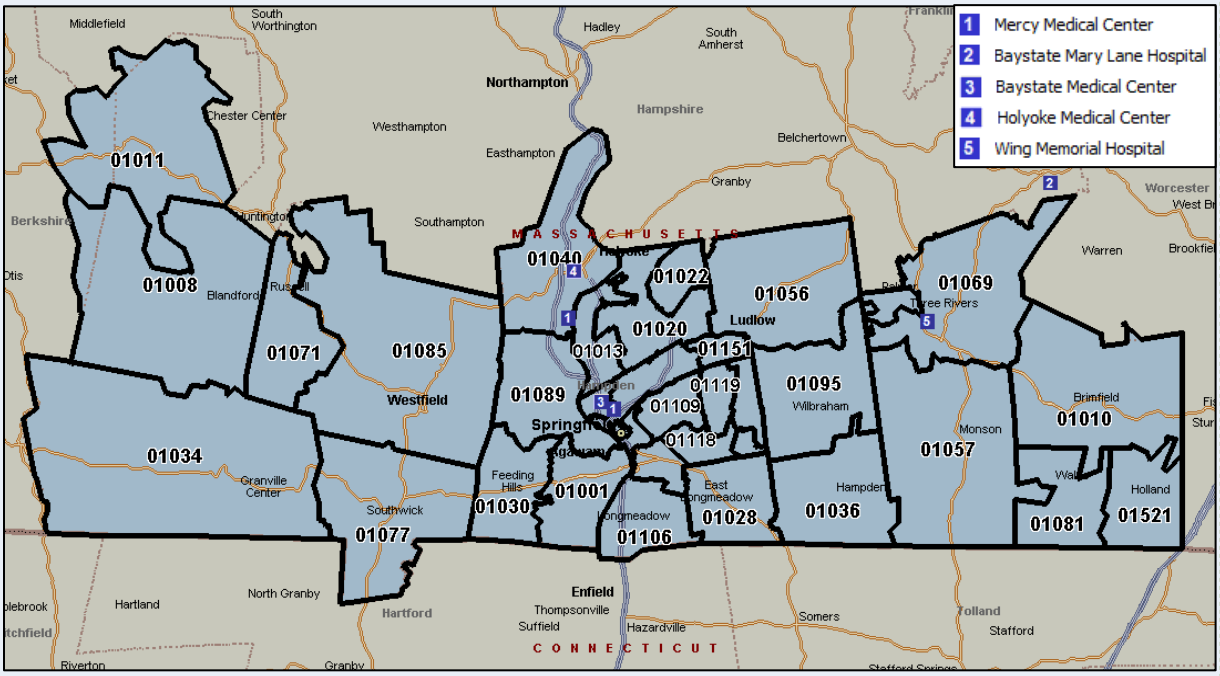
[1] Instructions for IRS Form 990, Schedule H, 2012.

The following topics and data are assessed in this report:

- Demographics, e.g., numbers and locations of vulnerable people;
- Economic issues, e.g., poverty and unemployment rates, and impacts of health reform;
- Community issues, e.g., homelessness, lack of affordable housing, environmental concerns, crime, and availability of social services;
- Health status indicators, e.g. morbidity rates for various diseases and conditions, and mortality rates for leading causes of death;
- Health access indicators, e.g., uninsurance rates, discharges for ambulatory care sensitive conditions (ACSC), and use of emergency departments for non-emergent care;
- Health disparities indicators; and
- Availability of healthcare facilities and resources.

The assessment identifies a prioritized list of community health needs. Mercy will be preparing an Implementation Strategy that describes how the hospital plans to address the identified needs.

EXECUTIVE SUMMARY



Mercy Community By the Numbers

- 51 ZIP codes representing all of Hampden County
- Population (2012): 464,416
- Projected population change (2012-2017):
  - Growth of about 1% overall; 11% increase in the 65+ population
- 10% of Mercy's discharges for ambulatory care sensitive conditions (ACSC)
- Discharges for ACSC most frequent among Medicare patients
- High poverty rates in 6 Springfield ZIP codes
- Higher crime rates than the commonwealth
- Disparities for Black and Hispanic (or Latino) residents:
  - More likely to be living in poverty
  - Higher stroke, heart disease, diabetes, and cancer mortality rates
- Growing diversity:
  - Growing Asian, Black, and Hispanic (or Latino) populations
  - 14% non-White in 2012; 16% non-White by 2017

The Mercy community, which includes all 51 ZIP codes in Hampden County, benchmarks favorably on a number of health indicators. However, health status and access problems are present, and this assessment seeks to identify the most pressing issues.

A person's health is influenced by complex (and interconnected) social and economic factors, including income, education, race/ethnicity, and local environment. Racial and ethnic minority groups, children, the elderly, and those with special needs are more likely to lack the social and economic resources necessary to maintain optimal health. Such inequalities can create barriers to access (to health services, employment, quality education, healthy food, housing, and other necessities and opportunities) and thus contribute to poor health. Analysis of primary and secondary data reveals problematic health disparities in the hospital's community.

A community survey was conducted as a major element of the CHNA methodology. 1,321 responses were received from residents of Mercy's community. Survey results were post-stratified to help assure that they accurately reflect the community's demographics. Responses also were assessed by race, insurance status, and education status.

Survey results indicate that the community has difficulty accessing prevention, wellness, and mental health services. Access disparities also are present, with White residents better able to access care. Uninsured residents and MassHealth (Medicaid) recipients rely primarily on free or low-cost clinics and hospital emergency rooms for basic primary care needs, or they indicate that "no routine healthcare is received."

The community perceives top health issues to include low income/financial challenges, obesity, substance abuse, diabetes, and unemployment. MassHealth (Medicaid) recipients identify mental health as a top health issue, Medicare beneficiaries identify cancer, those with Commonwealth Connector identify dental health issues, and those without health insurance identify tobacco use. Medicare recipients, MassHealth (Medicaid) beneficiaries, and those without health insurance also perceive a lack of exercise to be a top health issue.

Following is a brief summary of health issues in the community served by Mercy Medical Center. The summary is based on an assessment of all study data sources, including community interviews, the community survey, and the wide array of secondary data – all of which are described and assessed in the report.

Demographics.
The community is aging and diversifying, driven by growth in elderly and in Asian, Black, and Hispanic (or Latino) populations.

Hampden County reports comparatively low graduation rates and comparatively high rates of disability, particularly among youth. These factors can contribute to poverty, health care access barriers, and poor health.

Economics.
Poverty rates (particularly in Springfield) are above the Massachusetts average. Pediatric poverty and unemployment also are comparatively high. Unemployment disparities exist for Black, Asian, and Hispanic (or Latino) residents.

Hampden County residents are more reliant on government support programs such as the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) than the Massachusetts average. Lack of access to affordable food and housing also are concerns for segments of the community.

Social Factors.
Language and cultural barriers between patients and providers and the complexity of navigating the health system prevent some residents from seeking timely and appropriate health services for themselves and their children.

Insufficient coordination and culturally-appropriate services are perceived as barriers to care.

Behavioral Factors.
The Mercy community reports high rates of unsafe sex, teen pregnancy, and chlamydia. High rates of smoking during pregnancy and other infant health risk factors are present. Low rates of healthy food consumption and exercise and above average rates of obesity and chronic diseases like diabetes also are problematic. Prevalent alcohol, tobacco, and drug use also are concerns for the community as a whole and the youth population.

Mortality and Morbidity.
The community experiences comparatively high rates of chronic disease and disease-related mortality, including cancer, stroke, diseases of the circulatory system, and chronic liver disease. Racial and ethnic disparities for a variety of morbidity and mortality indicators are evident.

Poor mental and dental health affect many in the community particularly low-income residents, homeless residents, and children. The community also exhibits comparatively high suicide rates, particularly within the White population.

Asthma and air quality are issues, particularly for children. The community reports higher asthma prevalence and hospitalization rates than the Massachusetts average.

Local Environment.
Poor built environment and low environmental quality are present in parts of Hampden County. Several census tracts in or near Springfield, Chicopee, and Holyoke are classified as "food deserts," where people lack convenient access to healthy food.

Community safety also is a concern; homicides and other firearm-related deaths are comparatively frequent.

Care Access and Delivery.
Health system complexity and regulatory and administrative burdens result in frustration both for patients and providers.

Cost and an undersupply of certain healthcare providers in Hampden County are resulting in barriers to accessing primary, mental health, and dental care.

Discharges for Ambulatory Care Sensitive Conditions (ACSCs , which are potentially preventable if patients access primary care resources at optimal rates), were about 10 percent of Mercy's discharges. Bacterial pneumonia, chronic obstructive pulmonary disease or asthma, congestive heart failure, and urinary tract infection were the most common ACSC discharges from Mercy.

The community has a variety of resources working to address access barriers. There are 3 Federally Qualified Health Centers (FQHC) located in Hampden County with 21 additional site partners. All serve medically underserved areas and populations.

Priority Health Needs

This assessment begins by identifying the communities served by Mercy. Findings are based on various quantitative analyses regarding health-related needs in those areas, a review of health assessments conducted by other organizations in recent years, information obtained from interviews, and findings from a community survey. Preliminary assessment findings were discussed with community stakeholders during a series of "listening sessions" and feedback from participants helped validate findings. Finally, Verité applied a ranking methodology to help prioritize the community health needs identified by the assessment.

Including multiple data sources and stakeholder views is important when assessing the level of consensus that exists regarding priority community health needs. If alternative data sources including interviews support similar conclusions, then confidence is increased regarding the most problematic health needs in a community.

Further information about the analytic methods and prioritization process and criteria can be found in the CHNA report.

The table that follows describes the health needs identified throughout the assessment as priorities in the community served by Mercy Medical Center. These needs are presented in alphabetical order, by category. The prioritized list identifies the 15 most problematic community health needs found by this assessment.

Prioritized List of Community Health Needs

Access to Care

- Lack of Affordable and Accessible Medical Care
- Need for Care Coordination and Culturally Sensitive Care

Dental Health

- Lack of Access to Dental Care

Health Behaviors

- High Rates of Alcohol, Tobacco, and Drug Use
- High Rates of Unsafe Sex, Teen Pregnancy, and Chlamydia

Maternal and Child Health

- Prevalent Infant Health Risk Factors (e.g., smoking during pregnancy, lack of prenatal care)
- Pediatric Disability

Mental Health

- Lack of Access to Mental Health Services and Poor Mental Health Status

Morbidity and Mortality

- High Rates of Diet and Exercise-Related Diseases and Mortality (e.g., obesity, diabetes, heart disease)
- High Rates of Asthma
- Racial and Ethnic Disparities in Disease Morbidity and Mortality (e.g., breast and prostate cancer, chronic liver disease, stroke)

Physical Environment

- Poor Community Safety (e.g., homicide and other violent crimes)
- Poor Built Environment and Environmental Quality (e.g., air quality, presence of food deserts)

Social and Economic Factors

- Basic Needs Insecurity: Financial Hardship, Housing, and Food Access
- Low Educational Achievement

CHNA REPORT

METHODOLOGY

Analytic Methods

This assessment begins by identifying the communities served by Mercy. Findings based on various quantitative analyses regarding health needs in those areas are discussed, followed by a review of health assessments conducted by other organizations in recent years.

The assessment then presents information obtained from interviews and a community survey. Interviews were conducted with stakeholders who represent the broad interests of the community, including public health officials and experts, and Mercy-affiliated clinicians, administrators, and staff. Interviews were conducted between December 2012 and February 2013.

Community survey results were post-stratified to help assure they represent accurately views from all residents in Mercy's community. For example, if women represent 45 percent of the population but 75 percent of survey responses, post-stratification re-weights these responses to reflect a more representative proportion. Because statistical error increases if too many variables are considered, the community survey was post-stratified only by sex and by age.[2] Preliminary assessment findings were discussed with community stakeholders during a series of "listening sessions." Feedback from participants helped validate findings and prioritize the identified health needs.

Identifying priority community health needs involves benchmarking and trend analysis. Statistics for several health status and health access indicators were analyzed and compared to state-wide and national benchmarks. The assessment considers multiple data sources, including indicators from local, state, and federal agencies. Including multiple data sources and stakeholder views is important when assessing the level of consensus that exists regarding priority community health needs. If alternative data sources including interviews support similar conclusions, then confidence is increased regarding the most problematic health needs in a community.

Prioritization Process and Criteria

Verité applied a ranking methodology to help prioritize the community health needs identified by the assessment. Verité listed all identified health issues and assigned to each a severity score based on the extent to which indicators exceeded Massachusetts or U.S. averages. A score was calculated for each category of data (secondary data, previous assessments, survey, and interviews) based on the number of sources that measured each health issue and the severity of the issue as measured by data and as indicated by community input. Scores were averaged and assigned a weight: 35 percent, 10 percent, 35 percent, and 20 percent, respectively. A final score was calculated by summing the weighted averages.

[2]Applied Technologies for Learning in the Arts and Sciences, 2009. *Post-Stratification Weights.* Retrieved 2013, from http://www.atlas.illinois.edu/support/stats/resources/spss/create-post-stratification-weights-for-survery-analysis.pdf.

Information Gaps

No information gaps have affected Mercy's ability to reach reasonable conclusions regarding priority community health needs.

Collaborating Organizations

Mercy collaborated with each of the hospital facilities that are members of the Coalition of Western Massachusetts Hospitals for this assessment.

Mercy also collaborated with organizations that participated in a "Design Team" established by the Coalition. Representatives from The Collaborative for Community Health, Inc., the Franklin Regional Council of Governments, the Massachusetts Department of Public Health, and the Springfield Department of Health and Human Services participated on this Team.

Many individuals provided input for this assessment. Lists of interviewees are included in the report.

DEFINITION OF COMMUNITY ASSESSED

This section identifies the community assessed by Mercy. Verité validated the community definition by analyzing the geographic origins of the hospital's discharges (**Exhibit 3**).

Mercy's community is comprised of 51 ZIP codes in 21 cities and towns: Agawam, Blandford, Brimfield, Chester, Chicopee, East Longmeadow, Granville, Hampden, Holland, Holyoke, Longmeadow, Ludlow, Monson, Palmer, Russell, Southwick, Springfield, Wales, West Springfield, Westfield, and Wilbraham. The 51 ZIP codes collectively and essentially are equivalent to Hampden County (**Exhibit 1)**. The hospital is located in Springfield.

Exhibit 1: Community Population, 2012

Town/City*	Total Population 2012	Percent of Total Population
Agawam	28,516	6.1%
Blandford	1,320	0.3%
Brimfield	3,844	0.8%
Chester	1,277	0.3%
Chicopee	55,453	11.9%
East Longmeadow	15,723	3.4%
Granville	2,085	0.4%
Hampden	5,191	1.1%
Holland	2,512	0.5%
Holyoke	40,073	8.6%
Longmeadow	16,044	3.5%
Ludlow	21,197	4.6%
Monson	8,493	1.8%
Palmer	12,174	2.6%
Russell	1,605	0.3%
Southwick	9,629	2.1%
Springfield	152,998	32.9%
Wales	1,691	0.4%
West Springfield	28,292	6.1%
Westfield	42,044	9.1%
Wilbraham	14,255	3.1%
Total	**464,416**	**100.0%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Springfield (where Mercy is located) is the most populous city in the community

In the 12 months ended in September 2011, 88.4 percent of inpatients originated from the identified areas (**Exhibit 2**).

Exhibit 2: Inpatient Discharges by Town/City, 2010-2011

Town/City*	Number of Discharges	Percent of Total Discharges
Agawam	1,014	6.4%
Blandford	4	0.0%
Brimfield	11	0.1%
Chester	8	0.1%
Chicopee	1,940	12.2%
East Longmeadow	561	3.5%
Granville	31	0.2%
Hampden	94	0.6%
Holland	3	0.0%
Holyoke	1,086	6.8%
Longmeadow	273	1.7%
Ludlow	493	3.1%
Monson	72	0.5%
Palmer	130	0.8%
Russell	21	0.1%
Southwick	101	0.6%
Springfield	6,300	39.5%
Wales	3	0.0%
West Springfield	993	6.2%
Westfield	611	3.8%
Wilbraham	338	2.1%
Community Total	**14,087**	**88.4%**
Other Areas	**1,849**	**11.6%**
Total	**15,936**	**100.0%**

Source: Mercy Medical Center, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

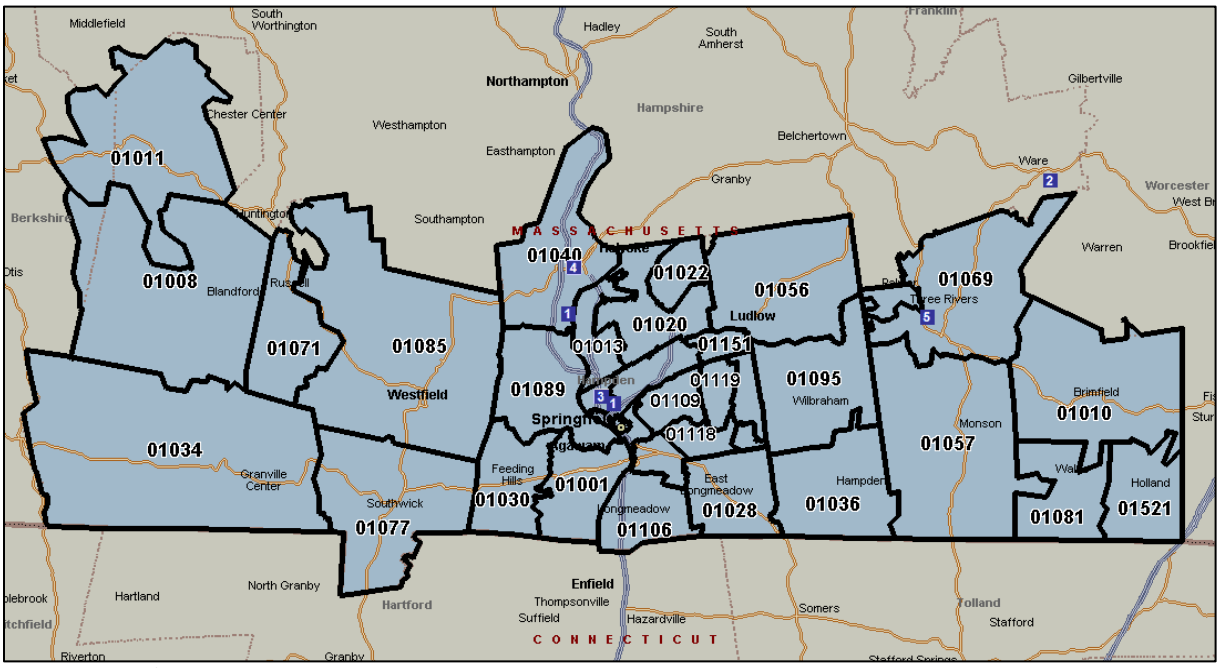
The 21 towns in the community accounted for 88% of Mercy's inpatient discharges

…

Springfield represented about 40% of Mercy's inpatient discharges

Exhibit 3 presents the ZIP codes that comprise Mercy's community.

Exhibit 3: Mercy Community



Source: Microsoft MapPoint and Mercy, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

51 ZIP codes in Hampden County comprise the community

…

Total Population: 464,416

SECONDARY DATA ASSESSMENT

This section assesses secondary data regarding health needs in the Mercy community.

Demographics

Population change plays a determining role in the types of health and social services needed by communities. Overall, the population living in the community is expected to increase about 0.7 percent between 2012 and 2017 (**Exhibit 4**).

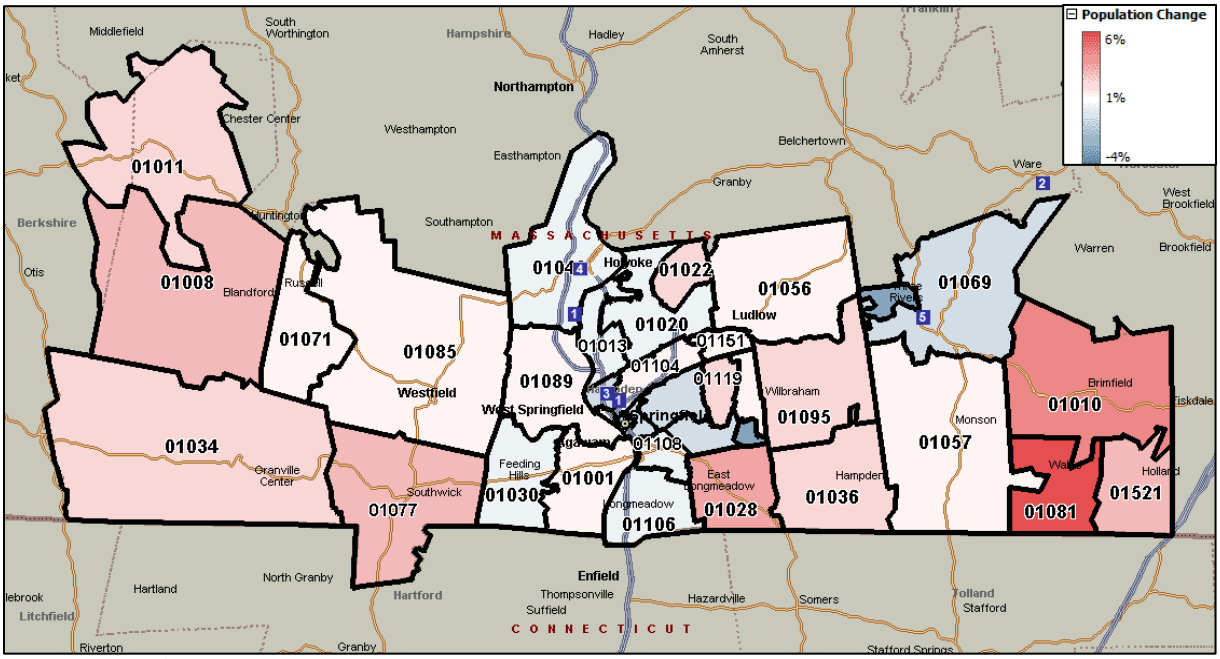
Exhibit 4: Percent Change in Population by County and Age, 2012-2017

Town/City*	Total Population 2012	Total Population 2017	Percent Change
Agawam	28,516	28,707	0.7%
Blandford	1,320	1,354	2.6%
Brimfield	3,844	3,994	3.9%
Chester	1,277	1,301	1.9%
Chicopee	55,453	55,684	0.4%
East Longmeadow	15,723	16,250	3.4%
Granville	2,085	2,130	2.2%
Hampden	5,191	5,268	1.5%
Holland	2,512	2,587	3.0%
Holyoke	40,073	40,222	0.4%
Longmeadow	16,044	16,075	0.2%
Ludlow	21,197	21,445	1.2%
Monson	8,493	8,579	1.0%
Palmer	12,174	12,017	-1.3%
Russell	1,605	1,620	0.9%
Southwick	9,629	9,919	3.0%
Springfield	152,998	153,160	0.1%
Wales	1,691	1,791	5.9%
West Springfield	28,292	28,484	0.7%
Westfield	42,044	42,566	1.2%
Wilbraham	14,255	14,491	1.7%
Total	**464,416**	**467,644**	**0.7%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Population growth rates vary by town. ZIP code 01081 (Wales) has the highest projected growth in population, with a 5.9 percent increase expected between 2012 and 2017. ZIP code 01069 (Palmer) is projected to experience a population decline of 1.3 percent (**Exhibit 5**).

Exhibit 5: Population Change by ZIP Code, 2012-2017



Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

ZIP code 01081 (Wales) projects growth of about 6% from 2012-2017

Exhibit 6 indicates that the 65+ and 45 to 64 age cohorts are expected to increase while other age cohorts will see population declines.

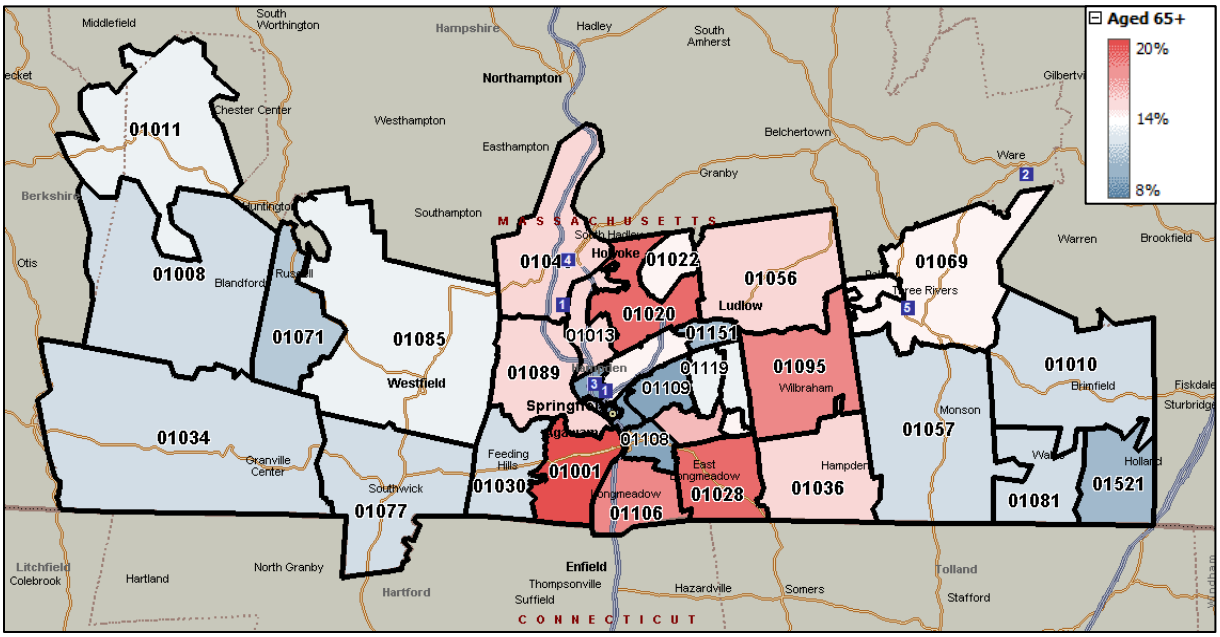
Exhibit 6: Percent Change in Population by Age/Sex Cohort, 2012-2017

Age/Sex Cohort	Community Population 2012	Community Population 2017	Percent Change
0-17	110,925	106,327	-4.1%
Female 18-44	81,921	80,284	-2.0%
Male 18-44	81,095	80,863	-0.3%
45-64	125,542	128,095	2.0%
65+	64,933	72,075	11.0%
Total	**464,416**	**467,644**	**0.7%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.

The percentage of people aged 65+ is highest in ZIP codes 01001 (Agawam), 01028 (East Longmeadow), and 01020 (Chicopee) (**Exhibit 7**).

Exhibit 7: Percent of Population Aged 65+ by ZIP Code, 2012



Source: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

ZIP code 01001 (Agawam) has the highest proportion of population aged 65+

In 2012, about 76 percent of the community's population was White. Non-White populations are expected to grow faster than White populations in the community. The Asian, American Indian, Black, and Other[3] population and those who identify as two or more races are expecting the fastest growth (**Exhibit 8**). The growing diversity of the community is important to recognize given the presence of health disparities and community input regarding the need to enhance cultural competency of health care providers.

Exhibit 8: Distribution of Population by Race[4], 2012-2017

Racial Cohort	2012	2017	Percent Change
White	75.8%	73.8%	-1.9%
Black	9.1%	9.4%	3.7%
American Indian	0.4%	0.4%	6.8%
Asian	2.1%	2.4%	14.8%
Other Race	9.6%	10.8%	12.5%
Two or More Races	3.0%	3.2%	8.5%
Total	**464,4**	**467,64**	**0.7%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.

The Asian population will grow by almost 15% from 2012 to 2017

Projections indicate that the Hispanic (or Latino) population is expected to increase more rapidly (approximately 12.6 percent between 2012 and 2017) than the non-Hispanic (or Latino) population (**Exhibit 9**).

Exhibit 9: Distribution of Population by Ethnicity, 2012-2017

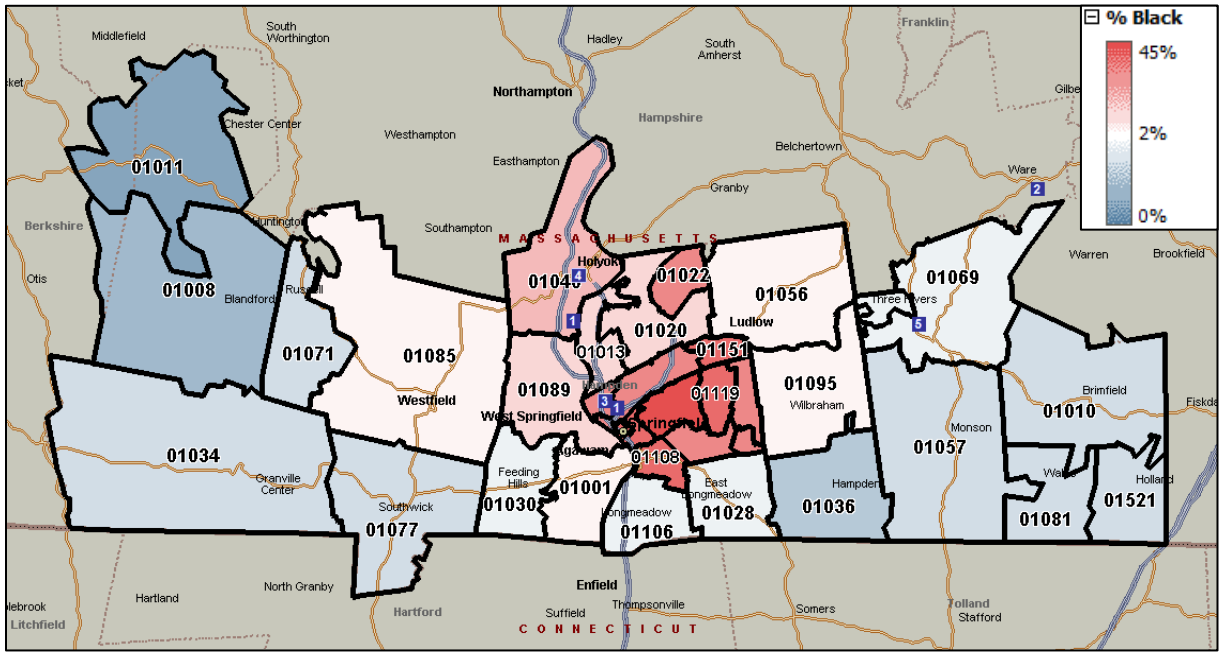
Ethnic Cohort	2012	2017	Percent Change
Hispanic (or Latino)	21.8%	24.6%	12.6%
Non-Hispanic (or Latino)	78.2%	76.1%	-2.6%
Total	**464,416**	**467,644**	**0.7%**

Source: The Nielsen Company and Truven Health Analytics via Mercy Medical Center, 2012.

Exhibits 10, 11, and 12 show where the percent of the population that is Black, Asian, and Hispanic (or Latino) is highest. The percent of Black residents is highest in ZIP code 01109 (Springfield). The percent of Asian residents is highest in ZIP code 01108 (Springfield). The percent of Hispanic (or Latino) residents is highest in three Springfield ZIP codes, particularly 01107.

[3] The "Other" population is the population that does not identify as White, Black, American Indian, Asian, or two or more races.
[4] The Nielson Company and Truven Analytics do not include "Hispanic" as a race.

Exhibit 10: Percent of Population (Black), 2012

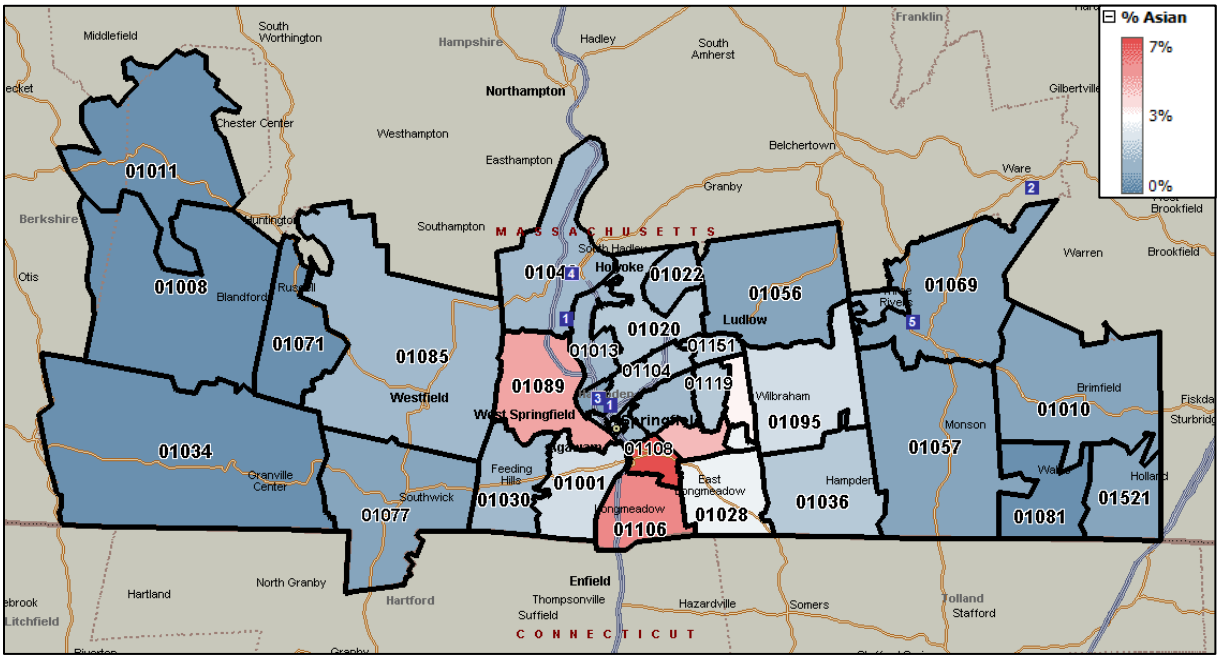


Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

Black residents make up the highest percentage of the population in ZIP code 01109 (Springfield)

Exhibit 11: Percent of Population (Asian), 2012

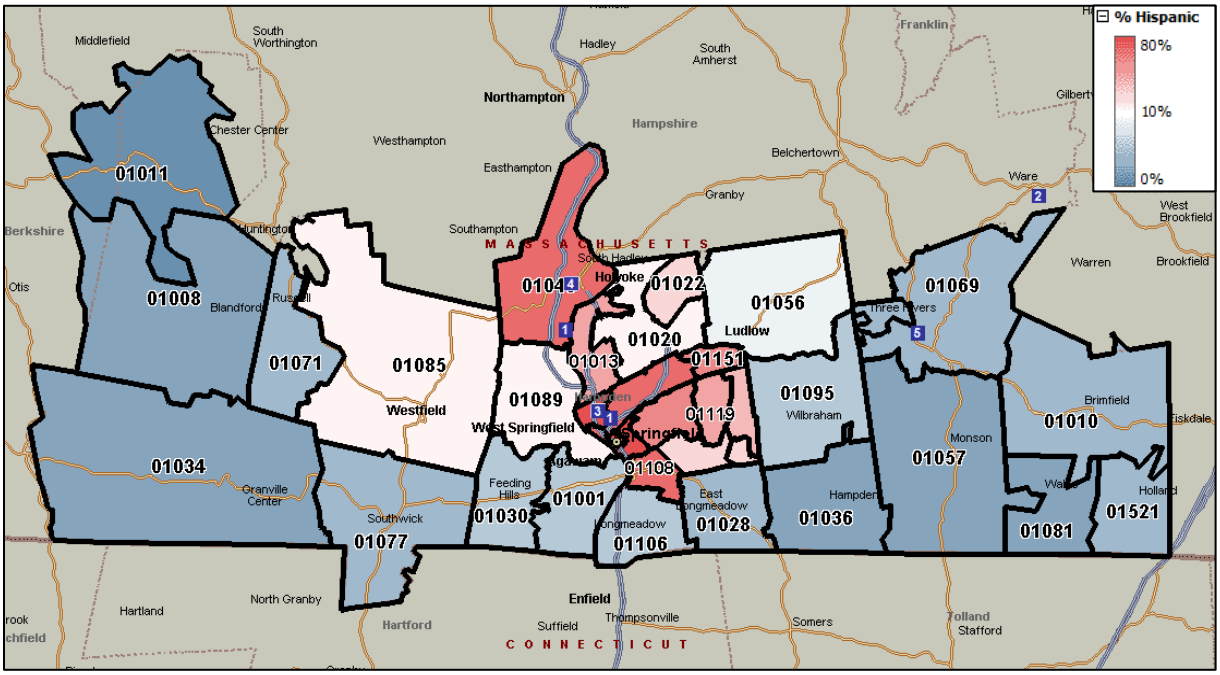


Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

ZIP code 01108 (Springfield) had the highest proportion of Asian residents in the community

Exhibit 12: Percent of Population (Hispanic (or Latino)), 2012



Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

About 78% of the population in ZIP code 01107 (Springfield) identified as Hispanic

Other demographic characteristics are presented in **Exhibit 13**. Key findings include:

- Hampden County had much higher percentages of residents reporting a disability than the national and Massachusetts averages. Pediatric disability was more than double the national average.
- Over 16 percent of Hampden County residents aged 25 and older did not graduate high school, slightly above the national average.
- Hampden County reported a slightly higher percentage of residents aged 5 and older who were linguistically isolated than the Massachusetts and national averages.[5]

Exhibit 13: Other Demographic Indicators, 2011

Demographic Indicators	Hampden	Massachusetts	U.S.
Total Population With Any Disability*	16.8%	**11.3%**	**12.1%**
Population 0-18 With Any Disability*	8.8%	**4.5%**	**4.0%**
Population 18-64 With Any Disability*	14.9%	**8.8%**	**10.2%**
Population 65+ With Any Disability*	39.3%	**34.1%**	**36.6%**
Population 25+ Without High School Diploma	16.6%	**10.8%**	**14.1%**
Population 5+ Who are Linguistically Isolated	9.3%	**8.9%**	**8.7%**

Source: U.S. Census Bureau, 2012.
*Respondents who report any one of the following six disability types are considered to have a disability: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty.

Key insights: ***Demographics***

- **The community population is aging and diversifying.**
- **Springfield is home to many Black, Asian, and Hispanic (or Latino) residents.**
- **Hampden County also reports very high disability rates across all age cohorts.**
- **Hampden County reports higher rates of linguistic isolation and low educational achievement than the Massachusetts and national averages.**

[5] Linguistic isolation is defined as the population aged 5 and older who speak a language other than English at home and who speak English less than "very well."

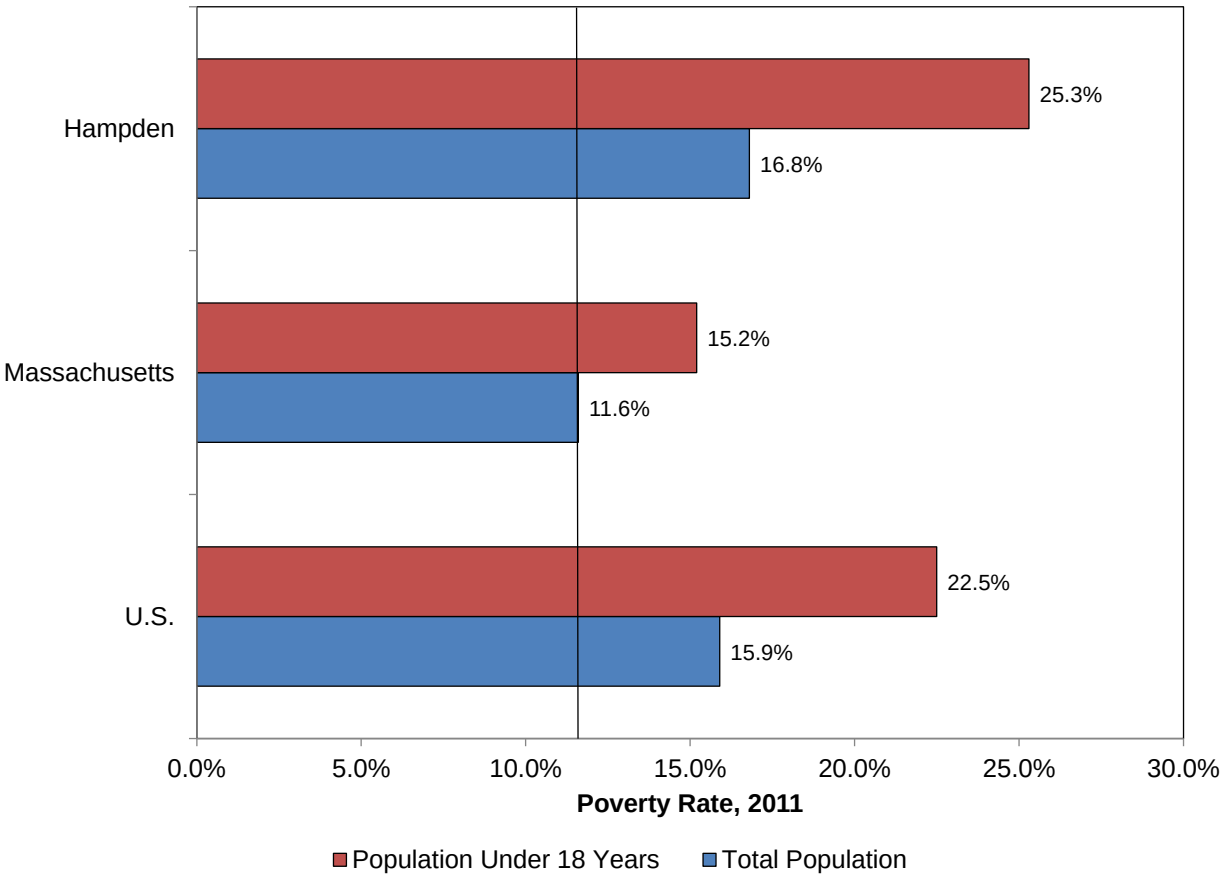
Economic Indicators

The following types of economic indicators with implications for health were assessed: (1) people in poverty, (2) household income, (3) unemployment rates, (4) crime, (5) health reform in Massachusetts, (6) utilization of government assistance programs, and (7) insurance status.

1. People in Poverty

Many health needs are associated with poverty. According to the U.S. Census, in 2011, nearly 16 percent of people in the U.S. and nearly 12 percent of people in Massachusetts lived in poverty. Hampden County reported a poverty rate significantly higher than commonwealth and national averages (**Exhibit 14**). The pediatric population has experienced higher poverty rates than the total population.

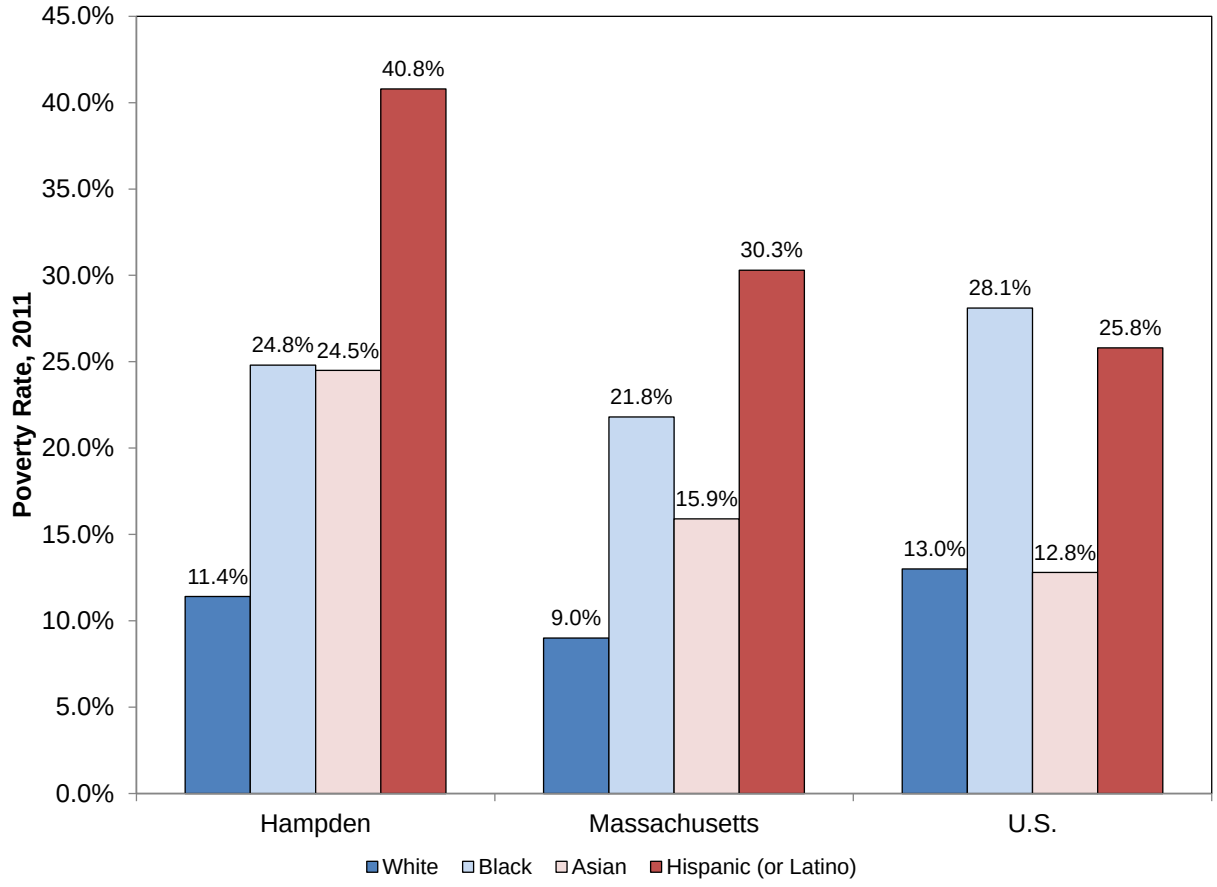
Exhibit 14: Percent of People in Poverty, 2011



Source: U.S. Census Bureau, 2012.

Exhibit 15 presents poverty rates by race. Asian, Black, and Hispanic (or Latino) populations in Hampden County reported higher poverty rates in 2011 than the White population. Poverty rates for each racial/ethnic group were higher in Hampden than comparable groups elsewhere in Massachusetts.

Exhibit 15: Percent of People in Poverty by Race/Ethnicity, 2011



Source: U.S. Census Bureau, 2012.

2. Household Income

In the Mercy community in 2012, 28 percent of all households had incomes below $25,000, an approximation of the federal poverty level (FPL) for a family of four; 54 percent had incomes less than $50,000, an approximation of 200 percent of the FPL for a family of four. FPL is used by many agencies and organizations to assess household needs for low-income assistance programs. The cities of Holyoke and Springfield reported the lowest average household income (**Exhibit 16**).

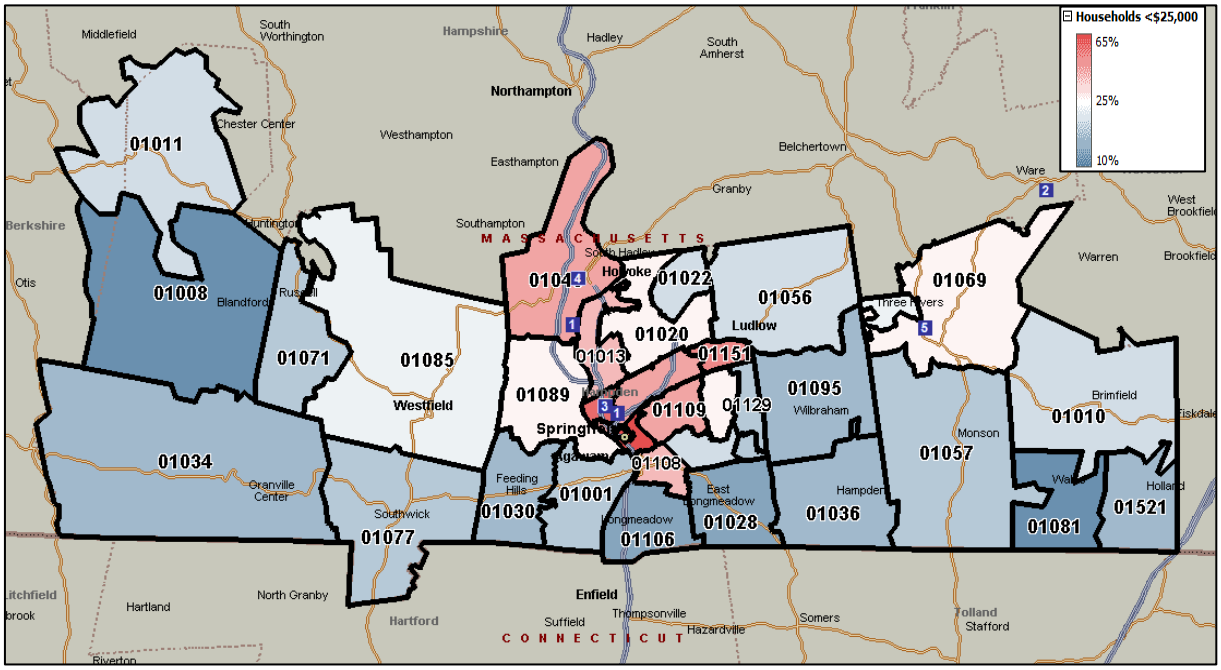
Exhibit 16: Percent Lower-Income Households by Town, 2012

Town/City*	Number of Households 2012	Average Income	Percent Less Than $25,000	Percent Less Than $50,000
Agawam	11,735	$67,092	16.5%	41.4%
Blandford	534	$76,025	11.0%	30.5%
Brimfield	1,526	$72,520	18.0%	41.0%
Chester	527	$59,829	18.8%	46.9%
Chicopee	23,864	$49,929	28.5%	60.8%
East Longmeadow	5,859	$91,210	13.3%	31.1%
Granville	818	$80,999	15.4%	33.7%
Hampden	1,930	$91,105	15.2%	29.9%
Holland	1,016	$75,103	15.4%	33.4%
Holyoke	15,504	$45,543	38.8%	66.1%
Longmeadow	5,900	$112,328	12.3%	28.2%
Ludlow	8,162	$65,395	18.6%	43.5%
Monson	3,276	$74,751	16.0%	35.5%
Palmer	5,115	$54,741	24.1%	52.0%
Russell	590	$63,983	15.8%	41.9%
Southwick	3,770	$71,493	16.5%	37.6%
Springfield	56,786	$44,902	38.3%	66.3%
Wales	676	$69,264	10.2%	37.7%
West Springfield	12,091	$58,115	26.2%	53.1%
Westfield	15,761	$65,389	22.4%	46.3%
Wilbraham	5,327	$98,618	14.2%	31.3%
Total	**180,767**	**$58,663**	**27.9%**	**54.0%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Six ZIP codes (01103, 01104, 01105, 01107, 01109, and 01151) in Springfield had over 40 percent of households reporting incomes under $25,000 (**Exhibit 17**).

Exhibit 17: Percent of Households with Incomes Under $25,000 by ZIP Code, 2012



Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

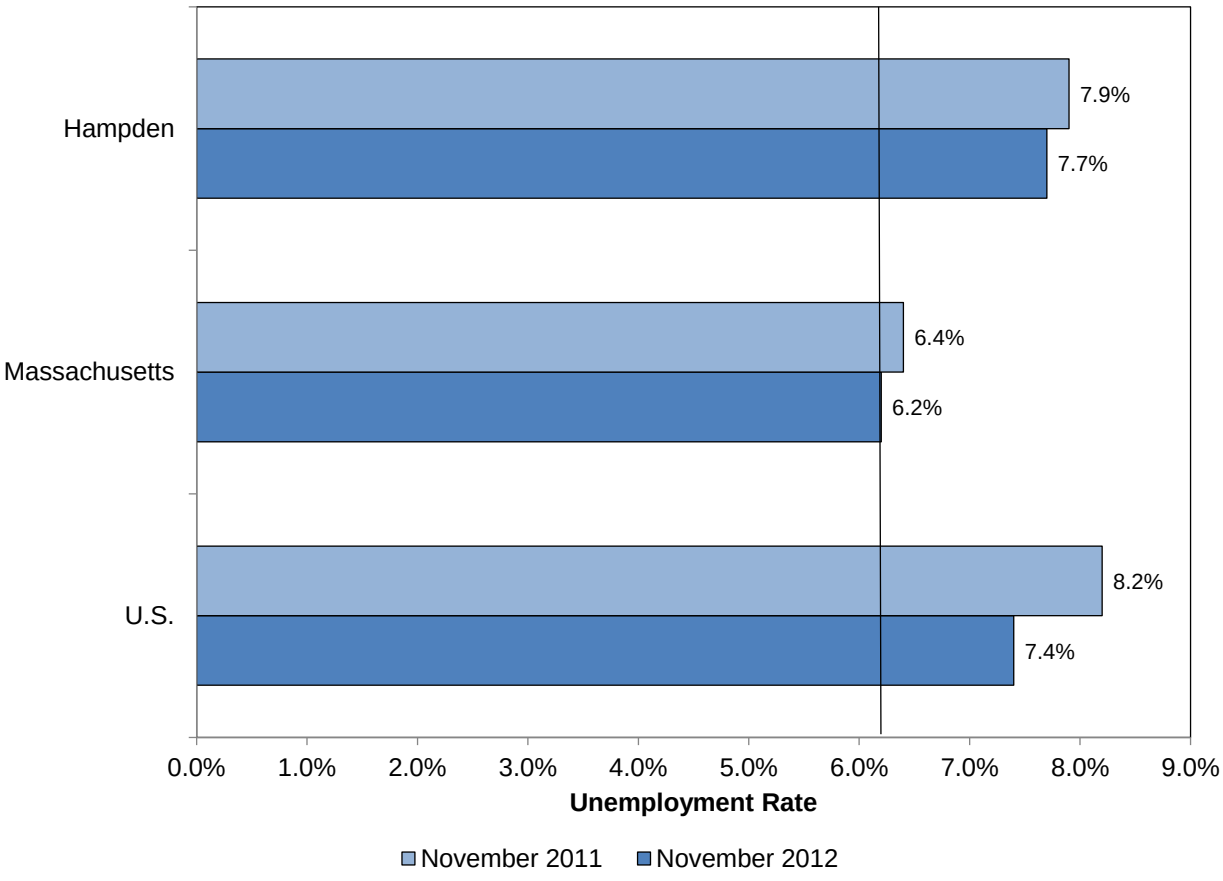
1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

ZIP code 01105 (Springfield) reported over 63% of households earning less than $25,000 per year

3. Unemployment Rates

Exhibit 18 shows the unemployment rates for Hampden County in November of 2011 and 2012, with Massachusetts and national averages for comparison. Hampden County reported unemployment rates above commonwealth averages in both 2011 and 2012.

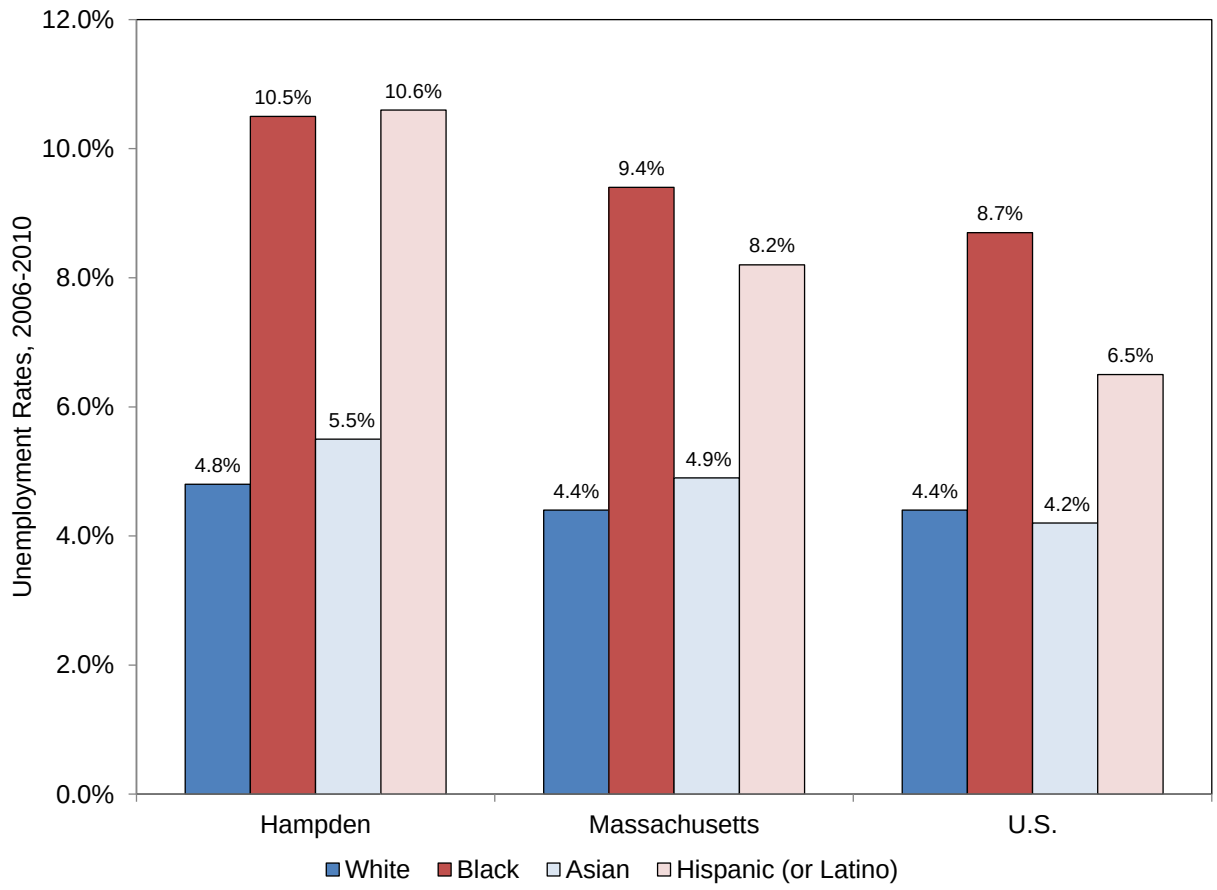
Exhibit 18: Unemployment Rates, 2011 and 2012



Source: U.S. Bureau of Labor Statistics, 2012.

Hampden County reported higher rates of unemployment across all racial and ethnic categories than the Massachusetts and national averages during the 2006-2010 period. Unemployment rates from 2006 to 2010 were highest for the Black and Hispanic (or Latino) populations (**Exhibit 19**).

Exhibit 19: Unemployment Rates by Race and Ethnicity, 2006-2010*



Source: U.S. Census Bureau, 2011.
*Unemployment data by race were available only within ACS 5-Year Estimates, 2006-2010.

4. Crime

The Federal Bureau of Investigation reports available data on violent crime in the United States. Hampden County reported significantly higher rates of all crimes than the Massachusetts and national averages (**Exhibit 20**).

Exhibit 20: Violent and Property Crime Rates, 2011

County	Population 2011	Crime Rates per 100,000 Population					
		Murder and Non-Negligent Manslaughter	Forcible Rape	Aggravated Assault	Robbery	Total Violent Crime	Total Property Crime
Hampden	449,520	5.6	31.4	409.5	160.8	607.3	3,353.4
Massachusetts	**6,349,092**	**2.9**	**25.6**	**309.3**	**106.6**	**444.5**	**2,343.5**
U.S.	**303,585,583**	**4.8**	**27.5**	**247.4**	**116.7**	**396.4**	**2,985.4**

Sources: Violent crime counts retrieved from the Federal Bureau of Investigation, Uniform Crime Reports, 2012. Population 2011 estimates obtained from the U.S. Census Bureau, ACS 1 Year Estimates 2011. Rates calculated by Verité.

5. Health Reform in Massachusetts

Massachusetts enacted comprehensive health reform in 2006 that expanded health insurance coverage for residents. The expansion has reduced the number of uninsured people in Mercy's community; however, this CHNA (including the community survey) indicates that access barriers remain present.

The Massachusetts Healthcare Insurance Reform Law required Massachusetts residents to carry a minimum level of healthcare insurance. Residents have been required to obtain coverage or face a tax penalty, unless they obtain a waiver from the Health Connector or for religious reasons.[6] Residents earning less than 150 percent of the federal poverty level (FPB) receive free health care insurance.

The impacts of these reforms have been well-studied. In 2010, while 18.4 percent of U.S. residents were uninsured, just 6.3 percent of Massachusetts residents were uninsured (a decrease from 10.9 percent in 2006). Primary care provider capacity has expanded to meet growing demand for services. More residents reported having a usual source of care, a preventive care visit, and a dental care visit in 2010 than in 2006.[7]

Even after the reforms, however, low-income residents remain more likely to be uninsured than higher income residents.[8] Other characteristics of the remaining uninsured are: single, young,

[6]The 188th General Court of The Commonwealth of Massachusetts. (2006). Chapter 58: An Act Providing Access to Affordable, Quality, Accountable Health Care. Retrieved from http://www.malegislature.gov/Laws/SessionLaws/Acts/2006/Chapter58

[7]The Henry J. Kaiser Family Foundation. (2012, May). Massachusetts Health Reform: Six Years Later. Retrieved from http://www.kff.org/healthreform/upload/8311.pdf

[8]Blue Cross Blue Shield of Massachusetts Foundation. (2012, May). Health Reform in Massachusetts: Expanding Access to Health Insurance Coverage – Assessing the Results. Retrieved from https://www.mahealthconnector.org/portal/binary/com.epicentric.contentmanagement.servlet.ContentDeliveryServlet/Health%2520Care%2520Reform/Overview/HealthReformAssessingtheResults.pdf

males; racial minorities, ethnic minorities, or non-citizens; unable to speak English well or very well; and/or living in a household with an adult unable to speak English well or very well.[9]

6. Utilization of Government Assistance Programs

Federal, state, and local governments provide assistance programs for low-income individuals and families. These programs include vouchers that subsidize housings costs, free and reduced-price lunches at public schools through the National School Lunch Program, the Supplemental Nutrition Assistance Program (SNAP), and Temporary Assistance for Needy Families (TANF).

Housing certificates and vouchers allow residents who meet certain eligibility criteria to receive monthly housing assistance under Section 8 of the Housing Act of 1937. Section 8 subsidies of rental and mortgage costs help make housing more affordable. Residents who apply may be placed on a waiting list before funds become available. Hampden County reported an average time on the waiting list for Section 8 housing certificates and vouchers that was shorter than the Massachusetts average. The average household federal contribution in Hampden County also is lower than the Massachusetts average (**Exhibit 21**).

Exhibit 21: Waiting Time for Section 8 Housing Certificates and Vouchers by County, 2009

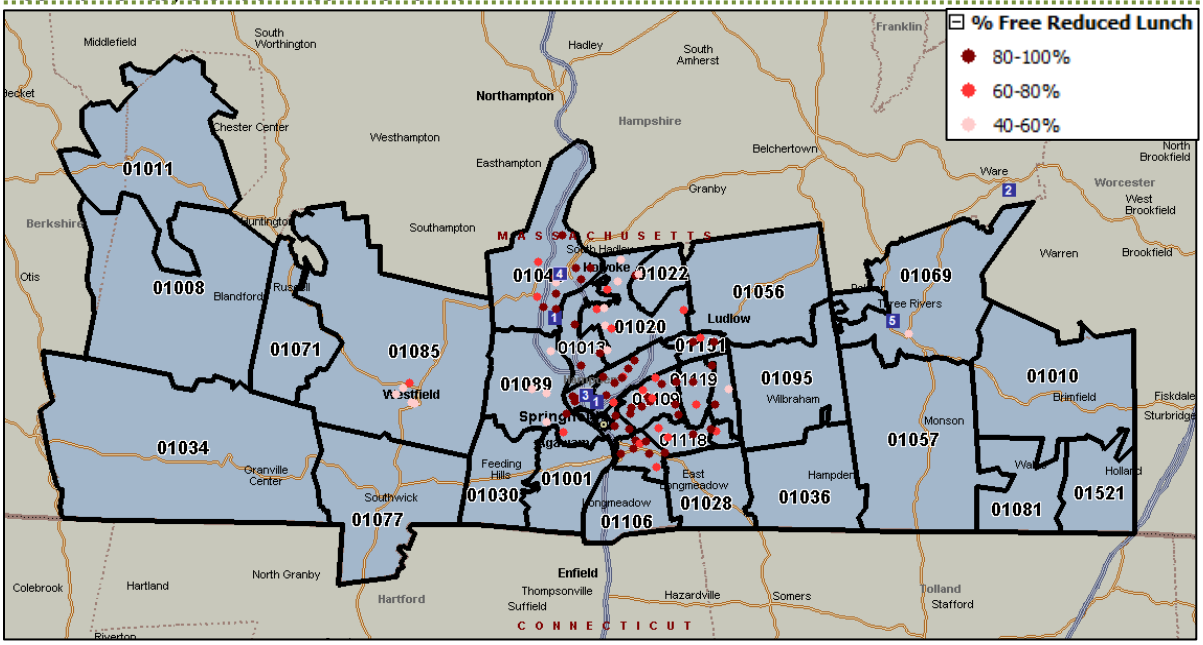
County	Number of Participating Households	Spending per Unit per Month		Average Months on Waiting List
		Average Household Contribution	Average Federal Contribution	
Hampden	8,040	$368	$594	11
Massachusetts	**72,369**	**$407**	**$907**	**15**
U.S.	**2,040,801**	**$319**	**$580**	**9**

Source: U.S. Department of Housing and Urban Development, 2012.

[9]State Health Access Data Assistance Center and Robert Wood Johnson Foundation. (2010, August). Massachusetts Health Reform in 2008: Who are the Remaining Uninsured Adults? Retreived from http://www.shadac.org/files/shadac/publications/MassReform2008UninsuredBrief.pdf

Schools participating in the National School Lunch Program are eligible to receive financial assistance from the USDA to provide free or reduced-price meals to low-income students. Schools with 40 percent or more of their student body receiving this assistance are eligible for school-wide Title I funding, designed to ensure that students meet grade-level proficiency standards. In the Mercy community, 87 of 143 schools were eligible for Title I funds (**Exhibit 22**).

Exhibit 22: Public Schools with Over 40 Percent of Students Eligible for Free or Reduced-Price Lunches, School Year 2010-2011



Sources: Microsoft MapPoint and National Center for Education Statistics, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

In 2011, 87 of 143 schools in Hampden County had over 40% of students eligible for free/reduced price lunches

Exhibit 23 shows the percent of the total population enrolled in the Supplemental Nutrition Assistance Program (SNAP). This U.S. Department of Agriculture program provides subsidies so low-income and no-income residents can purchase food. In 2011, 22.3 percent of Hampden County households participated in SNAP, a rate well above averages.

Exhibit 23: Supplemental Nutrition Assistance Program (SNAP) Enrollment, 2011

County	Households Enrolled in SNAP	Number of Households	Percent of Total Households
Hampden	39,319	176,575	22.3%
Massachusetts	**307,473**	**2,532,067**	**12.1%**
U.S.	**14,944,642**	**114,991,725**	**13.0%**

Source: U.S. Census Bureau, 2012.

Exhibit 24 shows the percent of the total population enrolled in cash public assistance, including the Temporary Assistance for Needy Families (TANF) program. TANF is a U.S. Department of Health and Human Services program that provides financial assistance to eligible low-and-no-income families with dependent children. About 4.5 percent of households in Hampden County received cash public assistance in 2011, again higher than Massachusetts and national averages.

Exhibit 24: Households Receiving Cash Public Assistance, 2011

County	Households Receiving Cash Public Assistance	Number of Households	Percent of Total Households
Hampden	8,014	176,575	4.5%
Massachusetts	**76,711**	**2,532,067**	**3.0%**
U.S.	**3,309,517**	**114,991,725**	**2.9%**

Source: U.S. Census Bureau, 2012.

7. Insurance Status

Exhibit 25 demonstrates that, in 2011, 4.8 percent of Hampden County's population lacked health insurance. This percentage was higher than the Massachusetts average but below the national average. Health reform in Massachusetts has significantly decreased uninsurance rates.

Exhibit 25: Uninsured Population by Age Cohort and County, 2011

County	Total Population	Population Under 18	Population 18-64			
	Percent Uninsured	Percent Uninsured	Percent Uninsured and Employed	Percent Uninsured and Unemployed	Percent Uninsured Not in Labor Force	Total Percent Uninsured
Hampden	4.8%	2.1%	6.5%	11.3%	6.7%	6.9%
Massachusetts	**4.3%**	**1.7%**	**5.2%**	**14.8%**	**5.4%**	**5.9%**
U.S.	**15.1%**	**7.5%**	**17.9%**	**46.0%**	**22.0%**	**21.0%**

Source: U.S. Census Bureau, 2012.

Exhibit 26 portrays the distribution of community-wide discharges by payer. Medicare and MassHealth (Medicaid) were the most common payers in the community. Springfield and Holyoke reported the highest percentage of MassHealth (Medicaid) discharges. Wilbraham, Brimfield, and East Longmeadow reported the highest percentage of Medicare discharges in the community.

Exhibit 26: Community-Wide Discharges[10] by Town/City and Payer, 2011

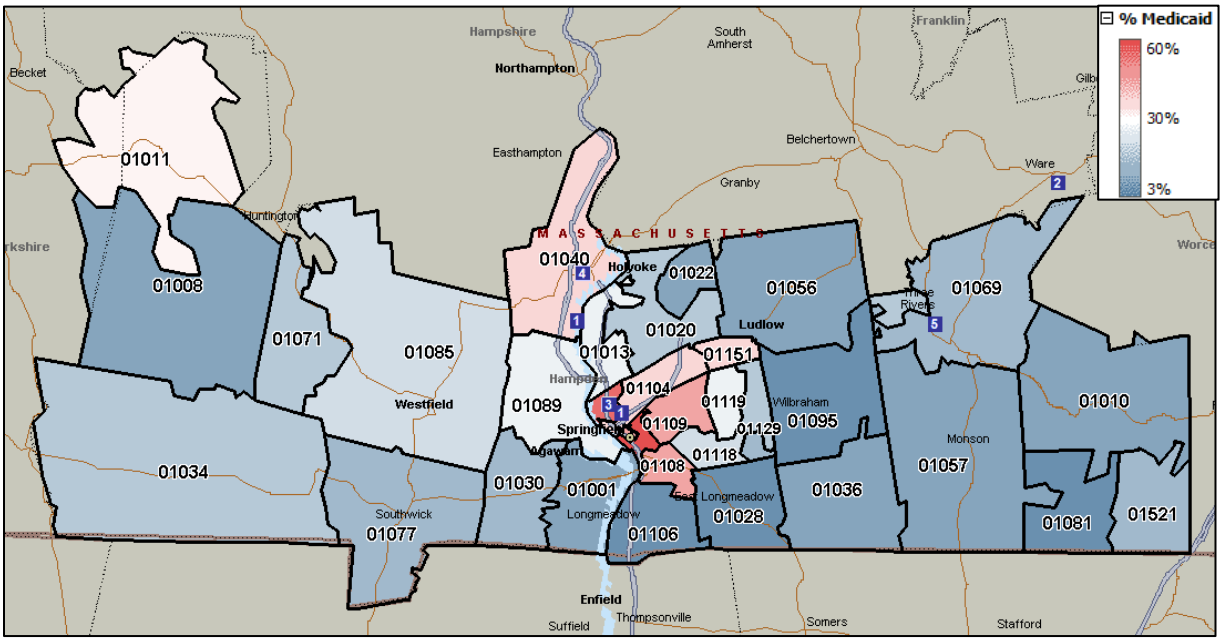
Town/City*	Discharges	MassHealth (Medicaid)	Medicare	Other	Private	Self-Pay
Agawam	3,346	11.8%	51.9%	5.3%	30.8%	0.2%
Blandford	40	10.0%	20.0%	5.0%	65.0%	0.0%
Brimfield	163	10.4%	59.5%	6.7%	23.3%	0.0%
Chester	52	30.8%	11.5%	5.8%	50.0%	1.9%
Chicopee	6,956	22.2%	43.9%	6.5%	26.8%	0.7%
East Longmeadow	1,750	6.3%	59.0%	2.9%	31.7%	0.2%
Granville	89	19.1%	28.1%	7.9%	44.9%	0.0%
Hampden	417	7.9%	53.5%	3.4%	34.8%	0.5%
Holland	23	13.0%	43.5%	8.7%	34.8%	0.0%
Holyoke	6,205	36.0%	40.7%	5.3%	17.4%	0.6%
Longmeadow	1,118	3.2%	57.8%	2.3%	36.6%	0.1%
Ludlow	1,881	9.6%	48.3%	6.5%	35.4%	0.2%
Monson	770	11.3%	46.2%	6.8%	35.1%	0.6%
Palmer	1,656	14.6%	55.1%	6.0%	24.0%	0.4%
Russell	89	18.0%	21.3%	6.7%	52.8%	1.1%
Southwick	496	13.7%	35.9%	5.6%	44.8%	0.0%
Springfield	19,992	41.2%	33.8%	5.2%	19.1%	0.7%
Wales	80	6.3%	56.3%	10.0%	27.5%	0.0%
West Springfield	3,145	25.6%	38.2%	6.0%	29.7%	0.5%
Westfield	2,414	23.7%	27.9%	6.2%	41.7%	0.6%
Wilbraham	1,522	4.8%	61.0%	3.2%	30.7%	0.2%
Total	**52,204**	**28.2%**	**40.9%**	**5.4%**	**25.0%**	**0.5%**

Source: Coalition of Western Massachusetts Hospitals, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Exhibit 27, 28, and **29** illustrate the prevalence of MassHealth (Medicaid), Medicare, and private discharges in the community.

[10] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Exhibit 27: MassHealth (Medicaid) Discharges[11] as a Percent of Total by ZIP Code, 2010-2011



Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.

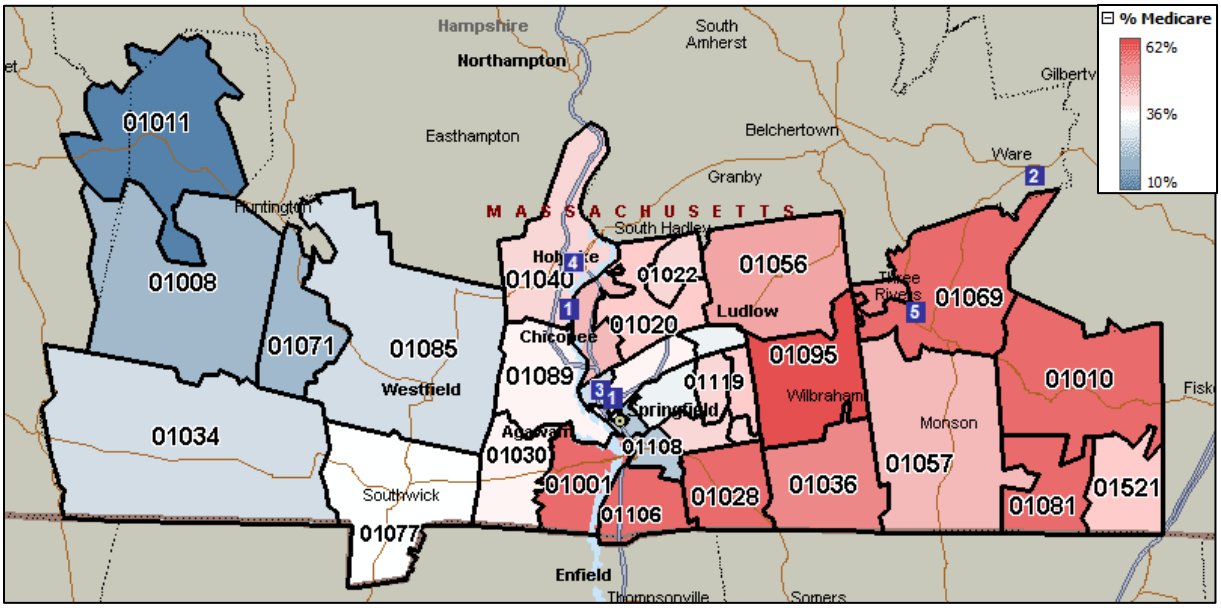
Data were not mapped for ZIP codes with fewer than 10 total discharges.

1 Mercy Medical Center
2 Baystate Mary Lane Hospital
3 Baystate Medical Center
4 Holyoke Medical Center
5 Wing Memorial Hospital

The Medicaid percent of discharges was highest in ZIP codes 01138, 01105, and 01107 (all in Springfield)

[11] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Exhibit 28: Medicare Discharges[12] as a Percent of Total by ZIP Code, 2010-2011



Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.

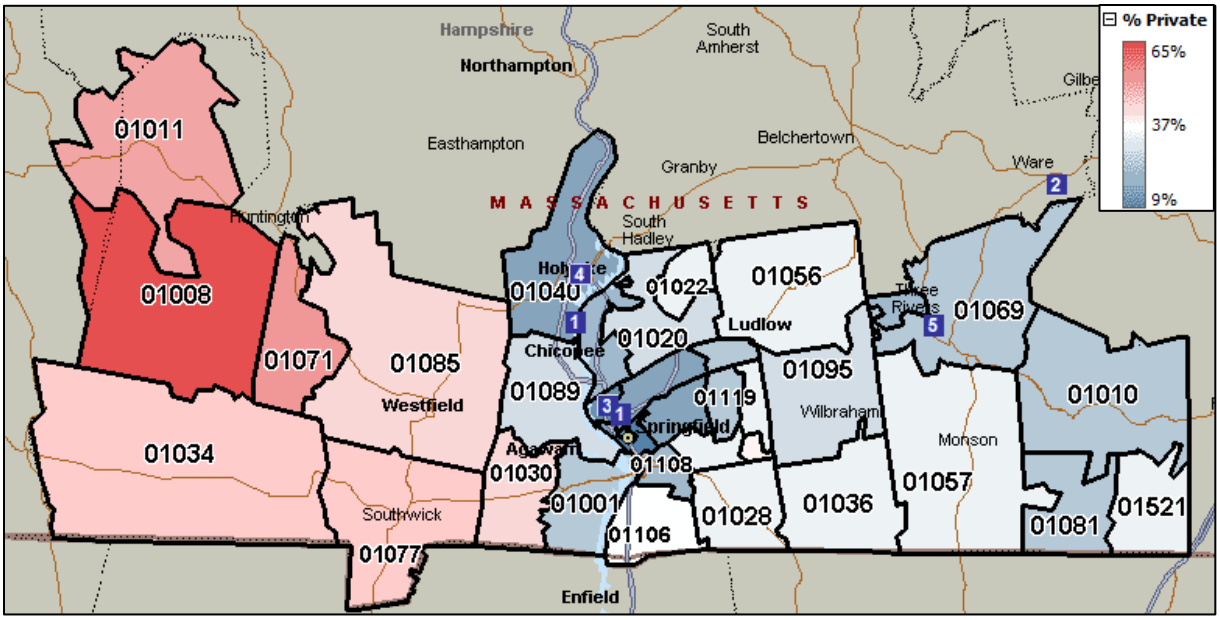
Data were not mapped for ZIP codes with fewer than 10 total discharges.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

The Medicare percent of discharges was highest in ZIP codes 01095 (Wilbraham), 01010 (Brimfield), 01028 (East Longmeadow)

[12] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Exhibit 29: Private Discharges[13] as a Percent of Total by ZIP Code, 2010-2011



Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.

Data were not mapped for ZIP codes with fewer than 10 total discharges.

The private percent of discharges was highest in ZIP codes 01008 (Blandford), 01071 (Russell), and 01011 (Chester)

Key insights: ***Economic Indicators***

- **Poverty is known to create barriers to access (to health services, quality education, healthy food, housing, and other basic needs and opportunities) and to contribute to poor health status. Hampden County reported a poverty rate well above the Massachusetts average.**
- **Hampden County reported significantly higher rates of crime than the Massachusetts averages in 2011. It also demonstrated higher utilization of government support programs (including SNAP and TANF).**
- **Health reform has meaningfully decreased uninsurance rates.**

[13] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Local Health Status and Access Indicators

The following data sources have been accessed to examine health status and access to care indicators in the Mercy community: (1) County Health Rankings, (2) Community Health Status Indicators Project, (3) Massachusetts Department of Public Health (MassCHIP), and (4) the Behavioral Risk Factor Surveillance System.

1. County Health Rankings

County Health Rankings, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, ranks each county within each state in terms of health factors and health outcomes. The health outcomes measure is a composite based on mortality and morbidity statistics, and the health factors measure is a composite of several variables known to affect health outcomes: health behaviors, clinical care, social and economic factors, and physical environment.

County Health Rankings is updated annually. *County Health Rankings 2013* relies on data from 2005 to 2012, with most data originating in 2009 to 2012. *County Health Rankings 2012* relies on data from 2002 to 2010, with most data originating in 2006 to 2009. *County Health Rankings 2011* relies on data from 2001 to 2009, with most data originating in 2006 to 2008. In all three years, *County Health Rankings* was able to rank all 14 of Massachusetts's counties.

Exhibits 31A and **31B** provide summary analysis of the rankings for Hampden County. Rankings for Massachusetts were divided into quartiles to indicate how each county ranks versus others in the commonwealth. **Exhibit 31A** illustrates the quartile into which each county fell by indicator in the 2012 edition, and also illustrates whether each county's ranking worsened or improved from 2011. For example, in the 2012 edition, Hampden County was in the bottom quarter (13th out of 14) of Massachusetts counties for the overall rate of morbidity; its ranking in 2012 fell for this indicator compared to the 2011 edition. **Exhibit 31B** uses a similar methodology; however, County Health Rankings' 2013 edition ranked fewer indicators.

Exhibit 30A: Hampden County Rank Among 14 Massachusetts Counties, 2011-2012

Indicator	Hampden	Rank Change
Health Outcomes		14 to 14
Mortality		14 to 14
Morbidity	↓	13 to 14
Health Factors		14 to 14
Health Behaviors		14 to 13
Tobacco Use		12 to 10
Diet and Exercise*[14]		N/A
Alcohol Use		8 to 7
Sexual Activity[15]		14 to 14
Clinical Care	↓	9 to 12
Access to Care[16]	↓	8 to 12
Quality of Care[17]	↓	7 to 9
Social & Economic Factors		14 to 14
Education		14 to 14
Employment		13 to 13
Income		14 to 13
Family and Social Support		13 to 13
Community Safety		13 to 13
Physical Environment		14 to 14
Environmental Quality[18]		14 to 14
Built Environment*[19]	↓	N/A

Hampden County ranked last for nine indicators

…

Access and Quality of Care rankings were more favorable than were health status categories

Source: *County Health Rankings*, 2011 and 2012.
*The 2012 edition of *County Health Rankings* used different data sources for the "Diet and Exercise" and "Built Environment" indicators than the 2011 edition. Therefore, it is not possible to draw comparisons between years for these indicators.

Key	
2012 County Ranking 1-7	
2012 County Ranking 8-10	
2012 County Ranking 11-14	
Ranks Not Comparable Between 2011 and 2012	N/A
Rank Worsened from 2011 to 2012	↓

In 2012, Hampden County ranked in the bottom quartile of Massachusetts counties for all but a few indicator categories.

[14] A composite measure that examines adult obesity and physical inactivity.
[15] A composite measure that examines the chlamydia rate per 100,000 population and the teen birth rate per 1,000 females ages 15 to 19.
[16] A composite measure that examines the percent of the population without health insurance and ratio of population to primary care physicians.
[17] A composite measure that examines the hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last 8 months of life.
[18] A composite measure that examines the number of air pollution-particulate matter days and air pollution-ozone days.
[19] A composite measure that examines access to healthy foods and recreational facilities and the percent of restaurants that are for fast food.

Exhibit 30B: Hampden County Rank Among 14 Massachusetts Counties, 2012-2013

Indicator	Hampden	Rank Change 2012 to 2013
Health Outcomes		14 to 14
Mortality		14 to 14
Morbidity		14 to 13
Health Factors		14 to 14
Health Behaviors		13 to 13
Clinical Care		N/A
Social & Economic Factors		14 to 13
Physical Environment		N/A

Hampden County ranked in the bottom quartile for all indicators

Source: *County Health Rankings*, 2012 and 2013.
*The 2013 edition of *County Health Rankings* used different data sources for "Clinical Care" and "Physical Environment" than the 2012 edition. Therefore, it is not possible to draw comparisons between years for these indicators.

Key	
2013 County Ranking 1-7	
2013 County Ranking 8-10	
2013 County Ranking 11-14	
Ranks Not Comparable Between 2012 and 2013	N/A
Rank Worsened from 2012 to 2013	↓

In 2013, Hampden County ranked in the bottom quartile for all indicators.

2. Community Health Status Indicators Project

The *Community Health Status Indicators* (CHSI) Project, provided by the U.S. Department of Health and Human Services through 2009, compared many health status and access indicators to both the median rates in the U.S. and to rates in "peer counties" across the U.S.

Counties are considered "peers" if they share common characteristics such as population size, poverty rate, average age, and population density. **Exhibit 31** highlights the analysis of CHSI health status indicators. Cells in the table are shaded if, on that indicator, a county compared unfavorably both to the U.S. as a whole and to the group of specified peer communities.

Exhibit 31: Unfavorable CHSI Indicators, 2009

Indicator	Hampden
Low Birth Weight Infants	
Very Low Birth Weight Infants	
Premature Births	
No Care in First Trimester	
Births to Women under 18*	
Births to Women age 40-54*	
Births to Unmarried Women*	
Infant Mortality	
Hispanic (or Latino) Infant Mortality	
White non-Hispanic (or Latino) Infant Mortality	
Black non-Hispanic (or Latino) Infant Mortality	
Neonatal Infant Mortality	
Post-neonatal Infant Mortality	
Breast Cancer (Female)	
Colon Cancer	
Lung Cancer	
Coronary Heart Disease	
Stroke	
Homicide	
Suicide	
Motor Vehicle Injuries	
Unintentional Injury	

Hampden County compared unfavorably for five indicators, all involving prenatal care and infant health

Source: The *Community Health Status Indicators* Project, 2010.
*The Community Health Status Indicators Project considers a high number of births to women age 18, age 40-54, or who are unmarried to be an unfavorable health indicator due to associations with increased risk of negative maternal and child health outcomes. Caution should be used when interpreting this indicator; women may be choosing to have children at these times or under these circumstances for a variety of reasons

Key	
	Unfavorable

Hampden County compared unfavorably for five indicators: No Care in First Trimester, Births to Women under 18, Births to Women age 40-54, Births to Unmarried Women, and Hispanic (or Latino) Infant Mortality.

3. Massachusetts Department of Public Health

The Massachusetts Department of Public Health (MDPH) maintains a publicly-available data warehouse, the Massachusetts Community Health Information Profile (MassCHIP),that includes indicators regarding a number of health issues.

Exhibits 32 and **33** display cancer incidence and mortality rates by race and ethnicity. **Exhibits 34, 35,** and **36** display mortality rates by race and ethnicity for a series of issues, including circulatory system, injuries, HIV/AIDs, respiratory diseases, and chronic liver disease. **Exhibit 37** displays incidence and/or prevalence of a variety of infectious diseases, including the most common sexually transmitted infections. **Exhibit 38** portrays rates of obesity and overweight health status for schoolchildren in the Mercy community**. Exhibits 39** and **40** display asthma-related data, including prevalence among schoolchildren and also hospitalizations by age group. **Exhibit 41** analyzes several infant and maternal health indicators.

Exhibit 32: Cancer Incidence Rates by Race/Ethnicity, 2008*

County and Race/Ethnicity	All Cancer	Breast (Female)	Colorectal	Esophagus	Leukemia	Lung	Non-Hodgkin Lymphoma	Ovary	Pancreas	Prostate	Stomach
Hampden											
Asian	361.3	N/A	N/A	0.0	0.0	N/A	N/A	0.0	N/A	N/A	0.0
Black	442.7	106.3	35.8	N/A	N/A	56.0	18.7	N/A	N/A	202.9	N/A
Hispanic (or Latino)	488.2	99.0	50.4	N/A	N/A	38.0	N/A	N/A	17.2	240.2	13.7
White	468.1	86.8	37.5	6.0	8.3	65.9	17.9	11.4	11.8	141.9	8.2
Total	**471.0**	**89.3**	**38.4**	**5.6**	**8.5**	**63.6**	**17.9**	**11.8**	**12.3**	**158.8**	**8.9**
Massachusetts											
Asian	326.2	65.8	42.7	3.2	8.5	45.0	11.8	9.3	4.6	89.6	11.2
Black	515.8	88.9	48.2	6.7	9.6	51.4	20.7	6.9	16.1	241.0	12.9
Hispanic (or Latino)	309.6	53.8	30.9	2.7	9.5	26.0	10.7	5.5	10.0	133.7	10.2
White	520.4	98.3	44.2	6.9	12.8	74.5	20.1	13.5	13.2	146.8	7.0
Total	**514.2**	**95.0**	**44.4**	**6.6**	**12.8**	**71.2**	**19.8**	**12.8**	**13.0**	**155.6**	**7.6**

Source: MassCHIP, 2012.
Rates are per 100,000 population and are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of cancer.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Hampden County reported higher rates of prostate and stomach cancer for the general population than the Massachusetts average. The Hispanic (or Latino) population reported higher rates of seven cancers than the Massachusetts Hispanic (or Latino) average. The Black population reported higher rates of breast and prostate cancer than the White population (**Exhibit 32**).

Exhibit 33: Cancer Mortality Rates by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Cancer Types	Breast (Female)	Colorectal	Esophagus	Leukemia	Lung	Non-Hodgkin Lymphoma	Ovary	Pancreas	Prostate	Stomach
Hampden											
Asian	93.0	0.0	0.0	0.0	0.0	22.1	0.0	0.0	56.8	0.0	0.0
Black	203.8	27.2	16.5	3.6	13.5	31.3	8.8	7.1	14.9	60.0	4.5
Hispanic	167.5	16.8	27.3	4.2	3.1	23.2	2.7	8.4	4.9	22.7	7.1
White	187.3	22.5	14.6	6.6	7.6	59.8	3.9	7.5	11.2	21.8	4.5
Total	**187.8**	**21.8**	**15.7**	**6.2**	**7.9**	**56.1**	**4.2**	**7.2**	**11.6**	**23.7**	**4.7**
Massachusetts											
Asian	95.7	9.4	12.4	2.9	5.0	22.3	2.4	2.1	6.7	6.5	4.0
Black	193.7	30.6	17.7	2.6	5.2	33.5	7.6	4.6	14.4	44.8	8.4
Hispanic	112.6	11.8	11.9	3.5	3.4	22.8	4.5	2.0	8.3	10.8	7.2
White	177.1	22.3	15.0	5.2	6.7	50.9	5.3	8.2	11.1	21.4	2.9
Total	**173.7**	**22.0**	**15.0**	**5.0**	**6.5**	**48.5**	**5.4**	**7.7**	**11.0**	**21.6**	**3.3**

Source: MassCHIP, 2012.
Rates are per 100,000 population and are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of cancer.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Cancer mortality rates throughout the community were higher than commonwealth averages. The Hispanic (or Latino) population had mortality rates worse than the Massachusetts averages by more than 75 percent for colorectal cancer, prostate cancer, and cancer of the ovaries. The leukemia-related mortality rate for Black residents was more than 75 percent worse than the commonwealth average. The mortality rate for pancreatic cancer for Asian residents of Hampden County was also more than 75 percent worse than the Massachusetts average (**Exhibit 33**).

Exhibit 34: Circulatory System-Related Mortality by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Circulatory System Diseases	Cerebrovascular Disease	Heart Disease	Myocardial Infarction
Hampden				
Asian	135.4	43.4	83.8	0.0
Black	267.8	60.4	174.2	45.0
Hispanic (or Latino)	209.1	34.6	150.7	33.5
White	202.3	30.2	156.6	29.2
Total	**208.4**	**32.9**	**158.1**	**30.1**
Massachusetts				
Asian	97.4	28.2	60.4	15.5
Black	250.2	43.0	182.4	27.4
Hispanic (or Latino)	114.9	20.3	84.0	17.0
White	202.7	31.7	156.8	29.6
Total	**200.2**	**31.9**	**153.9**	**28.9**

Source: MassCHIP, 2012.
Rates are per 100,000 population and are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of the disease.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Significant racial disparities existed for both Black and Hispanic (or Latino) residents for circulatory system-related mortality. The Black population had higher mortality rates than any other group for all circulatory disease categories. Hispanic (or Latino) residents had mortality rates more than 75 percent worse than the Massachusetts average for all circulatory system diseases, heart disease, and myocardial infarction (**Exhibit 34**).

Exhibit 35: Injury-Related Mortality by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Injuries	Unintentional Injury	Homicide	Suicide	Falls	Firearms	Poison	Opioid-Related Overdoses	Motor Vehicle
Hampden									
Asian	11.3	12.9	0.0	0.0	11.	0.0	0.0	0.0	0.0
Black	48.4	29.0	13.9	7.3	0.0	11.7	11.5	11.5	9.4
Hispanic (or Latino)	41.5	18.5	13.9	3.6	7.2	11.3	14.7	9.4	0.8
White	47.6	33.4	0.9	13.6	6.2	3.1	17.2	10.2	7.5
Total	**47.8**	**30.0**	**4.8**	**11.4**	**6.8**	**5.7**	**15.6**	**9.7**	**6.3**
Massachusetts									
Asian	24.4	11.3	1.1	5.2	6.5	1.0	1.2	0.8	5.7
Black	49.1	23.0	14.7	5.1	1.9	12.9	16.1	8.3	4.8
Hispanic (or Latino)	37.2	17.8	7.9	4.4	4.4	5.2	9.8	7.2	3.7
White	41.5	34.3	0.9	8.4	6.7	1.8	15.2	10.5	5.7
Total	**41.2**	**30.8**	**2.8**	**7.7**	**6.5**	**3.1**	**13.8**	**9.3**	**5.5**

Source: MassCHIP, 2012.
Rates are per 100,000 population; unintentional injuries are crude rates. All other rates are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of the injury.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Unintentional injuries, poisoning, suicide, and opioid-related overdoses were the leading causes of injury-related death in Mercy's community. Hampden County reported higher rates of most injury-related mortalities than the Massachusetts average. Racial and ethnic disparities were present, with Hispanic (or Latino) and Black residents more often a victim of homicide and more likely to be killed by a firearm than White residents in Hampden County (**Exhibit 35**).

Exhibit 36: Additional Indicator Mortality by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Respiratory System Diseases	Chronic Lower Respiratory Diseases (CLRD)	Emphysema	Pneumonia and Influenza	HIV / AIDS	Diabetes Mellitus	Chronic Liver Disease
Hampden							
Asian	40.0	40.0	0.0	0.0	0.0	0.0	25.0
Black	47.8	19.7	0.0	17.0	8.5	29.1	19.8
Hispanic (or Latino)	56.6	26.3	3.1	13.8	16.3	40.2	22.3
White	68.9	36.2	3.8	15.1	2.1	10.4	11.5
Total	**68.9**	**35.6**	**3.6**	**15.6**	**4.1**	**12.3**	**13.2**
Massachusetts							
Asian	36.9	13.7	2.2	14.8	1.5	9.2	4.0
Black	47.6	16.6	0.7	16.4	9.4	30.6	7.1
Hispanic (or Latino)	37.4	16.7	0.9	9.3	7.9	16.2	9.9
White	68.1	35.0	2.8	16.8	0.8	12.4	7.6
Total	**66.1**	**33.5**	**2.6**	**16.6**	**1.7**	**13.0**	**7.6**

Source: MassCHIP, 2012.
Rates are per 100,000 population and are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of the disease.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

HIV/AIDS and chronic liver disease are of particular concern in Hampden County. The diabetes mortality rate was more than 75 percent worse than the Massachusetts average for the Hispanic (or Latino) members of the population. The chronic liver disease mortality rates for the Asian, Black, and Hispanic (or Latino) populations were also more than 75 percent worse than the Massachusetts averages (**Exhibit 36**).

Exhibit 37: Reported Disease Morbidity Rates by County, 2009-2010

Disease	Hampden	Massachusetts
Hepatitis B	10.9	11.3
Hepatitis C	103.5	68.0
Pertussis[20]	5.8	5.8
Giardia[21]	6.6	11.5
Animal Rabies	1.7	1.9
Salmonella[22]	10.3	17.7
Shigella[23]	1.9	3.7
Lyme Disease	42.2	61.5
Campylobacter[24]	12.0	17.2
Chlamydia**	610.8	322.1
Gonorrhea**	53.4	37.9
Syphilis**	6.9	9.4
HIV/AIDS*	342.8	261.0

Source: MassCHIP, 2012.
Rates are per 100,000 population and are not age-adjusted.
*The HIV/AIDS rate represents prevalence; all others represent incidence.
**Data on chlamydia, gonorrhea, and syphilis are from 2010; all other data are from 2009.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Hampden County compared unfavorably to the commonwealth average for five of 13 reported morbidity rates. The chlamydia rate was more than 75 percent worse than the Massachusetts average (**Exhibit 37**).

[20] Respiratory disease, also known as "whooping cough."
[21] Parasitic disease affecting the digestive tract.
[22] Infection caused by the bacteria *salmonella.*
[23] Fecal-orally transmitted bacterial infection of the intestines.
[24] Diarrheal illness caused by bacteria, often food-borne.

Exhibit 38: Prevalence of Pediatric Overweight and Obesity by School District, 2009-2011

School District	Total Number of Students Screened	Percent Overweight	Percent Obese	Percent Overweight or Obese
Chicopee	2,199	19.8%	22.0%	41.8%
East Longmeadow	857	17.9%	14.5%	32.3%
Hampden Charter School Of Science	84	11.9%	22.6%	34.5%
Hampden Wilbraham	1,105	15.7%	12.1%	27.8%
Holyoke	1,379	16.3%	21.3%	37.6%
Longmeadow	757	12.9%	9.4%	22.3%
Lower Pioneer Valley Educational Collaborative	10	N/A	N/A	N/A
Ludlow	894	18.2%	17.0%	35.2%
Monson	396	15.2%	12.4%	27.5%
Palmer	499	15.6%	21.4%	37.1%
Pathfinder Regional Vocational Technical School	170	22.9%	25.9%	48.8%
Sabis International Charter School	482	24.3%	21.6%	45.9%
Southwick-Tolland	511	16.4%	18.6%	35.0%
Springfield	6,551	17.6%	24.2%	41.8%
Westfield	1,683	14.6%	15.4%	30.1%
Hampden Average		**17.1%**	**18.5%**	**35.6%**
MA Schools Total	**205,975**	**16.7%**	**15.7%**	**32.3%**

Source: Massachusetts Department of Public Health, 2012.

The Pathfinder Regional Vocational Technical School District had the highest rate of obesity in the community (**Exhibit 38**).

Exhibit 39: Asthma Prevalence Among Schoolchildren, 2008-2009

Town/City*	Prevalence	Statistically Significant
Agawam	9.6%	Yes
Blandford	5.5%	
Brimfield	14.6%	Yes
Chester	12.0%	
Chicopee	12.3%	Yes
East Longmeadow	13.1%	Yes
Granville	7.3%	
Hampden	8.3%	Yes
Holland	21.7%	Yes
Holyoke	18.7%	Yes
Longmeadow	8.8%	Yes
Ludlow	13.0%	Yes
Monson	20.7%	Yes
Palmer	16.5%	Yes
Russell	6.8%	
Southwick	12.9%	
Springfield	17.2%	Yes
Wales	11.4%	
West Springfield	7.2%	Yes
Westfield	8.5%	Yes
Wilbraham	8.6%	Yes
Massachusetts	**10.9%**	**Yes**

Source: Massachusetts Department of Public Health, 2012.
*Data were available by community, not ZIP code.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Holland and Monson reported asthma rates that were significantly higher (statistically significant) and approximately double the Massachusetts rate (**Exhibit 39**).

Exhibit 40: Asthma-Related Hospitalizations by Age Group, 2009

County	0-19	20-44	45-64	65+	Total
Hampden	8.1	17.4	16.4	18.8	14.8
Massachusetts	**5.2**	**8.3**	**11.4**	**18.9**	**9.9**

Source: MassCHIP, 2012.
Population 2009-2011 estimates were obtained from the U.S. Census Bureau, ACS 3 Year Estimates 2009-2011. Rates were calculated by Verité.
Rates are per 1,000 people.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Hampden County reported higher rates of asthma-related hospitalizations than the Massachusetts average for most age groups. Residents age 20-44 reported rates of asthma-related hospitalization more than 75 percent worse than the commonwealth average (**Exhibit 40**).

Exhibit 41: Selected Maternal and Child Health Indicators by County, 2009/2010

County and Race/Ethnicity	Teen Birth Rate	Low or Very Low Birthweight*	No Prenatal Care in First Trimester	Inadequate or No Prenatal Care**	Infant Mortality Rate	Mother Smoked During Pregnancy
Hampden						
Asian	21.0	4.5%	24.9%	12.3%	N/A	3.3%
Black	58.5	11.4%	38.2%	22.0%	11.8	13.9%
Hispanic (or Latino)	124.4	9.7%	29.6%	15.7%	7.1	10.0%
White	15.6	7.2%	22.1%	10.0%	3.5	13.8%
Total	**45.7**	**8.4%**	**26.6%**	**13.5%**	**5.5**	**12.1%**
Massachusetts						
Asian	10.9	7.6%	19.7%	10.0%	3.2	1.6%
Black	32.3	10.8%	29.1%	16.8%	7.6	5.3%
Hispanic (or Latino)	63.1	8.6%	26.0%	11.7%	7.1	5.0%
White	11.5	7.1%	15.6%	7.0%	4.1	8.1%
Total	**19.6**	**7.7%**	**18.9%**	**8.9%**	**4.8**	**6.8%**

Source: MassCHIP, 2012.
All rates are per 1,000 births.
All indicators are from 2010 except the percentage of mothers who smoked during pregnancy, which is from 2009.
*Low and very low birthweight are defined as <2500 grams and <1500 grams, respectively.
**The Kotelchuck measure of Prenatal Care examines quality of care across two axes: adequacy of care initiation (how early in the pregnancy prenatal care began) and adequacy of received services (how many times the mother made a prenatal visit to a doctor as a percentage of how many prenatal visits are recommended over the same time period). The two scores are combined into one. Data are not available for individual axis scores, but Inadequate Care is defined in adequacy of care initiation as receiving care beginning in month 7 or later, and Inadequate Care for received services is defined as the mother making 50 percent or fewer of the recommended prenatal Doctor's visits.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Teen birth rates and smoking during pregnancy appear to be more problematic in Hampden Count (**Exhibit 41**).

4. Behavioral Risk Factor Surveillance System

Data collected by the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) are based on a telephonic survey regarding various health issues, including risk behaviors, healthcare access, and preventive health measures. Data are collected for the entire U.S. at a county level of detail. **Exhibit 42** compares various BRFSS indicators for the Mercy community, Massachusetts, and the U.S. Indicators are shaded if Hampden County's values compared unfavorably to Massachusetts averages.

Exhibit 42: BRFSS Indicators and Variation from the Commonwealth of Massachusetts, 2011

Indicator		Hampden	Massachusetts	U.S.
Health Behaviors	Binge Drinkers*	12.6%	**13.1%**	**12.0%**
	Heavy Drinkers**	5.0%	**6.0%**	**5.3%**
	Current Smoker	18.5%	**16.3%**	**16.7%**
	No Physical Activity in Past 30 Days	29.7%	**23.8%**	**25.7%**
	Sometimes, Seldom, or Never Wear Seat Belt	9.1%	**8.9%**	**5.7%**
Access	Unable to Visit Doctor Due to Cost	10.3%	**8.4%**	**12.7%**
	No Personal Doctor/Healthcare Provider	10.0%	**7.9%**	**14.4%**
Health Conditions	Overweight or Obese	62.4%	**56.5%**	**60.6%**
	Told Have Asthma	17.8%	**14.7%**	**12.9%**
	Told Have Coronary Heart Disease or Angina	5.7%	**5.3%**	**6.0%**
	Told Have Diabetes	15.0%	**11.5%**	**12.4%**
Mental Health	Poor Mental Health > 21 Days/Month	8.5%	**6.8%**	**N/A**
Overall Health	Poor Physical Health > 21 Days/Month	11.5%	**8.6%**	**N/A**
	Limited by Physical, Mental, or Emotional Problems	28.9%	**23.8%**	**28.5%**
	Reported Poor or Fair Health	24.0%	**17.8%**	**19.6%**

Source: CDC BRFSS, 2012.
*Adult males having five or more drinks on one occasion; adult females having four or more drinks on one occasion.
**Adult men having more than two drinks per day; adult women having more than one drink per day.

Key	
	Better than MA
	0%-25% worse than MA
	25% to 75% worse than MA
	>75% worse than MA
N/A	Data Not Available

Thirteen of the 15 presented indicators compared unfavorably to Massachusetts averages. Hampden County reported four indicators more than 25 percent worse than the commonwealth average: those reporting they do not have a personal doctor, those told they have diabetes, those experiencing poor physical health for more than 21 days in a month, and those reporting poor or fair health. Obesity also appears to be unfavorably prevalent.

Massachusetts compared unfavorably to the U.S. for alcohol-related issues and for seat belt use.

5. Healthy People 2020 Goals

Healthy People 2020 (HP 2020) is a project of the U.S. Department of Health and Human Services (HHS). HP 2020 identifies national health priorities and works to improve public awareness regarding problematic health concerns.

Exhibit 43: Healthy People 2020 Indicators and Goals

Indicator	Hampden	Massachusetts	HP 2020 Goal
Percent of People with Health Insurance	95.2%	95.7%	100.0%
Percent of People with a Usual Source of Primary Care	90.0%	92.1%	83.9%
Cancer Mortality Rate	187.8	173.7	160.6
Lung Cancer Mortality Rate	56.1	48.5	45.5
Female Breast Cancer Mortality Rate	21.8	22.0	20.6
Colorectal Cancer Mortality Rate	15.7	15.0	14.5
Prostate Cancer Mortality Rate	23.7	21.6	21.2
Invasive Colorectal Cancer Incidence	38.4	44.4	38.6
Campylobacter Incidence	12.0	17.2	8.5
Salmonella Incidence	10.3	17.7	11.4
Stroke Mortality	32.9	31.9	33.8
Injury-Related Mortality Rate	47.8	41.2	53.3
Poison-Related Mortality Rate	15.6	13.8	13.1
Unintentional Injury-Related Mortality Rate	30.0	30.8	36.0
Fall-Related Mortality Rate	6.8	6.5	7.0
Homicide-Related Mortality Rate	4.8	2.8	5.5
Firearm-Related Mortality Rate	5.7	3.1	9.2
Infant Mortality Rate	5.5	4.8	6.0
Low Birth Weight Births (<2500 Grams)	8.4%	7.7%	7.8%
Very Low Birth Weight Births (<1500 Grams)	1.6%	1.3%	1.4%
Prenatal Care Beginning in First Trimester	73.4%	81.1%	77.9%
Pregnant Mothers Abstaining from Smoking	87.9%	93.2%	98.6%
Suicide Mortality Rate	11.4	7.7	10.2
Childhood Obesity*	18.5%	15.7%	14.6%
Percent of Adults Reporting No Leisure Physical Activity	29.7%	23.8%	32.6%
Binge Drinking	12.6%	13.1%	24.3%
Tobacco Use	18.5%	16.3%	12.0%

Sources: CDC BRFSS, 2012; Massachusetts Department of Health, 2012.
Rates are per 100,000 population, aside from infant mortality, which is per 1,000 live births.
*Childhood obesity is defined by HP 2020 as including ages 2-19; Verité's data are from school-aged children, which include most of these age groups.

Key	
	Better than HP 2020 Goal
	<50% Worse
	50% to 75% Worse
	>75% Worse

Exhibit 43 provides an array of health status and access indicators and compares Hampden County and Massachusetts values to HP 2020 goals.

Key insights:
Local Health Status Indicators

- **Hampden County demonstrated comparatively high rates of teen pregnancy and infant mortality.**
- **Hampden County ranks last for nine issues assessed by County Health Rankings.**
- **Indicators suggest the following issues are most problematic:**
  - **Tobacco/alcohol use**
  - **Maternal smoking during pregnancy**
  - **Chlamydia**
  - **Teen pregnancy**
  - **Diabetes**
- **Problematic disparities in mortality for the Black and Hispanic (or Latino) populations include:**
  - **Chronic liver disease**
  - **Breast cancer**
  - **Circulatory system diseases, including heart disease and heart attacks**
  - **Stroke**
- **Hampden County reported higher percentages of people indicating that they are overweight or obese, cannot afford doctor's visits, have poor physical health, and are limited by physical, emotional, or mental problems than the Massachusetts average.**

Ambulatory Care Sensitive Conditions

This section examines the frequency of discharges for Ambulatory Care Sensitive Conditions (ACSC) throughout Hampden County and at the hospital.

The methodologies for quantifying discharges for ACSC have been well-tested for more than a decade. The methodologies quantify inpatient admissions for diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, asthma, and other conditions that, in theory, could have been prevented if adequate ambulatory (primary) care resources were available and accessed by those patients.[25]

Disproportionately large numbers of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care services. The Agency for Healthcare Research and Quality (AHRQ), part of the U.S. Department of Health and Human Services, publishes software and methodologies for assessing discharges for ACSC. The AHRQ software was applied to analyze the prevalence of discharges for ACSC in geographic areas served by Mercy.

The ACSC analysis provides a single indicator of potential health problems - allowing comparisons to be made reliably across geographic areas and hospital facilities. This analysis also allows demonstrating a possible "return on investment" from interventions that reduce admissions (for example, for uninsured or MassHealth (Medicaid) patients) through better access to ambulatory care resources.

1. County-Level Analysis

Disproportionately large numbers of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory (primary) care services. **Exhibit 44** indicates how many discharges in the Mercy community from any of the Coalition hospitals were found to be for ACSCs by payer.

Exhibit 44: Community-Wide Discharges[26] for ACSC by Payer, 2010-2011

County	MassHealth (Medicaid)	Medicare	Other	Private	Self-Pay	Total
Hampden	8.9%	19.4%	9.6%	7.0%	11.6%	12.8%
Total	**8.9%**	**19.4%**	**9.6%**	**7.0%**	**11.6%**	**12.8%**

Source: Verité analysis of data from the Coalition of Western Massachusetts Hospitals using AHRQ software, 2012.

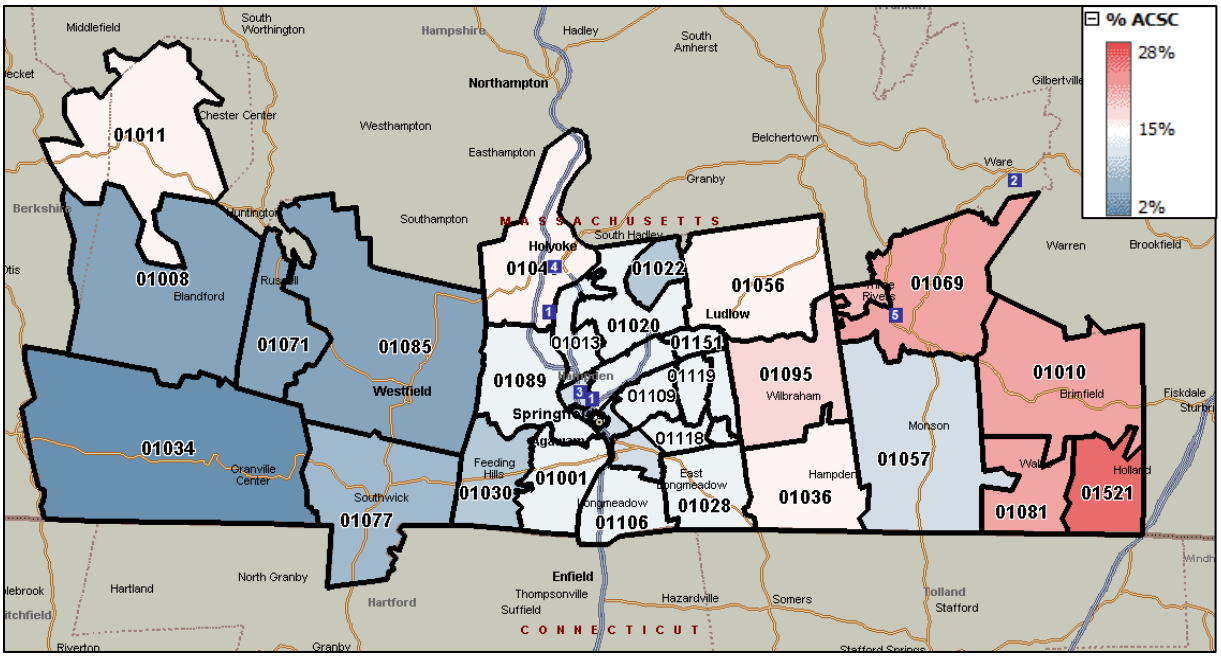
The table indicates that, for the 12 months ended September 2011, 12.8 percent of discharges were for ACSCs. Medicare patients had the highest proportion of discharges for ACSC, followed by self-pay patients.

[25] See: http://www.ahrq.gov/data/hcup/factbk5 for more information on this methodology.
[26] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

2. ZIP Code-Level Analysis

Exhibit 45 illustrates the percentage of discharges for all community residents that were for ACSCs by ZIP code.

Exhibit 45: Community-Wide Discharges[27] for ACSC by ZIP Code, 2010-2011



Sources: Microsoft MapPoint and Verité analysis of data from the Coalition of Western Massachusetts Hospitals using AHRQ software, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

ZIP codes 01521 (Holland), 01081 (Wales), and 01079 (Thorndike, a community in Palmer) had the highest percentage of discharges that were ACSC

ACSC discharges were most prevalent in the following ZIP codes: 01521 (Holland), 01081 (Wales), and 01079 (Thorndike, a community in Palmer).

[27] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Exhibit 46 illustrates possible relationships between ACSC discharges, low-income households, and the percentage of the population aged 65+.

Exhibit 46: ACSC Discharges[28] by Town/City

Town/City**	Number of ACSC Discharges	Total Discharges*	Percent ACSC Discharges	Percent Households <$50,000	Percent Aged 65+
Holland	6	23	26.1%	33.4%	10.2%
Wales	17	80	21.3%	37.7%	11.7%
Brimfield	34	163	20.9%	41.0%	11.9%
Palmer	340	1,656	20.5%	52.0%	14.3%
Wilbraham	273	1,522	17.9%	31.3%	17.3%
Chester	8	52	15.4%	46.9%	12.9%
Hampden	63	417	15.1%	29.9%	14.7%
Holyoke	933	6,205	15.0%	66.1%	14.5%
Ludlow	266	1,881	14.1%	43.5%	15.3%
Longmeadow	150	1,118	13.4%	28.2%	17.3%
East Longmeadow	233	1,750	13.3%	31.1%	19.1%
Chicopee	895	6,956	12.9%	60.8%	16.8%
West Springfield	395	3,145	12.6%	53.1%	15.1%
Agawam	416	3,346	12.4%	41.4%	16.4%
Springfield	2,370	19,992	11.9%	66.3%	11.5%
Monson	90	770	11.7%	35.5%	11.6%
Southwick	39	496	7.9%	37.6%	11.9%
Westfield	142	2,414	5.9%	46.3%	12.9%
Russell	5	89	5.6%	41.9%	11.1%
Blandford	2	40	5.0%	30.5%	11.7%
Granville	3	89	3.4%	33.7%	12.4%
Total	**6,680**	**52,204**	**12.8%**	**54.0%**	**14.0%**

Sources: Verité analysis of data from The Coalition of Western Massachusetts Hospitals using AHRQ software, 2012, and The Nielsen Company and Truven Health Analytics via Mercy, 2012.
*Caution should be used when assessing towns with a small number of total discharges.
**Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

The town of Palmer has a comparatively high percentage of ACSC discharges, households with incomes under $50,000, and residents aged 65+. Wilbraham has comparatively high percentages of ACSC discharges and senior residents. Chester exhibits higher rates of ACSC discharges and low-income households (**Exhibit 46**).

[28] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

3. Hospital-Level Analysis

For the 12 months ended September 2011, 10.3 percent of Mercy's discharges were for ACSCs. **Exhibit 47** indicates that the top four conditions were: bacterial pneumonia, chronic obstructive pulmonary disease or asthma, congestive heart failure, and urinary tract infection.

Exhibit 47: Discharges for ACSC by Condition, 2010-2011

Condition	Age Range				Total Discharges	% of Total Discharges
	0 to 17	18 to 39	40 to 64	65+		
Bacterial Pneumonia		6.8%	28.0%	65.2%	325	19.7%
COPD or Asthma in Older Adults			47.1%	52.9%	306	18.6%
Congestive Heart Failure		0.7%	19.3%	80.1%	296	18.0%
Urinary Tract Infection		6.8%	13.7%	79.5%	249	15.1%
Dehydration		6.0%	22.7%	71.3%	150	9.1%
Diabetes Long-Term Complication		3.8%	62.0%	34.2%	79	4.8%
Diabetes Short-Term Complication		43.9%	46.3%	9.8%	41	2.5%
Asthma in Younger Adults		100.0%			37	2.2%
Low Birth Weight	100.0%				35	2.1%
Hypertension		5.9%	55.9%	38.2%	34	2.1%
Perforated Appendix		30.8%	42.3%	26.9%	26	1.6%
Uncontrolled Diabetes		15.0%	60.0%	25.0%	20	1.2%
Angina Without Procedure			41.2%	58.8%	17	1.0%
Iatrogenic Pneumothorax		8.3%	33.3%	58.3%	12	0.7%
Accidental Puncture Or Laceration		9.1%	45.5%	45.5%	11	0.7%
Nosocomial Vascular Catheter Related Infections			100.0%		7	0.4%
Pediatric Perforated Appendix	100.0%				1	0.1%
Total	**2.2%**	**7.5%**	**30.0%**	**60.4%**	**1,646**	**100.0%**

Source: Verité analysis of discharge data from Mercy using AHRQ software, 2012.

Key insights: ***Ambulatory Care Sensitive Conditions***

- **ACSC discharges are viewed as preventable if patients had accessed primary care appropriately. High discharges may indicate the lack of access to or utilization of primary care services.**
- **Bacterial pneumonia, chronic obstructive pulmonary disease or asthma, congestive heart failure, and urinary tract infection were the most common ACSC discharges from Mercy.**

ZIP Code and Census Tract-Level Health Status and Access Indicators

ZIP code and census tract-level health status and access to care indicators have been reviewed from: (1) Dignity Health's Community Need Index, and (2) U.S. Department of Agriculture.

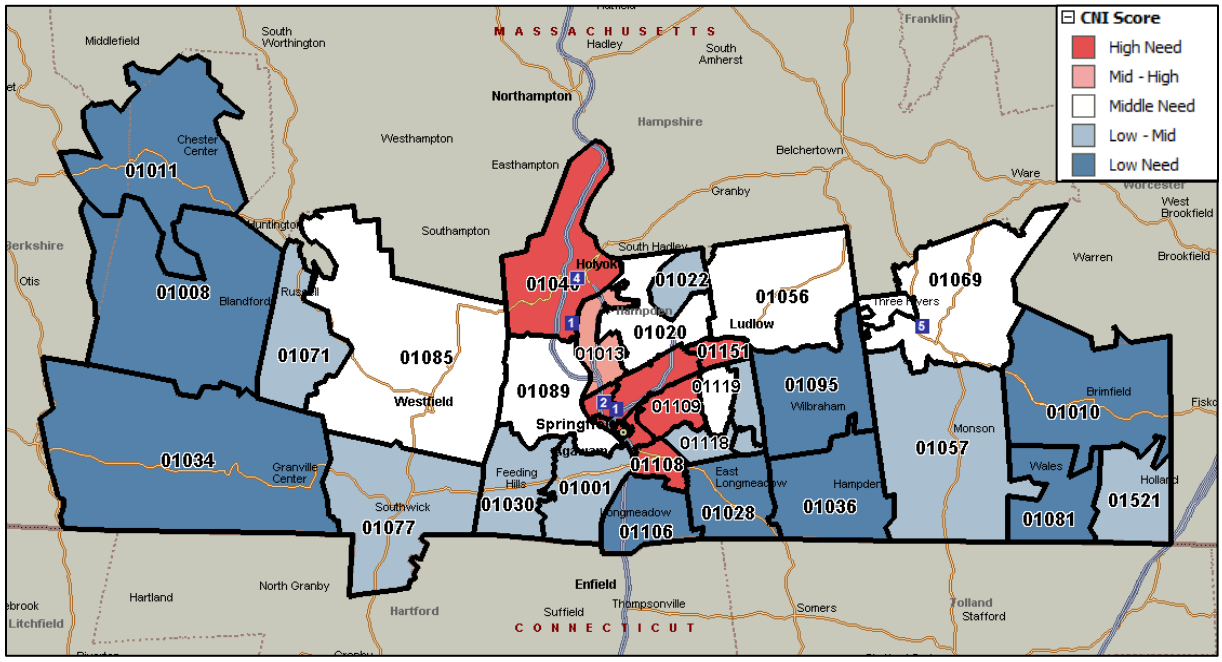
1. Dignity Health Community Needs Index

Dignity Health, a hospital system based in California, developed the *Community Needs Index*, a standardized index that measures barriers to healthcare access by county and ZIP code. The index is based on five social and economic indicators:

- The percentage of elderly, children, and single parents living in poverty;
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without high school diplomas;
- The percentage of uninsured and unemployed residents, and;
- The percentage of the population renting houses.

The *Community Needs Index* represents a score based on these indicators, assigned to each ZIP code. Scores range from "Lowest Need" (1.0-1.7), to "Highest Need" (4.2-5.0). **Exhibit 48** presents the *Community Needs Index* (CNI) score of each ZIP code in the Mercy community.

Exhibit 48: Community Needs Index Score by ZIP Code



Sources: Microsoft MapPoint and Dignity Health, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

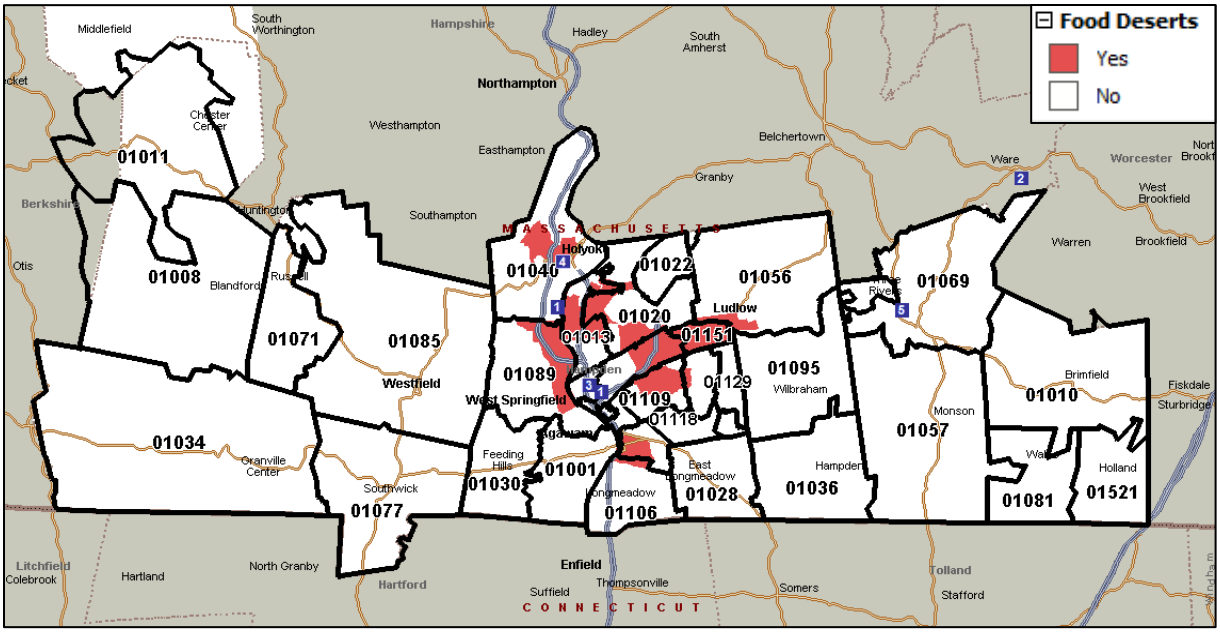
ZIP codes in Springfield, Holyoke, and Chicopee are "High Need" areas

ZIP codes 01013 (Chicopee), 01040 (Holyoke), 01103 (Springfield), 01104 (Springfield), 01105 (Springfield), 01107 (Springfield), 01108 (Springfield), 01109 (Springfield), and 01151 (Springfield) all scored in the "Highest Need" category (**Exhibit 48**).

2. Food Deserts

The U.S. Department of Agriculture's Economic Research Service estimates the number of people in each census tract that live "more than 1 mile from a supermarket or large grocery store in urban areas and more than 10 miles from a supermarket or large grocery store in rural areas."[29] Several government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these "food deserts." **Exhibit 49** shows the location of identified food deserts in Mercy's community.

Exhibit 49: Food Deserts by Census Tract



Source: Microsoft MapPoint and the Economic Research Service, U.S. Department of Agriculture, 2011.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

The community contains 20 census tracts identified as "Food Deserts"

Mercy's community contains 20 census tracts defined as food deserts. These are located in Chicopee, Holyoke, Longmeadow, Ludlow, Springfield, and West Springfield (**Exhibit 49**).

[29] Economic Research Service (ERS). (n.d.). *Food Desert Locator.* U.S. Department of Agriculture. Retrieved 2012, from http://www.ers.usda.gov/data-products/food-desert-locator.aspx

Key insights:

ZIP Code and Census Tract-Level Indicators

- **Based on a composite measure of socio-economic need (Dignity Health's Community Needs Index), ZIP codes 01013 (Chicopee), 01040 (Holyoke), 01103, 01104, 01105, 01107, 01108, 01109, and 01151 (all in Springfield) scored "Highest Need."**
- **The community has 20 census tracts that have been classified as "food deserts."**

Overview of the Health and Social Services Landscape

This section identifies geographic areas and populations in the community that may be facing barriers to accessing care due to medical underservice or a shortage of health professionals.

The section then summarizes various assets and resources available to improve and maintain the health of the community.

1. Medically Underserved Areas and Populations

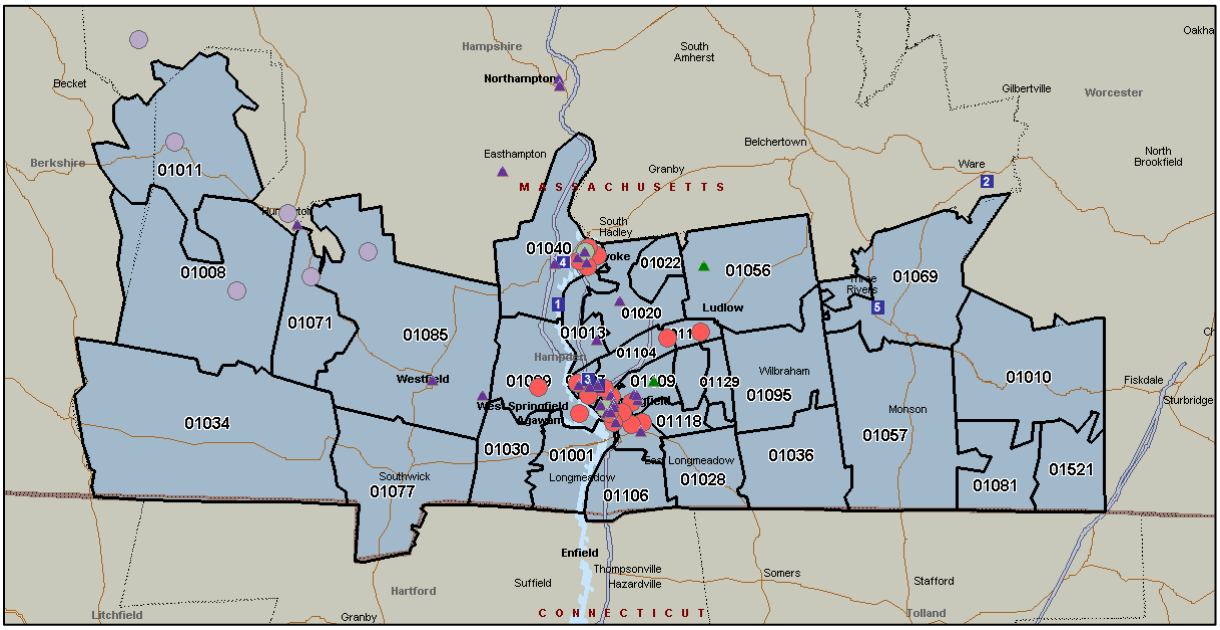
HRSA calculates an Index of Medical Underservice (IMU) score for communities across the U.S. The IMU score calculation includes the ratio of primary medical care physicians per 1,000 persons, the infant mortality rate, the percentage of the population with incomes below the poverty level, and the percentage of the population greater than age 64. IMU scores range from zero to 100 where 100 represents the least underserved and zero represents the most underserved.[30]

Any area or population receiving an IMU score of 62.0 or less qualifies for Medically Underserved Area (MUA) or Medically Underserved Population (MUP) designation. Federally Qualified Health Centers (FQHCs) may be established to serve MUAs and MUPs. Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. When a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides."[31]

Exhibit 50 shows areas designated by HRSA as medically underserved. Hampden County contains 17 MUAs.

[30] U.S. Health Resources and Services Administration. (n.d.) *Guidelines for Medically Underserved Area and Population Designation*. Retrieved 2012, from http://bhpr.hrsa.gov/shortage/muaps/index.html.
[31] *Ibid.*

Exhibit 50: Location of Federally Designated Areas in the Mercy Community, 2012



Sources: Microsoft MapPoint and HRSA, 2012.

- **MUA/MUP**
  - MUA
  - MUP
- **Type of HPSA**
  - Dental Health
  - Mental Dental
  - Mental Health
  - Primary Dental
- HPSA Facilities
- FQHC
- 1 Mercy Medical Center
- 2 Baystate Mary Lane Hospital
- 3 Baystate Medical Center
- 4 Holyoke Medical Center
- 5 Wing Memorial Hospital

Hampden County has 17 MUAs, all within the service area

…

The community has 3 FQHCs with 21 additional FQHC site partners

…

The community contains six HPSA facilities

2. Health Professional Shortage Areas

An area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present.

In addition to areas and populations that can be designated as HPSAs, a facility can receive federal HPSA designation and an additional Medicare payment if it provides primary medical care services to an area or population group identified as having inadequate access to primary care, dental, or mental health services.

HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility."[32]

Several areas and populations in Hampden County are designated as HPSAs (**Exhibit 50**). Gateway/Hampshire Regional is designated as a primary medical care HPSA, while the low-income populations in Holyoke and Springfield are designated as mental health HPSAs. The Hillstowns area is designated as a dental HPSA.

3. Description of Other Facilities and Resources within the Community

The Mercy community contains a variety of resources that are available to meet the health needs identified in this assessment. These resources include facilities designated as HPSAs, hospitals, FQHCs, health professionals, and other agencies and organizations.

There are six facilities in the community that also are designated as HPSAs (**Exhibit 51**).

Exhibit 51: List of HPSA Facilities in the Mercy Medical Center Community

County	HPSA Type	HPSA Name
Hampden	Primary Medical Care, Mental Health, Dental	Caring Health Center, Inc.
		Caring Health Center, Inc. – Forest Park
		Holyoke Health Center
		Springfield Public Health Department
	Primary Medical Care	Hampden County House of Corrections
	Mental Health	Springfield Southwest

Source: Health Resources and Services Administration, 2013.

The community contains six acute care hospital facilities (**Exhibit 52**).

[32] U.S. Health Resources and Services Administration, Bureau of Health Professionals. (n.d.). *Health Professional Shortage Area Designation Criteria*. Retrieved 2012, from http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/index.html

Exhibit 52: Information on Hospitals in the Mercy Medical Center Community

County	Hospital Name	ZIP Code
Hampden	Mercy Medical Center	01199
	Holyoke Medical Center	01040
	Mercy Medical Center	01104
	Noble Hospital	01085
	Shriner's Hospital for Children- Springfield	01104
	Wing Memorial Hospital And Medical Center	01069

Source: The Commonwealth of Massachusetts, Executive Office of Health and Human Services, Department of Public Health, Division of Health Care Quality, 2012, and the CMS Impact File, 2012.

Federally Qualified Health Centers (FQHCs) were created by Congress to promote access to ambulatory care in areas designated as "medically underserved." These clinics receive cost-based reimbursement for Medicare and many also receive grant funding under Section 330 of the Public Health Service Act. FQHCs also receive a prospective payment rate for Medicaid services based on reasonable costs.

There are 3 FQHCs located in the Mercy community with 21 additional FQHC site partners (**Exhibit 53**).

Exhibit 53: FQHCs in the Community

County	FQHC	FQHC Site Partner	ZIP Code
Hampden	Baystate Brightwood Health Center*		01107
	Caring Health Center, Inc.	Caring Health Center, Inc .- Forest Park	01108
		Caring Health Center, Inc.	01103
	City Of Springfield's Health Services for the Homeless	Annie's House	01109
		City Of Springfield Adolescent Health Center	01109
		Jefferson Shelter	01107
		Loretto House	01040
		Main Street Shelter	01040
		Massachusetts Career Development Center	01109
		New Resource Center	01105
		Open Door Social Services	01105
		Prospect House	01107
		Rutledge House	01105
		Safe Havens	01105
		Samaritan Inn	01085
		Springfield Rescue Mission Center	01105
		Teen Living Program	01107
		Worthington Shelter Dental Program	01105
		New England Farm Worker's Council	01103
	Holyoke Health Center	Chicopee Dental Center - All Care Dental Site	01020
		Chicopee Health Center	01013
		Holyoke Health Center, Inc.	01040
		Holyoke Soldier Home	01040
		Western Massachusetts Hospital	01085

Source: Health Resources and Services Administration, 2013.
*Baystate Brightwood Health Center is an FQHC site partner in the community.

Exhibit 54 presents the rates of primary care physicians, mental health providers, and dentists per 100,000 population. Provider availability in Hampden County is below the Massachusetts average.

Exhibit 54: Health Professionals Rates per 100,000 Population by County

County	Primary Care Physicians**		Mental Health Providers		Dentists**	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Hampden	424	90.4	164	35.0	223	48.3
Massachusetts	**8,810**	**134.6**	**6,514**	**99.5**	**4,560**	**64.5**

Source: Data provided by County Health Rankings, 2012
*Primary care physician data are from 2009; dentist data and mental health provider data are from 2007.
**Numbers of health professionals in Massachusetts calculated by Verité.

As of 2012, a range of other agencies and organizations are available in the county to assist in meeting health needs, including social service organizations and community coalitions.

Some of these include:

- Community organizations that focus on health and human services, including:
    - Behavioral Health Network
    - Center For Human Development
    - Community Foundation of Western MA
    - Community Survival Center
    - Davis Foundation
    - Food Bank of Western MA
    - Mason Square Health Task Force
    - North End Campus Coalition
    - Quaboag Hills Coalition
    - Springfield Cultural Council
    - United Way of Pioneer Valley
    - Urban League (of Springfield)
    - Western Mass Recovery Learning Community
- Community organizations that provide health and human services to specific populations, including:
    - Big Brothers Big Sisters of Franklin County
    - Canines Helping Autism and PTSD Survivors
    - Friends of the Homeless
    - Green Meadows Community Services, Inc.
    - Keystone Senior Center
    - Khalsa Learning Center, Inc.

    - Ludlow Boys & Girls Club
    - River Valley Counseling Center
    - Vietnamese American Civic Association
- Local chapters of national organizations, such as the Alzheimer's Association, American Cancer Association, American Heart Association, American Red Cross, Habitat For Humanity, La Leche League, United Farm Workers, YMCA, and YWCA
- Local first responders, including fire departments, police departments, and emergency medical services (EMS)
- Local FQHCs and HPSA facilities
- Local government agencies, Chambers of Commerce, Councils of Governments, and City Councils
- Local health departments and Boards of Health
- Local places of worship and related health and human services organizations such as Mission of Hope International, Inc.
- Local schools, colleges, and universities
- Representatives from community health network areas

Key insights:
Community Assets

- **Some residents in Mercy's community face barriers to accessing care as demonstrated by a shortage of some health professionals.**
- **Hampden County had fewer primary care providers, mental health professionals, and dentists per capita than Massachusetts averages.**
- **The community has hospitals, health and human services departments, and other community assets working to meet health needs.**
- **Six facilities in the Hampden community are HPSAs.**

Secondary Data Indicators Highlights

This assessment analyzed secondary data regarding demographics, social and economic factors, health behaviors, physical environment, care delivery, morbidity, and mortality. **Exhibits 55** through **57** highlight indicators that vary the most from national and Massachusetts benchmarks.

Exhibit 55A: Secondary Data Indicator Highlights

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Data Year(s)	Benchmark Definition
Demographics	Growth in Black Population	Hampden	3.7%	-1.9%	Percent	2012	White Population
	Growth in American Indian Population	Hampden	6.8%	-1.9%	Percent	2012	White Population
	Growth in Asian Population	Hampden	14.8%	-1.9%	Percent	2012	White Population
	Growth in Other Race Population	Hampden	12.5%	-1.9%	Percent	2012	White Population
	Growth in Two or More Races Population	Hampden	8.5%	-1.9%	Percent	2012	White Population
	Growth in Hispanic Population	Hampden	12.6%	-2.6%	Percent	2012	Non-Hispanic Population
	Growth in 65+ Population	Hampden	11.0%	-1.0%	Percent	2012	Non-65+ Population
Social and Economic Factors	Low Educational Achievement	Hampden	14	14	County Rank	2006-2010	Number Of Counties
	Unemployment	Hampden	13	14	County Rank	2010	Number Of Counties
	SNAP Enrollees	Hampden	22.3%	12.1%	Percent	2011	MA Average
Health Behaviors	Poor Diet and Lack of Exercise	Hampden	13	14	County Rank	2009	Number Of Counties
	Unsafe Sex	Hampden	14	14	County Rank	2002-2008, 2009	Number Of Counties
	Lack of Emotional and Social/Family Support	Hampden	13	14	County Rank	2006-2010	Number Of Counties
Physical Environment	Community Safety	Hampden	13	14	County Rank	2007-2009	Number Of Counties
	Murder and non-Negligent Manslaughter	Hampden	5.6	2.9	Rate per 100,000	2011	MA Average
	Environmental Quality	Hampden	14	14	County Rank	2007	Number Of Counties
	Built Environment	Hampden	12	14	County Rank	2006 and 2009	Number Of Counties
Access to Care	Access to Care	Hampden	12	14	County Rank	2009	Number of Counties

Source: Verité analysis of secondary data, 2012.

Exhibit 55B: Secondary Data Indicator Highlights

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Data Year(s)	Benchmark Definition
Health Outcomes: Morbidity	Overall Morbidity	Hampden	10	14	County Rank	2002-2010	Number Of Counties
	Asthma-Related Hospitalizations Age 20-44	Hampden	17.4	8.3	Rate per 1,000	2009	MA Average
	Chlamydia Incidence	Hampden	610.8	322.1	Rate per 100,000	2010	MA Average
Health Outcomes: Mortality	Overall Mortality	Hampden	14	14	County Rank	2006-2008	Number Of Counties
	Hispanic Circulatory Disease Mortality	Hampden	209.1	114.9	Rate per 100,000	2009	MA Average
	Black Heart Attack Mortality	Hampden	45.0	27.4	Rate per 100,000	2009	MA Average
	Hispanic Heart Disease Mortality	Hampden	150.7	84.0	Rate per 100,000	2009	MA Average
	Black Total Cancer Mortality	Hampden	4.5-60.0	2.6-44.8	Rate per 100,000	2009	MA Average
	Hispanic Total Cancer Mortality	Hampden	2.7-27.3	3.4-22.8	Rate per 100,000	2009	MA Average
	Suicide Mortality: White	Hampden	13.6	8.4	Rate per 100,000	2009	MA Average
	Hispanic Chronic Liver Disease Mortality	Hampden	22.3	9.9	Rate per 100,000	2009	MA Average
	Firearm Mortality	Hampden	5.7	3.1	Rate per 100,000	2009	MA Average
	Hispanic Firearm Mortality	Hampden	11.3	4.4	Rate per 100,000	2009	MA Average
	Hispanic Diabetes Mortality	Hampden	40.2	16.2	Rate per 100,000	2009	MA Average
Maternal Indicators	Teen Pregnancy: Total	Hampden	45.7	19.6	Rate per 1,000 Births	2009	MA Average

Source: Verité analysis of secondary data, 201

Disparities of Concern

Vulnerable populations often lack resources they need to maintain optimal health. Health indicators highlighting racial and ethnic disparities that appeared most unfavorable in the Mercy community are presented below in **Exhibit 56**.

Exhibit 56: Disparities of Concern

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Benchmark Definition
Social and Economic Factors	Black Unemployment	Hampden	10.5%	4.8%	Percent	White Population
	Hispanic Unemployment	Hampden	10.6%	4.8%	Percent	White Population
	Non-White Poverty	Hampden	38.3%	11.4%	Percent	White Population
Health Outcomes: Morbidity	Hispanic Breast Cancer Incidence	Hampden	99.0	50.4	Rate per 100,000	MA Average
	Hispanic Prostate Cancer Incidence	Hampden	240.2	158.8	Rate per 100,000	MA Average
Health Outcomes: Mortality	Black Heart Disease Mortality	Hampden	174.2	156.6	Rate per 100,000	White Population
	Hispanic Firearm Mortality	Hampden	11.3	3.1	Rate per 100,000	White Population
	Black Diabetes Mortality	Hampden	29.1	10.4	Rate per 100,000	White Population
	Hispanic Diabetes Mortality	Hampden	40.2	10.4	Rate per 100,000	White Population
	Black Stroke Mortality	Hampden	60.4	30.2	Rate per 100,000	White Population
Maternal and Infant Indicators	Black Infant Mortality	Hampden	11.8	3.5	Rate per 1,000 Births	White Population
	Hispanic Infant Mortality	Hampden	7.1	3.5	Rate per 1,000 Births	White Population
	Hispanic Teen Pregnancy	Hampden	124.4	15.6	Rate per 1,000 Births	White Population

Source: Verité analysis of secondary data, 2012.

Geographic Areas of Concern

Certain geographic areas within the Mercy community exhibited higher levels of need when compared to the community as a whole (**Exhibit 57**).

Exhibit 57: Geographic Areas of Concern

Category	Indicator	Location	Community Value	Benchmark	Data Format	Benchmark Definition
Social and Economic Factors	Low-Income Households	Hampden	13	14	County Rank	Number of Counties
	Low-Income Households	Chicopee	60.8%	51.8%	Percent	Percent Below $50,000 Income
	Low-Income Households	Springfield	66.3%	51.8%	Percent	Percent Below $50,000 Income
	Low-Income Households	Holyoke	66.1%	51.8%	Percent	Percent Below $50,000 Income
Physical Environment	Food Desert(s) Present	Chicopee	Present	N/A	N/A	Present or Not Present: No Benchmark
	Food Desert(s) Present	Holyoke	Present	N/A	N/A	Present or Not Present: No Benchmark
	Food Desert(s) Present	Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
	Food Desert(s) Present	West Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
Access to Care	Health Professional Shortage Areas	Holyoke	Present	N/A	N/A	Present or Not Present: No Benchmark
	Health Professional Shortage Areas	Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
	Health Professional Shortage Areas	Ludlow	Present	N/A	N/A	Present or Not Present: No Benchmark
	Medically-Underserved Areas/Populations	Holyoke	Present	N/A	N/A	Present or Not Present: No Benchmark
	Medically-Underserved Areas/Populations	Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
	Medically-Underserved Areas/Populations	West Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
Health Outcomes: Morbidity	Schoolchildren With Asthma	Holland	21.7%	10.9%	Percent	MA Average
	Schoolchildren With Asthma	Monson	20.7%	10.9%	Percent	MA Average

Source: Verité analysis of secondary data, 2012.

Findings of Other Recent Community Health Needs Assessments

Verité also considered the findings of other needs assessments published since 2007. Ten such assessments have been conducted in the Mercy area and are publicly available. Findings from these assessments have been incorporated into this assessment. Summary findings from these assessments are provided below.

1. Pioneer Valley Planning Commission, 2013

The 2013 *State of the People for the Pioneer Valley Assessment* was conducted by the Pioneer Valley Planning Commission to discuss health behaviors of the community.[33] Community health behaviors were categorized by letter grade. The findings cover behaviors that received the lowest grade, typically a D- or D for each category.

Health behaviors are categorized as follows: children and youth, the elderly, education, health and safety, economic security, housing, and environment. Findings in the report include an analysis of data from various public sources.

Findings from the report include:

Children and Youth

- In 2009, the Pioneer Valley as a whole had an infant mortality rate of 5.1 per 1,000 births, though some towns in the region, such as Westfield (Hampden County), had infant mortality rates as low as 2.3 per 1,000. The town of Shelburne (Franklin County) had the highest infant mortality rate at 55.6 per 1,000 births.
- In 2007 to 2009, the Pioneer Valley region had a 1.5 percent rate of very low birth weight babies. Fourteen towns and communities fell below this rate, though a few towns had extremely high rates, such as Granville (10.3 percent) in Hampden County and Northfield (8.6 percent) in Franklin County.
- For the 2010 to 2011 school year, the Pioneer Valley region had a high rate of enrollment in its free and reduced price lunch programs, at 47.8 percent. This rate was up for the Pioneer Valley; 2006 rates were around 38.0 percent. The city of Springfield (Hampden County) had the highest rate at 84.2 percent enrollment, while Longmeadow (Hampden County) had the lowest rate at 4.1 percent.

Elderly

- From 2006 to 2010, about 10.5 percent of the Pioneer Valley region's population were in situations where grandparents had to support their grandchildren, putting a unique level of stress on the family. The highest rates of this indicator were in Springfield, at 23.0

[33] Pioneer Valley Planning Commission. (2013, January). *State of the People for the Pioneer Valley Needs Assessment* .Retrieved from http://www.pvpc.org/activities/data-state-people-feb-2013.shtml

percent, compared to low rates in 27 communities in the region that had no grandparents raising grandchildren.

- In 2010, the Pioneer Valley had a population of 31.5 percent who were 65 years of age or older and lived alone. Leyden had the lowest rates of this population at 12.5 percent, while Monroe had the highest rates at 52.4 percent.
- Between 2005 and 2009, the Pioneer Valley reported a high percentage of individuals age 65 and older with access to a car, with an average of 83.0 percent for the region. Monroe had the lowest rate at 36.4 percent, while nine towns had 100.0 percent accessibility to cars.

Education

- Between 2006 and 2010, early education enrollment rates were around 44.9 percent for the Pioneer Valley. Some towns such as Hawley (Franklin County), Monroe (Franklin County), and Tolland (Hampden County) had a rate as low as zero percent, while other towns such as Leyden and Buckland (both in Franklin County) reported rates as high as 100.0 percent.
- The high school graduation rate in the Pioneer Valley was 75.2 percent, though the majority of towns in the region had over 90.0 percent graduation rates. The lowest rates were in Holyoke (73.1 percent) and Springfield (74.3 percent).
- In 2011, 28.5 percent of the population ages 25 years or greater held a Bachelor's degree or higher in the Pioneer Valley region. The town of Erving (Franklin County) had the lowest proportion at 15.4 percent, and Amherst (Hampshire County) had the highest at 68.0 percent.

Health and Safety

- In 2009, the Pioneer Valley region had a diabetes hospitalization rate of 30.8 per 1,000 people. There were three towns that had a zero percent rate of diabetes (Hawley, Leyden, and Tolland), while the town of Shelburne had the highest rate of diabetes at 60.2 per 1,000 people.
- The three year average for asthma hospitalizations between 2006 and 2008 was 13.0 hospitalizations per 1,000 people, Ashfield had 1.6 hospitalizations per 1,000, the lowest rate in the region, compared to the highest rate of 22.9 hospitalizations in Holyoke.
- In 2009, the Pioneer Valley region had 12.7 mental health hospitalizations per 1,000 people. Four towns had no hospitalizations, while Greenfield had the highest rate at 23.3 hospitalizations per 1,000 people.
- In 2009, the Pioneer Valley reported an HIV/AIDS prevalence of 2.6 per 1,000 people. Seven towns had no cases; Springfield and Holyoke reported the highest prevalence of HIV/AIDS, with 6.4 and 7.2 per 1,000 people, respectively.
- In 2010, the obesity rate was around 25.0 percent for the Pioneer Valley Region, up from the 17.0 to 20.0 percent range in the 1990s. The obesity rate was close to the commonwealth average, which was about 24.0 percent in 2010, but much lower than the national rate of 35.7 percent.

Economic Security

- From 2005 to 2009, the poverty rate for the Pioneer Valley region was 15.1 percent. Middlefield had the lowest poverty rate of 0.8 percent, while Amherst had the highest poverty rate at 29.3 percent.
- From 2005 to 2009, the self-sufficiency rate was measured as the percent of one parent/one child families that were not economically independent. In the Pioneer Valley, 56.8 percent of one parent/one child families were not self-sufficient. Eight towns reported no dependent one parent/one child families. Tolland and Heath reported 100.0 percent of one parent/one child families were economically dependent from 2005-2009.
- In 2010, 9.1 percent of the Pioneer Valley was unemployed. The town of Pelham (Hampshire County) had the lowest unemployment rate at 3.8 percent, while the town of Monroe had the highest unemployment rate in the region at 18.5 percent.

Housing

- In 2011, the Pioneer Valley had a higher rate of homeless individuals, at 3.7 per 1,000 people, than the Commonwealth of Massachusetts, at 2.5 per 1,000 people. Homelessness was an especially pressing issue in Springfield, which contained 40.0 percent of the regional homeless population in 2011. While this represents a decrease in proportion since 2005, when Springfield contained 53 percent of the regional homeless population, the number of homeless individuals from Springfield has actually grown to 1,025 people.
- Between 2005 and 2009, the availability of subsidized housing is of concern to households of low and moderate incomes. About 9.6 percent of housing units in the Pioneer Valley were designated as subsidized housing, while Springfield (16.4 percent) and Holyoke (20.7 percent) had much higher subsidized housing units.

Environment

- The Pioneer Valley had poor air quality on about 15.6 percent of the days in 2010. The range was 16.0 to 23.0 percent between 2002 and 2010.
- The average commute time within the Pioneer Valley region was below the commonwealth's average from 1990 to 2009. The Pioneer Valley region averaged 21.7 minutes of commute time. Amherst reported the lowest average commute time at 16.7 minutes; the town of Tolland had the highest commute time of 37.3 minutes. The commute time was within the range of 15 to 40 minutes for all the towns in Pioneer Valley.

2. Pioneer Valley Food Security Advisory Committee and the Pioneer Valley Planning Commission, 2012

This report was prepared by the Pioneer Valley Planning Commission (PVPC) with input from farmers, planners, advocates, Community Involved in Sustaining Agriculture (CISA), and the Food Bank of Western Massachusetts.[34] This report analyzed food security issues across Hampden, Hampshire, and Franklin counties and the Commonwealth of Massachusetts.

Findings include:

- In 2011, the food insecurity rate was 14.3 percent in Hampden County, compared to 10.2 percent in Hampshire County, 11.5 percent in Franklin County, and a Massachusetts average of 11.2 percent.
- The child food insecurity rate was highest for Hampden County, at 24.3 percent, compared to 16.3 percent in Hampshire County, 20.2 percent in Franklin County, and 18.1 percent in the commonwealth.
- Between 1995 and 2005, there was a 12.0 percent increase in the number of overweight adults in Western Massachusetts.
- Hampden County had a greater percentage of overweight males (72.8 percent) and females (55.4 percent) than Hampshire County (64.5 and 42.5 percent, respectively), Franklin County (67.5 and 50.2 percent, respectively), and Massachusetts (67.5 and 47.8 percent, respectively).

3. Springfield School District, Stop Access Springfield Coalition, and the Gandara Center, 2012

This report analyzed results from a survey of 1,225 eighth grade students in the Springfield School District.[35]

Findings for Springfield include:

- Comparatively high use of alcohol, cigarettes, and marijuana;
- Comparatively high rates of binge drinking; and
- Comparatively high percentages of students involved in gangs.

[34] Pioneer Valley Food Security Advisory Committee and the Pioneer Valley Planning Commission (2012, October). *The Pioneer Valley Food Security Plan.* Retrieved from http://www.smith.edu/food/documents/PV_Food_Security_Plan_10-12-12_DRAFT.pdf

[35] Stop Access Springfield Coalition and the Gandara Center. (2012). *2012 Massachusetts Prevention Needs Assessment Survey: Survey Results for Springfield School District.* Retrieved 2012 , from http://gandaracenter.org/wp-content/uploads/PNA_results.pdf

4. Springfield Partners for Community Action, 2012

The Springfield Partners for Community Action designed a community action plan for Springfield for 2012 through 2014.[36]

Findings from that assessment include:

- Children had a higher rate of poverty in Springfield (34 percent) compared to other regions in Massachusetts. For Latino children, the percent of all children in poverty was almost 60 percent, while nearly 75 percent of Latino children under the age of 5 were in poverty.
- Of the households in the Springfield community, 27 percent were in poverty. The rate was highest for single-parent households. About 62 percent of single-parent households were headed by women and included children under the age of five years making these the most likely households to be living in poverty.
- In 2010, the Springfield annual high school dropout rate was 11 percent, more than three times the Massachusetts average (three percent).
- In 2011, Springfield's unemployment rate was close to 13 percent, higher than the Massachusetts average rate (eight percent).

5. City of Springfield Community Survey, 2012

The city conducted a survey in June 2012 of residents living at Marble Street Apartments and Outing Park/Hollywood Apartments.[37] Approximately 70 percent, or 164 of 232 households, responded. Survey respondents answered questions about health behaviors, priorities, and needs.

Findings include:

- More than half (55 percent) of all residents indicated that their child had a problem with asthma. Only 70 percent were receiving treatment for the condition.
- About 35 percent of residents had a household member that suffered from depression. Sixty-four percent were seeking treatment.
- Around 14 percent of households were suffering from diabetes. Seventy percent were receiving treatment.
- Residents indicated a need for dental, eye care, and mental health services.
- Community safety was problematic due to the presence of gangs, guns, drugs, and violence as reported by respondents.

[36] Springfield Partners for Community Action. (2011). *Community Action Plan Report. 2012-2014.* Retrieved 2012, from http://www.springfieldpartnersinc.com/Data/aboutus/strategicplan2012/2012-2014capspfldpartners.pdf

[37] City of Springfield. (2012, June). *Springfield Choice Neighborhoods Resident Survey Results.*

6. Commonwealth of Massachusetts, House of Representatives, 2011

This report studied Lyme disease in Massachusetts. Data from the Massachusetts Department of Public Health indicate that the incidence of Lyme disease has increased in past years. The most recently reported data from the source suggested a total of 4,045 cases of Lyme disease in 2009, including 196 in Hampden County (an increase of 57 percent since 2005).[38]

7. Holyoke Youth Task Force and Bach Harrison, 2009

The report completed by the Holyoke Youth Task Force and Bach Harrison Survey Research L.L.C., analyzed results from a survey of students in Holyoke City, which is part of Hampden County.

Findings for Hampden County include:

- Decreases in cigarette consumption between 2007 and 2009;
- Increases in marijuana usage most dramatically for tenth graders;
- Comparatively low use of cocaine and inhalants for eighth, tenth, and twelfth grades;
- Comparatively lower family attachment than in 2007;
- Increases in the percentage of high risk youth in 2009; and
- Decreases in gang involvement for eight, tenth, and twelfth graders since 2007.

8. Cities of Holyoke, Northampton, and Springfield, MA and Family, Inc., 2008

The Pioneer Valley has experienced increases in its homeless populations. A report by the Cities of Holyoke, Northampton, and Springfield indicates that on January 30, 2007 there were more than 1,000 homeless individuals in Franklin, Hampshire, and Hampden counties, either on the streets or in shelters.

Some of the findings from the report include:

- Urban and rural homelessness are present. Rural homeless populations tend to be "hidden" and likely to be in "doubled-up" conditions compared to the homeless in urban settings.
- Springfield and Holyoke had large populations living in poverty and were noted as two of the "hotspots" for homelessness throughout the commonwealth ("hotspots" are communities with a large number of homeless families). Springfield had a poverty rate of

[38] Commonwealth of Massachusetts, House of Representatives. (2011, April). *Lyme Disease in Massachusetts: A Public Health Crisis (A Report Issued by the House Committee on Post Audit and Oversight).* Retrieved from http://www.malegislature.gov/Content/Documents/Committees/h46/LymeDiseaseReport.pdf

34 percent and Holyoke had a rate of 51 percent, which were some of the highest poverty rates in the U.S.

- Homeless children suffer high rates of chronic illness, such as asthma. The rates of such illnesses are typically four times the rate of housed children. More than 50 percent of homeless children had problems with depression and anxiety. They also had lower rates of school completion.
- In Springfield, hospital costs of high-need chronically homeless[39] individuals cost an average of $100,000 per person over the course of one year (as calculated by Mercy Hospital).
- Housing instability and chronic homelessness may lead to increased placement of children in foster care. Foster care in Massachusetts averaged $6,552 per child per year.

9. University of Connecticut Health Science Center, 2008

This report analyzed results from a survey created by the Holyoke Council on Aging and the University of Connecticut Health Science Center, including two main subgroup populations: "baby boomers" between the ages of 45 and 59 and older adults above the age of 60.[40] Results were reported by ethnicity (Hispanic or Latino and those not of Hispanic or Latino ethnicity).

The report highlighted the following issues (with ethnic disparities present):

- Transportation,
- Depression,
- Need for additional caregiving capacity,
- Poor health status,
- Community safety,
- Taxes, and
- Cost of living.

[39] Chronic homelessness is defined by the U.S. Substance Abuse and Mental Health Administration as being homeless for a year or longer. A *chronically homeless family* is one in which there is an adult with a disabling condition and has been *continuously homeless for six months*; or has had *two or more episodes of homelessness in the past two years*; or has had a *history of residential instability* (5 or more moves in the past two years).

[40] University of Connecticut Health Center on Aging. (2008, May). *City of Holyoke Services and Needs Assessment.* Retrieved 2012, from http://www.holyoke.org/~cityholy/images/stories/dept_council_on_aging/holyoke_executive_summary_only.pdf

10.Catalyst Institute, 2008

In January 2008, the Catalyst Institute studied the oral health of the children in Massachusetts.[41]

Key issues include:

- About 25.0 percent of kindergarten children and nearly 40.0 percent of children in the third grade experienced dental decay.
- For children between the ages of 6 and 8, 17.3 percent had untreated dental decay of their primary and permanent teeth; the Healthy People 2020 target was 21.0 percent.
- Disparities between Hispanic children and White children existed, as nearly 23.5 percent of Hispanic kindergarten children had untreated tooth decay, double the rate of untreated decay for White kindergarten children.
- Across Franklin, Hampden, Hampshire, and Worcester counties:
    - Hampden County's sixth graders had the most untreated decay at 23.0 percent, compared to the 12.0 percent of Worcester County sixth graders and 11.0 percent of the commonwealth's sixth graders.
    - Hampshire County had the most untreated decay for kindergartners, at 31.0 percent, compared to only 24.0 percent of Worcester County's kindergartners, and 17.0 percent of the commonwealth. The percentage of sixth graders with dental sealants was highest in Hampshire County, at 63.0 percent, compared to 42.0 percent of Worcester County sixth graders and 52.0 percent of Massachusetts sixth graders.

[41] White BA, Monopoli MP, Souza BS. Catalyst Institute. (2008, January). *The Oral Health of Massachusetts' Children*. Retrieved 2012, from http://www.deltadentalma.com/news/pdfs/reports/OralHealthOfMAChildren08.pdf

Key insights:
Other Recent CHNAs

- **Common themes among other recent needs assessments conducted in the area include:**
  - **Abuse of alcohol and drugs among adults and older children,**
  - **Poor mental health,**
  - **Low community safety (including gang activity), and**
  - **Basic needs insecurity (including healthy food and housing).**
- **Racial and ethnic minorities, low-income and homeless populations, and those with special needs generally face greater barriers to health compared to other cohorts. Other assessments found that these groups have greater difficulty accessing health care.**
- **Other assessments also show that social and economic disadvantages are associated with disparities in health status for vulnerable populations in the community. Low-income families and children typically have poorer diets, limited physical activity, higher rates of smoking and substance abuse, and higher rates of chronic diseases like asthma, obesity, and cardiovascular issues.**

Summary Of Mental Health Findings

Because Mercy operates Providence Behavioral Health Hospital (in Holyoke), this CHNA report includes a section that consolidates findings regarding mental health needs in the community.

1. Primary Data Summary

Mental health issues were raised by numerous people who provided input into this assessment.

Respondents to the community survey reported difficulty accessing needed mental health care services.

- Thirty-four percent of respondents indicated they are not always able to access needed mental health services. Respondents have better access to primary, vision, dental, and medical specialty care as well as medicine, medical supplies, and equipment.
- MassHealth (Medicaid) and Commonwealth Connector recipients and uninsured residents report the greatest access challenges.
- The majority of respondents indicating problems accessing mental health services were from Agawam, Holyoke, and Springfield.

Lack of insurance and cost were indicated as top access barriers. Lack of knowledge about available services and how to access them also was frequently mentioned.

When asked to identify "top health related issues," survey respondents ranked substance abuse/addition as third and mental health as sixth. Mental health was in the "top 5" for MassHealth (Medicaid) recipients.

Many interviewees also expressed concern regarding access to mental health and substance abuse treatment. Several suggested that alcohol and drug use, depression, and stress were prevalent problems in Springfield. Interviewees indicated that many with alcohol problems have difficulty accessing services.

Nearly all interviewees said that the community needs more alcohol and drug abuse prevention and treatment programs. There was uniform concern regarding a shortage of psychiatric care in the area, in particular child psychiatry.

2. Secondary Data Summary

Exhibit 58 presents secondary data indicators from various Massachusetts and national sources.

Exhibit 58: Summary of Mental and Behavioral Health Indicators

Indicator	Location	Community Indicator	Benchmark	Data Format	Benchmark Definition	Year	Source
Alcohol Use	Hampden County	8	14	County Rank	Number Of Counties	2004-2010	County Health Rankings
Suicide	Hampden County	10.0	10.9	Rate Per 100,000	U.S. Average	2005	CHSI
Suicide	Hampden County	11.4	7.7	Rate Per 100,000	MA Average	2008	MassCHIP
Binge Drinking	Hampden County	12.6%	13.1%	Percent	MA Average	2011	BRFSS
Heavy Drinking	Hampden County	5.0%	6.0%	Percent	MA Average	2011	BRFSS
Poor Mental Health > 21 Days/Month	Hampden County	8.5%	6.8%	Percent	MA Average	2011	BRFSS
Limited By Physical, Mental, Or Emotional Problems	Hampden County	28.9%	23.8%	Percent	MA Average	2011	BRFSS
Health Professional Shortage Area (HPSA) – Mental Health	Holyoke	Present	N/A	N/A	Present Or Not Present - No Benchmark	2012	HRSA
Health Professional Shortage Area (HPSA) – Mental Health	Springfield	Present	N/A	N/A	Present Or Not Present - No Benchmark	2012	HRSA

Several mental and behavioral health indicators benchmark unfavorably (**Exhibit 58**).

- In 2008, suicide rates in Hampden County were higher than the Massachusetts average.
- According to BRFSS, Hampden County had a higher percentage of residents than Massachusetts who reported binge drinking, having poor mental health greater than 21 days per month, and being limited by physical, mental, or emotional problems.
- Holyoke and Springfield areas were designated by HRSA as mental health HPSAs.

The Massachusetts Department of Mental Health (DMH) developed the State Mental Health Plan 2012-2014 as part of its application for a Mental Health Block Grant from the Center for Mental Health Services (CMHS) and the Substance Abuse and Mental Health Services Administration

(SAMHSA). This plan[42] describes the "public mental health system, available services, strengths and weaknesses, unmet needs, and the state's priorities."

The plan identified a number of mental health-related needs including:

- More services focusing on, and resulting in, positive outcomes for persons with mental health conditions, such as:
    - Increased employment; and
    - Health and wellness to impact conditions such as: tobacco dependency, chronic health problems, poor diet and nutrition, and a lack of physical activity.
- More services focusing on specific populations, including:
    - Culturally and linguistically diverse populations/minorities;
    - Seniors;
    - Gay, lesbian, bisexual, and transgender youth;
    - The deaf and hard of hearing; and
    - Veterans.
- More services focusing on peer support services.
- More access to affordable housing services and programs for the homeless through housing assessments and SAMHSA funded projects for Assistance in Transition from Homelessness (PATH).
- Additional workforce development that focuses on utilization of evidence based practices.
- Increased DMH staff safety.
- New research that focuses on youth, transition age youth/adults, and suicide prevention strategies.
- Improved funding, coordination, and collaboration between state agencies, mental health organizations, and providers of care.
- Increased access to and integration between primary care and behavioral health, mental health, and substance abuse services and between acute and continuing care services.

The following additional needs were identified for children:

- Increased linkages to school based services and systems, special education services, and other prevention based interventions.
- Increased availability of outpatient psychiatry services and child primary care providers.

[42] Massachusetts Department of Mental Health. (2011). *State Mental Health Plan 2012-2014.* Retrieved 2013, from: http://www.mass.gov/eohhs/gov/departments/dmh/state-mental-health-plan-2012-2013.html

The 2011 Consumer and Family Member Satisfaction (Adult Consumer) Survey[43] conducted by the Center for Mental Health Services Research (CMHSR) in the University of Massachusetts Medical School also identified mental health-related needs in Massachusetts, including improved education on medications and increased availability of transportation.

[43] University of Massachusetts Medical School . (2011). *Consumer and Family Member Satisfaction (Adult Consumer) Survey*. Retrieved 2013, from: http://www.mass.gov/eohhs/researcher/behavioral-health/mental-health/dmh-results-and-reports.html

PRIMARY DATA ASSESSMENT

Community input was gathered through interviews, a community survey, and community listening sessions.

Interviews were conducted with public health experts, representatives of health or other departments or agencies, community leaders, and persons representing the broad interests of the community. The interviews were structured to help identify the most pressing health status and access issues in the community.

Mercy also sought input from the public regarding the health of the community through an online and paper-based survey. A website link to the survey (in both English and Spanish) was made available from January through February 2013. Paper copies of the survey were distributed at various local organizations and clinics in multiple languages. Efforts were made to reach those without internet access as well as vulnerable populations such as racial and ethnic minorities, low-income groups, individuals with low literacy levels, and non-English speakers. The survey was publicized via flyers, social media, newspapers, email listservs, and other methods.

A listening session was held during which community members reviewed and discussed preliminary findings from this assessment.

Discussion at the listening session was helpful in that it validated assessment findings and contributed to the prioritization process.

Community Survey Findings

The survey consisted of 48 questions about a range of health status and access issues and regarding respondent demographic characteristics.

1. Respondent Characteristics

1,321 residents from the Mercy community completed the survey. Seventy-four percent of respondents were female and 49 percent were between the ages of 45 and 64. Seventy-two percent were White and 98 percent did not identify as Hispanic (or Latino). The majority of respondents reported being in good or very good overall health (70 percent), married (50 percent), employed full time (61 percent), privately insured (67 percent), and having an undergraduate degree or higher (53 percent). The majority (83 percent) of respondents speak English in the home. Spanish was the top non-English language reported. Seven percent of respondents reported that they spoke multiple languages at home. Survey responses were received from residents of 43 of the Mercy community's 51 ZIP codes.

Exhibit 59 presents the percentage of respondents by town. Springfield had the highest percent of respondents.

Exhibit 59: Survey Responses, 2012 – Respondents by Town

Town/City*	Number of Respondents	Percent of Respondents	Percent of Total Population
Agawam	43	3.3%	6.1%
Blandford	2	0.2%	0.3%
Brimfield	4	0.3%	0.8%
Chester	4	0.3%	0.3%
Chicopee	104	7.9%	11.9%
East Longmeadow	37	2.8%	3.4%
Granville	6	0.5%	0.4%
Hampden	17	1.3%	1.1%
Holland	2	0.2%	0.5%
Holyoke	159	12.0%	8.6%
Longmeadow	58	4.4%	3.5%
Ludlow	110	8.3%	4.6%
Monson	45	3.4%	1.8%
Palmer	106	8.0%	2.6%
Russell	2	0.2%	0.3%
Southwick	12	0.9%	2.1%
Springfield	438	33.2%	32.9%
Wales	3	0.2%	0.4%
West Springfield	45	3.4%	6.1%
Westfield	68	5.1%	9.1%
Wilbraham	56	4.2%	3.1%
Total	**1,321**	**100.0%**	**464,416**

A total of 1,321 residents from Mercy Medical Center's community participated in the survey

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Although the survey garnered many respondents, the sample is not representative of the community and the results are not generalizable to the community as a whole.

2. Access Issues

The majority of the survey respondents (as post-stratified) reported they visit a primary care provider regularly. Twenty percent did not. Eleven percent of the respondents reported not having a primary care provider.

Exhibit 60 shows that 56 percent of families received routine (non-emergency, non-specialty) healthcare services from a private doctor's office and 9 percent received routine care from an urgent care facility or store-based walk in clinic. Approximately 22 percent received services from a free or low-cost clinic or health center, hospital emergency room, homeless shelter, school-based clinic, or soup kitchen. Six percent reported not receiving routine care.

Exhibit 60: Locations Where Respondents from the Mercy Community Received Routine Healthcare

Response	Total Community (Post-Stratified)	Commonwealth Connector	MassHealth (Medicaid)	Medicare	No Health Care Insurance	Private / Commercial Insurance	Less Than College Education
No Routine Healthcare Received	6.1%	4.1%	7.6%	2.2%	31.6%	1.4%	5.2%
Free Or Low-Cost Clinic Or Health Center	13.1%	8.2%	30.7%	14.4%	21.1%	3.9%	16.4%
Private Doctor's Office	56.2%	57.1%	25.2%	58.9%	15.8%	77.6%	50.5%
Urgent Care Facility Or Store-Based Walk-In Clinic	9.3%	8.2%	8.4%	10.0%	3.5%	10.0%	8.0%
Hospital Emergency Room	7.0%	8.2%	12.2%	5.6%	10.5%	3.1%	8.8%
School-Based Clinic	0.4%	2.0%	0.8%	0.0%	0.0%	0.6%	8.8%
Soup Kitchen	0.3%	2.0%	0.8%	0.0%	0.0%	0.1%	0.5%
Homeless Shelter	1.5%	2.0%	5.9%	1.1%	1.8%	0.0%	2.7%
Other (Please Specify)	6.1%	8.2%	8.4%	7.8%	15.8%	3.4%	7.2%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013. Response numbers varied by response and healthcare type. All Responses (N=1,534).

When responses are arrayed by respondent source of insurance coverage and education level (not post-stratified), great variation in where various community members receive their routine healthcare services becomes evident. While 78 percent of respondents with "private/commercial insurance" visit private doctor's offices, only 16 percent of uninsured respondents and 25 percent of MassHealth (Medicaid) recipients access these settings. Uninsured and MassHealth (Medicaid) patients are more likely not to receive any routine healthcare. Respondents without insurance and those with Commonwealth Connector or MassHealth (Medicaid) were more likely to use the Emergency Room for routine healthcare than other groups.

Exhibit 61 indicates whether respondents feel that they are able to get needed care. **Exhibits 62** and **63** present respondents who were not always able to get needed care by town and by race.

Exhibit 61: Respondent Ability to Receive Needed Care in the Mercy Community

Response	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, And Equipment	Prevention And Wellness Services
Total Community (Post-Stratified)							
Always	82.6%	77.6%	74.9%	66.0%	70.7%	76.5%	62.6%
Sometimes	12.9%	13.1%	14.3%	16.1%	17.3%	15.0%	16.5%
Rarely	3.0%	4.9%	7.2%	8.2%	6.5%	4.7%	9.9%
Never	1.5%	4.4%	3.6%	9.7%	5.6%	3.8%	11.1%
Commonwealth Connector							
Always	76.9%	59.4%	55.9%	39.1%	40.7%	46.4%	27.3%
Sometimes	17.9%	25.0%	26.5%	39.1%	33.3%	42.9%	36.4%
Rarely	2.6%	3.1%	5.9%	4.3%	11.1%	0.0%	4.5%
Never	2.6%	12.5%	11.8%	17.4%	14.8%	10.7%	31.8%
MassHealth (Medicaid)							
Always	80.1%	61.0%	56.7%	57.8%	57.8%	73.3%	50.0%
Sometimes	15.8%	23.5%	25.4%	21.1%	24.1%	17.0%	17.0%
Rarely	3.5%	9.6%	14.9%	11.0%	9.5%	7.4%	18.1%
Never	0.6%	5.9%	3.0%	10.1%	8.6%	2.2%	14.9%
Medicare							
Always	89.3%	87.7%	71.6%	82.4%	79.3%	84.7%	69.8%
Sometimes	9.3%	11.0%	14.9%	8.8%	17.2%	8.5%	14.0%
Rarely	1.3%	1.4%	9.0%	2.9%	3.4%	5.1%	14.0%
Never	0.0%	0.0%	4.5%	5.9%	0.0%	1.7%	2.3%
No health care insurance							
Always	35.7%	22.9%	23.1%	21.4%	19.2%	28.6%	25.8%
Sometimes	28.6%	22.9%	20.5%	3.6%	15.4%	25.0%	19.4%
Rarely	19.0%	22.9%	23.1%	25.0%	23.1%	14.3%	12.9%
Never	16.7%	31.4%	33.3%	50.0%	42.3%	32.1%	41.9%
Private / commercial insurance							
Always	89.1%	89.1%	86.5%	72.7%	80.8%	84.6%	69.9%
Sometimes	10.0%	8.5%	10.0%	18.1%	15.8%	13.0%	17.1%
Rarely	0.7%	1.9%	2.8%	7.0%	2.7%	1.9%	7.5%
Never	0.2%	0.5%	0.7%	2.2%	0.6%	0.4%	5.5%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
*N size varies for each insurance and care type.

Exhibit 61 suggests that, for each type of care, more than 60 percent of the total respondents (post-stratified) felt that they "always" received it, compared to those that felt they sometimes, rarely, or never received needed care. More residents responded that they always received primary care, vision care, medicine, medical supplies, and equipment, dental care, and medical specialty care. A higher percentage of respondents reported rarely or never being able to get needed prevention and wellness services (21 percent) and mental health care (18 percent) than primary care (4.5 percent).

Exhibit 62 presents the percentage of respondents who reported "not always" being able to get needed care by town. Data indicate that access varies by type of care and locality.

Exhibit 62: Respondents Not Always Able to Receive Care, By Town, in the Mercy Community

Town/City**	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, and Equipment	Prevention and Wellness Services
Agawam	14.3%	14.0%	21.4%	61.1%	21.4%	24.2%	56.0%
Blandford*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%
Brimfield*	0.0%	25.0%	25.0%	0.0%	33.3%	33.3%	33.3%
Chester*	0.0%	0.0%	0.0%	-	50.0%	25.0%	100.0%
Chicopee	11.2%	10.1%	15.2%	25.5%	15.6%	18.8%	29.2%
East Longmeadow	16.2%	8.3%	5.6%	23.1%	19.2%	7.4%	31.8%
Granville*	0.0%	0.0%	0.0%	0.0%	20.0%	33.3%	28.6%
Hampden	6.7%	5.9%	17.6%	30.0%	30.8%	8.3%	30.8%
Holland*	0.0%	50.0%	50.0%	100.0%	100.0%	-	-
Holyoke	17.2%	26.8%	29.3%	41.1%	33.3%	22.8%	39.8%
Longmeadow	8.8%	5.6%	5.3%	22.7%	17.1%	10.0%	15.6%
Ludlow	10.8%	8.1%	11.0%	22.7%	15.5%	12.3%	21.3%
Monson	18.2%	7.1%	17.1%	30.0%	28.1%	28.6%	35.5%
Palmer	8.6%	10.7%	10.0%	9.1%	8.8%	7.5%	13.6%
Russell*	0.0%	100.0%	0.0%	-	0.0%	0.0%	-
Southwick	16.7%	9.1%	16.7%	25.0%	22.2%	10.0%	22.2%
Springfield	19.6%	28.1%	33.0%	43.0%	38.1%	28.0%	47.9%
Wales*	0.0%	0.0%	33.3%	-	0.0%	0.0%	0.0%
West Springfield	20.0%	16.7%	22.2%	5.6%	17.9%	21.2%	19.0%
Westfield	12.7%	17.5%	16.9%	31.4%	22.4%	20.4%	38.5%
Wilbraham	8.9%	7.3%	11.1%	28.6%	16.3%	13.3%	36.6%
Total	**14.9%**	**17.9%**	**21.5%**	**33.6%**	**26.4%**	**20.3%**	**36.0%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=1,295), Vision Care (N=1,197), Dental Care (N=1203), Mental Health Care (N= 657), Medical Specialty Care (N=907), Medicine, Medical Supplies and Equipment (N= 981), Prevention and Wellness Services (N=808).
*Denotes a small sample size (N=10 or less).
**Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Across all towns, more people were not always able to receive prevention and wellness services (36 percent) and mental health care (about 34 percent) than other services.

Among respondents not receiving prevention and wellness services, the largest percentages were in Agawam (56 percent) and Springfield (48 percent). The majority of those not receiving mental health care also were in Agawam (61 percent) and Springfield (43 percent). Primary, vision, and dental care service needs were not being met for populations in Holyoke, Springfield, and West Springfield (**Exhibit 62**).

Exhibit 63 indicates that Asian residents were the least likely to receive primary care (28 percent), followed by Hispanic (or Latino) respondents (19 percent). The Asian population also was less likely to receive vision, dental, and mental health care (50, 55, and 100 percent, respectively) compared to other races. White residents were most able to access care.

Exhibit 63: Respondents Not Always Able to Receive Care, By Race, in the Mercy Community

Race/Ethnicity	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, and Equipment	Prevention and Wellness Services
Asian	28.0%	50.0%	54.5%	100.0%	35.0%	33.3%	46.7%
Black	16.8%	26.0%	35.2%	31.7%	31.1%	24.7%	40.3%
Hispanic (or Latino)	19.2%	38.6%	33.3%	54.5%	47.7%	33.3%	57.9%
Multiple	11.5%	28.8%	37.7%	52.5%	39.6%	30.6%	51.3%
All Other Races*	16.7%	10.0%	10.0%	33.3%	37.5%	33.3%	25.0%
White	13.7%	13.2%	16.7%	28.1%	21.2%	17.1%	31.6%
Total	**14.6%**	**17.0%**	**20.9%**	**33.1%**	**24.9%**	**19.8%**	**35.0%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=1,228), Vision Care (N=1,140), Dental Care (N=1,144), Mental Health Care (N=626), Medical Specialty Care (N=858), Medicine, Medical Supplies, and Equipment (N=929), Prevention and Wellness Services (N=768).
*Other includes Native American/American Indian, East Indian, and "Other."

Respondents indicating that they were not always able to get care were asked to identify barriers to access (**Exhibit 64**). Cost and lack of insurance were the two most frequently reported barriers to care. Residents reported difficulty getting an appointment with a primary care doctor.

Exhibit 64: Barriers to Receiving Needed Care in the Mercy Community

Response	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, and Equipment	Prevention and Wellness Services
I Don't Have Insurance	19.7%	28.3%	26.6%	16.4%	16.2%	19.5%	16.8%
I Can't Get an Appointment	17.9%	6.8%	6.4%	8.4%	10.6%	2.6%	4.6%
I Can't Afford It / Too Expensive	10.7%	21.7%	28.6%	16.2%	20.9%	30.5%	20.3%
The Hours Are Inconvenient	9.5%	6.6%	9.5%	7.7%	10.0%	4.3%	7.7%
These Services Are not Available in My Area	1.9%	1.5%	1.9%	4.3%	2.2%	3.4%	6.6%
I Don't Have Transportation	11.5%	9.6%	6.2%	5.1%	8.7%	6.9%	5.0%
I Don't Trust the Doctor	5.8%	3.2%	3.4%	4.6%	3.4%	3.3%	3.2%
The Doctors and Staff Do not Speak My Language	5.7%	4.5%	3.9%	3.3%	4.0%	4.1%	3.9%
I Can't Take Time Off From Work or From Caring for Others	7.0%	5.5%	5.2%	7.0%	6.2%	5.3%	7.2%
Other	10.4%	12.3%	8.2%	27.0%	17.8%	20.0%	24.7%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=267), Vision Care (N=227), Dental Care (N= 303), Mental Health Care (N=311), Medical Specialty Care (N=261), Medicine, medical supplies, and equipment (N=201), Prevention and Wellness Services (N=290).

Key	
Top Two Barriers by Care Type	

3. Health Issues

When asked to identify the top health issues in the community, respondents most often chose low income / financial challenges, obesity, substance abuse / addiction, and diabetes (**Exhibit 65**).

Exhibit 65: Top Health Issues, By Insurer and Education, in the Mercy Community

Health Issue	Total Community (Post-Stratified)	Commonwealth Connector	MassHealth (Medicaid)	Medicare	No Health Care Insurance	Private / Commercial Insurance	Less Than College Education
Low Income / Financial Challenges	8.2%	8.8%	7.5%	7.8%	8.4%	9.0%	8.1%
Obesity	7.3%	4.8%	4.3%	9.0%	3.8%	8.4%	6.1%
Substance Abuse / Addiction	7.0%	6.6%	6.5%	6.8%	5.2%	7.7%	6.6%
Diabetes	6.4%	5.3%	6.4%	5.3%	8.0%	6.0%	6.0%
Unemployment	6.1%	5.3%	6.9%	4.0%	9.1%	5.4%	6.7%
Mental Health (Such as Depression, Bipolar, Autism)	5.9%	4.8%	5.4%	5.3%	4.9%	7.2%	5.7%
Cancer	5.7%	4.8%	5.3%	8.3%	4.9%	5.9%	5.6%
Not Enough Exercise	5.1%	7.5%	3.8%	6.0%	5.6%	5.5%	4.6%
Tobacco Use	5.0%	4.8%	4.4%	4.0%	6.3%	4.4%	4.9%
Poor Dietary Choices	4.9%	4.4%	3.4%	4.3%	4.5%	5.3%	4.1%
Heart Disease	4.2%	4.0%	2.8%	5.8%	3.8%	5.0%	3.9%
Affordable Housing	3.9%	4.4%	4.8%	5.5%	4.5%	3.4%	4.3%
Asthma	3.8%	2.2%	4.5%	2.5%	3.1%	4.1%	3.4%
Homelessness	3.6%	4.4%	5.0%	3.3%	2.1%	3.0%	4.2%
Unsafe Neighborhoods	3.3%	4.8%	4.3%	2.5%	2.8%	3.0%	3.8%
Limited Access to Healthy Food	3.3%	4.8%	3.7%	3.0%	4.5%	3.0%	3.6%
Dental Health Issues	3.2%	5.3%	3.7%	2.8%	4.5%	2.6%	3.6%
Domestic Violence	3.2%	3.1%	4.4%	2.5%	4.5%	2.6%	3.5%
Unsafe Sex	2.9%	1.8%	3.5%	2.0%	3.5%	2.4%	3.0%
Alzheimer's or Dementia	1.6%	2.6%	1.7%	2.0%	0.7%	1.7%	1.7%
Stroke	1.4%	0.9%	2.3%	2.5%	1.0%	1.0%	1.9%
Chronic Obstructive Pulmonary Disease (COPD)	1.3%	0.9%	1.8%	1.8%	1.4%	1.0%	1.7%
Poor Air Quality	1.3%	0.9%	2.3%	1.0%	0.7%	1.2%	1.6%
Birth Defects	0.7%	1.3%	1.2%	0.5%	0.7%	0.4%	0.9%
Other	0.7%	1.3%	0.2%	1.5%	1.4%	0.8%	0.5%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Total Community (N=7,357), Commonwealth Connector (N=227), MassHealth (Medicaid) (N=1,217), Medicare (N=398), No Healthcare Insurance (N=287), Private/Commercial Insurance (N=4,825), Less than College Education (N=3710).

Key	
Top Five Reasons for Not Receiving Care By Group	

Exhibit 66 indicates whether care was accessed for a variety of health conditions (post-stratified).

Exhibit 66: Receiving Care for Health Conditions in the Mercy Community

Health Condition	We Are Getting the Care We Need	We Choose Not to Get Care at This Time	We Don't Know Where or How to Get Care for This Condition
Asthma	95.7%	2.9%	1.4%
Alzheimer's / Dementia	77.2%	17.0%	5.8%
Cancer	91.8%	5.5%	2.7%
Chronic Obstructive Pulmonary Disease (COPD)	81.8%	13.8%	4.4%
Diabetes	93.6%	4.1%	2.3%
High Blood Pressure	95.8%	2.4%	1.8%
Heart Disease	92.8%	3.8%	3.4%
Mental Health Issues	82.9%	8.3%	8.8%
Obesity / Overweight	63.2%	20.3%	16.5%
Sexually Transmitted Diseases	58.3%	23.2%	18.6%
Substance Abuse /Addiction	64.9%	22.4%	12.6%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Asthma (N=416), Alzheimer's/Dementia (N=109), Cancer (N=218), Chronic Obstructive Pulmonary Disease (N=119), Diabetes (N=380), High Blood Pressure (N=692), Heart Disease (N=280), Mental Health Issues (N=391), Obesity/Overweight (N=499), Sexually Transmitted Diseases (N=35), Substance Abuse/Addiction (N=161).

Females age 65+ were most likely to report living alone …

Of males 65+ living alone, over 44 percent reported living without support

Care was accessed most for asthma (95.7 percent) and high blood pressure (95.8 percent) and least accessed for sexually transmitted diseases. Many respondents stated not wanting care and / or not knowing where to get care for obesity, sexually transmitted diseases, and substance abuse / addiction (**Exhibit 66**).

Exhibit 67 provides survey responses about members of the community who live alone and, of those, how many are without emotional and/or financial support. Females 65+ were most likely to report living alone.

Exhibit 67: Living Alone and Without Support in the Mercy Community

Age and Sex	Living Alone	Without Emotional and/or Financial Support
Female 15-34	10.7%	22.7%
Female 35-44	8.8%	15.4%
Female 45-54	14.7%	20.0%
Female 55-64	21.4%	22.9%
Female 65+	38.4%	15.0%
Male 15-34	15.6%	10.0%
Male 35-44	18.6%	40.0%
Male 45-54	28.2%	28.0%
Male 55-64	21.7%	20.0%
Male 65+	20.0%	44.4%
Total	**18.8%**	**22.4%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Living Alone (N=1,266), Without Emotional and/or Financial Support (N=227).

4. Health Behaviors

Exhibit 68 portrays various health behaviors in the Mercy community.

Exhibit 68: Health Behaviors in the Mercy Community

Health Behavior	Total Community (Post-Stratified)	MassHealth (Medicaid)	Medicare	Less Than College Education
Not Physically Active	27.3%	28.6%	32.9%	30.3%
Eat Less Than Recommended Amounts of Fruit	43.8%	48.9%	41.1%	46.7%
Eat Less Than Recommended Amounts of Vegetables	74.4%	78.9%	69.3%	79.2%
Never or Rarely Shop at Farmer's Market	78.6%	82.9%	73.0%	80.7%
Travel 5 Miles or More for Fresh Produce	14.3%	11.2%	6.8%	13.4%
Drank Alcohol 10+ Days in the Past Month	11.4%	3.9%	12.0%	6.9%
Usually have 4 or More Drinks on an Occasion	10.7%	23.1%	0.0%	11.9%
Use Tobacco a Few Times per Week or Daily	19.0%	36.7%	10.7%	24.1%
Primary Care Provider Not Aware of All Drugs taken	5.0%	8.5%	1.5%	5.7%
Ever Used Prescription Drugs Belonging to Others	17.7%	22.9%	6.8%	15.9%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
*N size varies for each cohort and each health behavior.

A large percentage of respondents reported that they were not eating the recommended amount of vegetables and that they never or rarely shopped at a farmer's market. MassHealth (Medicaid) recipients and/or those with less than a college education were less likely to eat the recommended amount of fruit and vegetables and shop at a farmer's market. MassHealth (Medicaid) recipients were more likely to have four or more drinks on one occasion and use tobacco a few times per week or on a daily basis (**Exhibit 68**).

The principal reason stated for not shopping at a farmer's market was that respondents accessed local produce in their own garden, grocery store, or Community-Supported Agriculture (CSA). The greatest reason for not eating the recommended amount of fruits and vegetables was cost. The majority of respondents (54 percent) reported purchasing their groceries in a grocery store, while respondents were least likely to buy groceries at an ethnic food store (5 percent).

Usage of alcohol and tobacco were problematic for certain cohorts and many respondents suggested that they were unable to reduce their use of alcohol and tobacco despite a desire to do so.

Exhibit 69 examines the health topics that respondents felt children need to know more about (post-stratified).

Exhibit 69: Improving Children's Health in the Mercy Community

Topic	Ages 0-5	Ages 6-10	Ages 11-15	Ages 16-19
Dental Hygiene	19.4%	9.7%	5.2%	5.2%
Nutrition	15.5%	10.5%	6.5%	6.4%
Getting Enough Sleep	10.8%	7.8%	6.1%	6.4%
Bullying	13.1%	11.0%	6.6%	6.3%
Asthma Management	6.7%	6.8%	4.3%	3.9%
Diabetes Management	5.1%	6.0%	4.8%	4.6%
Eating Disorders	4.0%	5.9%	6.8%	6.6%
Tobacco	5.4%	8.0%	7.6%	7.1%
Alcohol	4.2%	7.1%	7.7%	7.3%
Drug Abuse	4.1%	7.4%	7.6%	7.3%
Mental Health Issues	2.7%	5.2%	7.0%	7.2%
Suicide Prevention	2.3%	4.6%	7.2%	7.3%
Sexual Intercourse	1.9%	3.8%	8.2%	7.5%
Sexually Transmitted Diseases	1.9%	3.5%	8.2%	7.6%
Reckless Driving/Speeding	2.0%	1.9%	5.7%	8.6%
Other	0.9%	0.8%	0.6%	0.6%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Ages 0-5 (N=4218), Ages 6-10 (N=7886), Ages 11-15 (N=11381), Ages 16-19 (N=10689).

Key	
Top Three Issues by Age Group	

Among children aged 0 to 5 years and 6 to 10 years, health topics such as dental hygiene, nutrition, and bullying were seen as important. Sexual intercourse and sexually transmitted diseases were the primary suggested educational topics for children aged 11 to 19. In addition, respondents suggested information on alcohol should be taught to youth aged 11 to 15 years and reckless driving/speeding to youth aged 16 to19 years.

Key insights:
Community Survey

- **1,321 residents in Mercy's community responded to the community survey. Post-stratification weights were applied to reflect community demographics.**
- **78 percent of respondents with private insurance receive their routine healthcare in a private physician's office. Uninsured residents and MassHealth (Medicaid) recipients more often rely on free or low-cost clinics, urgent care facilities, hospital emergency rooms, and other settings – or they do not receive services on a routine basis.**
- **Area residents are most unable to receive needed prevention and wellness services, mental health care, dental care, and "medical specialty care". Difficulty accessing basic primary care appears most acute for residents of Springfield and West Springfield.**
- **Disparities in access are present – in particular for Hispanic (or Latino) people. Affordability (even after the Massachusetts health insurance expansion) remains a primary barrier.**
- **Respondents indicate that obesity, substance abuse/addiction, diabetes, mental health, and cancer are the top five health issues (other than financial and economic challenges). Top issues vary depending on insurance status (e.g., dental health issues for Commonwealth Connector recipients and cancer for Medicare beneficiaries).**
- **A number of community residents "don't know where or how" to receive care for obesity, sexually transmitted disease, or substance abuse issues. Primary, vision, and dental care service needs were not being met for populations in Holyoke, Springfield, and West Springfield. Among respondents not receiving prevention and wellness services as well as mental health care, the majority were in Agawam and Springfield.**

Summary of Interview Findings

Key informant interviews were conducted face-to-face and by telephone by Mark Rukavina, Principal at Community Health Advisors, LLC. The interviews were designed to gain perspective into health needs in the community served by Mercy.

A total of 39 local key informants, including external and internal stakeholders (those affiliated or employed by Mercy Medical Center/Providence Behavioral Health Hospital) were interviewed during December 2012 through February 2013. In addition, 10 staff members from the Massachusetts Department of Public Health regional office in Northampton also were interviewed as a part of this assessment.

These interviews were conducted using a structured questionnaire. Informants were asked to discuss community health issues and encouraged to look broadly at the social determinants of health. Interviewees were asked about issues related to health care access, changes in community population, prevalence of chronic health conditions, and health disparities.

The frequency with which community health issues was mentioned and the interviewees' perceptions of the significance of each concern were assessed. The following issues are considered of greatest concern, based on the interviews with key informants.

Social and Economic Issues

- **Poverty and Financial Hardship:** The issue of poverty was identified by nearly all interviewees as a significant factor in terms of community health. The City of Springfield reports a large percentage of residents living in poverty. The area has limited employment opportunities, especially for those with little formal education or training, but there are broad community efforts to bolster skill building and job training.
- **Education:** Related to the issue of poverty, many interviewees described an educational gap that is experienced by Springfield residents. In an effort to break the cycle of poverty, interviewees expressed the need to encourage the success of children in schools. Many people said that reading skills are a vital factor driving health. Others said that there is a need in the area to build trusting relationships between parents and schools as a strategy that enables children to reach their educational potential.
- **Safety:** The issue of public safety was raised as a concern by a number of interviewees. Many drew a link to between poverty and public safety. Several of the interviewees cited safety as a hindrance to physical activity.
- **Institutional Racism:** A number of interviewees raised the issue of institutional racism as a factor driving health disparities. They noted that many people of color and non-English speaking patients feel that they must take more steps in order to get care. Several said that institutional racism must be addressed in order for equitable services to be available to everyone in need.
- **Nutrition:** Interviewees expressed concern regarding proper nutrition and affordable healthy foods. In certain Springfield neighborhoods, it was noted that it's difficult to find

fresh fruits and vegetables. Many interviewees note that there are area efforts to address food deserts and food insecurity.

- **Physical Activity:** Many interviewees said that community health could be improved by increasing physical activity throughout Springfield. This issue was seen as overlapping with that of safety. Interviewees pointed to community efforts as demonstrations of commitment to address this issue. Examples include the projects funded under Mass in Motion grants, the "Walking School Bus," built environment improvements, the river walk, and other community enhancements.
- **Trust:** The issue of a lack of trust and connectivity, especially between some of the larger public and private institutions, was frequently noted as a problem. Tying this to health, a number of interviewees noted that interactions and relationships with medical providers can be intimidating and alienating. Several suggested that more efforts where there are interactions in community settings could help to build trusting relationships.

Access Issues

- **Substance Abuse Treatment:** Interviewees frequently said that Springfield has a serious problem with alcohol and drug use. Drug trafficking and misuse are seen as significant health and safety factors. A number of people expressed frustration with the difficulty of accessing treatment for people with alcohol problems. In general, on-demand treatment is seen as a challenge. Nearly all interviewees said that the area needs more alcohol and drug abuse prevention and treatment programs.
- **Mental Health:** Many of the interviewees expressed concern regarding access to mental health treatment. Several suggested that depression and stress are prevalent problems in Springfield. There was also an expressed concern regarding a shortage of psychiatric care in the area, in particular child psychiatry.
- **Inappropriate Use of Emergency Department**: The issue of people accessing non-emergent care in the emergency department was noted by a number of interviewees. Some felt that it indicated a shortage of primary care providers and others said that it was related to issues of convenience or a lack of understanding the various care options. Many people felt that it was an important issue that must be addressed.
- **Primary Care:** Several of the interviewees mentioned the need for more primary care providers. Others felt that while there may be sufficient primary care capacity, many residents have never had a primary care provider and/or need assistance in establishing a medical home.
- **Out of Pocket Costs:** A number of interviewees raised concerns that out of pocket costs were interfering with care. In particular, they saw copayments and deductibles as barriers to medications and ongoing treatment for chronic diseases. Several interviewees said that there is a lack of affordable insurance for small business owners.
- **Access for Culturally Diverse Populations:** Interviewees regularly raised the issue of access to care for culturally diverse populations. Some had concerns for limited English proficient populations and others felt that more education for health providers was needed to provide culturally competent care.

- **Dental Health:** Though the problem of dentists accepting MassHealth has improved in recent year, the issue of access to dental care was raised as a concern by a number of interviewees.
- **Transportation:** Transportation was cited as a problem by several interviewees. While Springfield is seen as having good public transportation, it can be a hardship for some residents, especially among low income residents and those with small children, to easily get to medical appointments.

Morbidity/Health Status Issues

- **Alcohol, Tobacco, and Other Drug Use:** A significant number of interviewees felt that the alcohol and substance abuse problems in Springfield were quite serious. The issues of alcohol and opiate abuse were frequently cited as major health problems in the area. Tobacco was raised as a concern, but by fewer of the interviewees. There were also concerns raised regarding HIV/AIDS related to the drug use.
- **Mental Health:** Several interviewees noted the problems related to depression, stress, and anxiety. They expressed a need for more affordable and timely mental health services.
- **Teen Pregnancy:** The issues of sexually active teens and teen pregnancy were seen as problems by many interviewees. Addressing the teen pregnancy problem was seen as crucial to breaking the cycle of poverty.
- **Chronic Disease Management:** Several interviewees noted concern regarding the management of chronic conditions such as diabetes, hypertension, asthma, and heart disease. They felt that the area would benefit from more related education and chronic disease management initiatives to support residents.
- **Obesity:** A number of interviewees saw obesity as a serious community health problem. The problems of proper nutrition and exercise were seen as contributing factors in terms of this problem.
- **Homelessness:** Many interviewees said the area has a problem with homelessness and expressed concern that Springfield shelters are housing the homeless from many other parts of the Commonwealth.
- **Care Coordination:** Many of the interviewees felt there is a need for better coordination of care across the various programs and providers serving the Springfield area. Successful efforts of care coordination within the Springfield Public School system as well as the Office of the Sheriff of Hampden County were cited as examples of effective care coordination. Many people cited the lack of care coordination as a serious barrier to improved community health.
- **Violence:** Violence and abuse were seen by interviewees as problems that need to be addressed in the Springfield area.

Key insights:
Interviews

- **Poverty manifests in a variety of community needs, including financial hardship, homelessness, and poor nutrition.**
- **Reducing teen pregnancy, which respondents view as crucial to breaking the cycle of poverty.**
- **Substance abuse (including alcohol, tobacco, and other drugs)**
- **Additional support for chronic disease management (including asthma, hypertension, and diabetes) is important for improving community health.**
- **Health system complexity and lack of integration across providers result in frustration for both patients and providers.**
- **Poor mental health impacts the entire family, and accessing treatment for these issues is difficult.**
- **Lack of understanding of appropriate use leads to insufficient primary care utilization and overuse of the emergency room for non-emergent conditions.**

Individuals Providing Community Input

The 49 stakeholders were comprised of public health experts; individuals from health or other departments and agencies; leaders or representatives of medically underserved, low-income, and minority populations; and other community members **(Exhibits 70, 71, 70, and 73**). Additionally, 18 community members participated in the CHNA listening sessions.

1. Public Health Experts

Individuals interviewed with special knowledge of or expertise in public health include (**Exhibits 70A** and **70B**).

Exhibit 70A: Public Health Experts Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Tracy Osbahr	Director	Massachusetts Department of Public Health, Early Intervention Program	Ms. Osbahr has significant, specialized experience in public health due to her position as the director of the Early Intervention Program at the Massachusetts Department of Public Health.	Interview
Ben Wood	Healthy Community Design Coordinator	Massachusetts Department of Public Health, Division of Prevention and Wellness	Mr. Wood has special knowledge of public health due to his current position with the Massachusetts Department of Health's Division of Prevention and Wellness and his past work as Northampton's health director.	Interview
Donna Salloom	Community Liason	Massachusetts Department of Public Health, Division of Prevention and Wellness	As the community liaison for the Massachusetts Department of Health's Division for Prevention and Wellness, Ms. Salloom has important public health experience.	Interview
Ruth Jacobson-Hardy	Regional Manager	Massachusetts Department of Public Health, Substance Abuse Services	Ruth Jacobson-Hardy is the regional manager for the Massachusetts Department of Health's Bureau of Substance Abuse Services, giving her specific public health experience.	Interview
Molly Butler	Program Coordinator	Massachusetts Department of Public Health, Rural Health	Ms. Butler is the program coordinator for the State Office of Rural Health in the Massachusetts Department of Public Health and is experienced in public health.	Interview
Barbara Coughlin	Advisor	Massachusetts Department of Public Health, STD Program	Barbara Coughlin is an advisor with the STD Program at the Massachusetts Department of Public Health, a position which demonstrates her expertise in public health.	Interview
Charles Kaniecki	District Health Officer	Massachusetts Department of Public Health, Western Mass Region	As a district health officer in the Western Massachusetts region for the Massachusetts Department of Public Health, Charles Kaniecki has special expertise in public health.	Interview
Ronnie Rom	Coordinator	Massachusetts Department of Public Health, Rural Hospital Program	Ronnie Rom is a coordinator with the Massachusetts Department of Public Health's Rural Hospital Program, which requires specialized public health expertise.	Interview

Exhibit 70B: Public Health Experts Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Amy Waldman	Project Director	Massachusetts Department of Public Health, Rural Domestic and Sexual Violence Project	As project director of the Rural Domestic and Sexual Violence Project at the Massachusetts Department of Public Health, Amy Waldman has specialized public health knowledge.	Interview
Cathy O'Conner	Director	Massachusetts Department of Public Health, Office of Healthy Communities	Ms. O'Connor is the director of the Office of Healthy Communities at the Massachusetts Department of Public Health, a position which emphasizes her public health expertise.	Interview
Helen Caulton-Harris	Director	City of Springfield, Dept of Health and Human Services	Ms. Caulton-Harris is the director of Springfield's Department of Health and Human Services, which demonstrates her expertise on public health issues.	Interview, Listening Session
Ben Cluff	Assistance Regional Manager	Bureau of Substance Abuse Services	Mr. Cluff is an assistance regional manager at the Bureau of Substance Abuse Services of the Massachusetts Department of Public Health, where he demonstrates his public health expertise.	Listening Session

2. Health or Other Departments or Agencies

Several interviewees were from departments or agencies with current data or other information relevant to the health needs of the Mercy community (**Exhibit 71**).This list excludes the public health experts identified in **Exhibit 70**.

Exhibit 71A: Individuals from Health Departments or Agencies Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Michael Ashe	Hampden County Sheriff	Hampden County Corrections	As Hampden County Sheriff, Mr. Ashe has gained specialized expertise in the physician and mental health needs of Hampden County's inmate population.	Interview
Andrew Morehouse	Executive Director	Food Bank of Western Massachusetts	Mr. Morehouse is the executive director for the Food Bank of Western Massachusetts, a position which lends expertise on nutrition and food security.	Interview
Ann Awad	President/CEO	Caring Health Center (FQHC)	Ms. Awad is the president/CEO of Caring Health Center (a Federally-Qualified Health Center). This position gives her critical expertise on the health needs of the uninsured, racial/ethnic minorities, and underserved residents in the Springfield area.	Interview
Bill Miller	Executive Director	Friends of the Homeless	Bill Miller is the executive director of Friends of the Homeless, which demonstrates his significant expertise on homeless needs in the Springfield area.	Interview, Listening Session
Deleney McGoffin	Executive Assistant, Community Affairs at YMCA of Greater Springfield	YMCA of Greater Springfield	Through her position with the YMCA of Greater Springfield, Ms. McGoffin has an excellent understanding of the physical activity and health needs of the Springfield area.	Listening Session
Dora Robinson	President/CEO	United Way of Pioneer Valley	As the president/CEO of the United Way of the Pioneer Valley, Ms. Robinson has specialized knowledge of community health and the social determinants of health.	Interview
Elaine Massery	Executive Director	Greater Springfield Senior Services	Ms. Massery is the executive director of Greater Springfield Senior Services, which gives her expertise on the health needs of elderly residents in the Greater Springfield area.	Listening Session
Janet Denney	Director	City of Springfield, Elder Affairs	Ms. Denney has expertise in the needs of Springfield's elderly residents through her position as director at the Department of Elder Affairs for the City of Springfield.	Interview
Jeanne Clancy	Nursing Supervisor	Springfield Public Schools	Ms. Clancy is a nursing supervisor with Springfield Public Schools, which demonstrates her expertise in the physical and mental needs of school-aged children in the local school system.	Interview
John Roberson	Vice-President of Children and Family Services	Center for Human Development	Through his time at the Center for Human Development, Mr. Roberson has gained expertise in the behavioral health needs of children in families throughout Western MA.	Interview

Exhibit 71B: Individuals from Health Departments or Agencies Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Juan Campbell	Vice-President of Sales	Health New England	As the Vice-President of Sales for Health New England, Mr. Campbell has significant knowledge about Greater Springfield's health needs.	Listening Session
Kathy Wilson	President / CEO	Behavioral Health Network	As president/CEO of Behavioral Health Network, Ms. Wilson has specialized knowledge of the behavioral health needs of children and families in Western MA.	Interview, Listening Session
Kristina Chapell	Development Officer	Alzheimer's Association	Ms. Chapell is a development officer with the Alzheimer's Association, which demonstrates her expertise in issues relating to Alzheimer's disease and dementia.	Interview
Mary Walachy	Project Director	Davis Foundation	As Project Director at the Davis Foundation, Ms. Walachy has expertise in community health and the social determinants of health.	Interview
Nanyamka Hales	Director for Health Initiatives	American Cancer Association	Ms. Hales is Director for Health Initiatives at the American Cancer Association, which demonstrates her expertise on cancer-related issues.	Interview
Nikki Burnett	Regional Vice President for Health Equity	American Heart Assocation	Ms. Burnett is the Regional Vice President for Health Equity at the American Heart Association, which emphasizes her knowledge of issues relating to stroke and heart disease, including racial and ethnic disparities.	Interview
Pamella Wells	Resident Services Manager	Springfield Housing Authority	Through her position as Resident Services Manager at the Springfield Housing Authority, Ms. Wells has expertise in the health needs of residents in publicly-supported housing.	Interview
Robert Marmor	President / CEO	Jewish Family Services	Mr. Marmor is president/CEO of Jewish Family Services; in this position, he has gained expertise in the health needs of families, elders, and racial/ethnic groups in Western Massachusetts.	Interview
Sally Fuller	Executive Director	Davis Foundation	Ms. Fuller is the executive director of the Davis Foundation, which emphasizes her knowledge of community health and social determinants of health.	Interview
Soloe Dennis	Emergency Preparedness Planner	Pioneer Valley Planning Commission	Mr. Dennis is the Emergency Preparedness Planner for the Pioneer Valley Planning Commission, highlighting his expertise in emergency preparedness.	Listening Session
Sr. Mary Caritas	Vice President	Sisters of Providence Health System	Sr. Caritas is part of the Sisters of Providence Health System, where she has gained significant knowledge about health needs in the Greater Springfield area.	Interview, Listening Session
Vickie Nelson	Associate Director of Development	YMCA of Greater Springfield	As the Associate Director of Development for the YMCA of Greater Springfield, Ms. Nelson has expertise in the physical activity and health needs of the Springfield area.	Listening Session
William Abrashkin	Judge	Springfield Housing Authority	Mr. Abrashkin is a judge with the Springfield Housing Authority, which highlights his expertise in the health needs of residents in publicly supported housing.	Interview

3. Community Leaders and Representatives

The following individuals were interviewed because they are leaders or representatives of medically underserved, low-income, and/or minority populations (**Exhibits 72A** and **72B**).This list excludes the public health experts identified in **Exhibits 70A** and **70B**.

Exhibit 72A: Community Leaders or Representatives Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Jay Minkarah	President/CEO	Develop Springfield	Mr. Minkarah is the president/CEO of Develop Springfield, which highlights his knowledge of community needs.	Listening Session
Sarah Perez-McAdoo	Director	Youth Empowerment Adolescent Health (YEAH)	Ms. Perez-McAdoo is the director of Youth Empowerment Adolescent Health (YEAH), a position which emphasizes her knowledge of youth health needs in the Greater Springfield area.	Listening Session
Bill Ward	Executive Director	Regional Employment Board	As executive director of the Regional Employment Board, Mr. Ward has expertise in the health needs and employment opportunities in the Greater Springfield area.	Interview, Listening Session
Carlos Gonzalez	President/CEO	MA Latino Chamber of Commerce	Mr. Gonzalez is the president/CEO of the MA Latino Chamber of Commerce, which highlights his familiarity with healthcare and insurance issues.	Interview
Cindy Miller	Hampden County Health Services Manager, Tapestry Health	CHNA #4, Community Health Connections	Through her work with the Community Health Network Area #4, Ms. Miller has special knowledge of community health needs.	Interview
Giang Phan	Professor	University of Massachusetts Amherst, Vietnamese American Civic Association	Professor Phan is active at the University of Massachusetts at Amherst and with the Vietnamese American Civic Association. In those capacities, Professor Phan has gained expertise in immigrant and refugee health issues.	Interview
Henry Thoms	President	Urban League of Springfield	Mr. Thoms is the president of the Urban League of Springfield, which highlights his knowledge of community-based organizations and community needs.	Interview
Maly Son	Executive Director	Springfield Vietnamese American Civic Association	As the executive director of the Springfield Vietnamese American Civic Association, Mr. Son is an expert in immigrant and refugee health issues.	Interview
Mike Suzor	Assistant to the President	Springfield Technical Community College	Mr. Suzor is the assistant to the president at Springfield Technical Community College, a position in which he has demonstrated expertise in community issues.	Listening Session

Exhibit 72B: Community Leaders or Representatives Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Mila Dubinchik	Regional Director	Russian Community Association of MA	Mr. Dubinchik is the regional director of the Russian Community Association of MA, highlighting his knowledge of immigrant and refugee health issues.	Interview
Sr. Maxyne Schneider	President	Sisters of St. Joseph	Sr. Schneider is a member of the Sisters of St. Joseph, which highlights her expertise in the basic needs of Springfield and Holyoke vulnerable populations.	Interview
Rev. Talbert Swan	Pastor	Spring of Hope Church	Rev. Swan is pastor of Spring of Hope Church, a position in which he demonstrates his expertise in community health needs, with a particular focus on racial/ethnic groups.	Interview
Theresa Glenn	-	CHNA #4, Community Health Connections	Through her work with the Community Health Network Area #4, Ms. Glenn has special knowledge of community health needs.	Interview, Listening Session
Timothy Paul Baymon, Ph.D.	Archbishop	Council of Churches of Greater Springfield	Archbishop Baymon's work with the Council of Churches of Greater Springfield highlights his understanding of the community's health needs.	Interview, Listening Session
Vanessa Otero	Director	North End Campus Coalition	As director of the North End Campus Coalition, Ms. Otero has expertise in migrant health and health disparities in the North End neighborhood of Springfield.	Interview
Wanda Givens	Director	Mason Square Health Task Force	Ms. Givens is the director of the Mason Square Health Task Force, which demonstrates her special knowledge of community health needs, particularly racial/ethnic disparities.	Interview

4. Persons Representing the Broad Interests of the Community

Exhibit 73: Other Interviewees Representing the Broad Interests of the Community

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Patrick McCarthy	Clinical Director	Hampden County Sheriff's Dept	Mr. McCarthy's work with the Hampden County Sheriff's Department has given him specialized knowledge of the community's health needs.	Listening Session
Shannon Giordano	Legislative Aide	Office of Rep. Coakley-Rivera	Through her work at the Office of Rep. Coakley-Rivera, Ms. Giordano is knowledgeable about community needs.	Listening Session
Domenic Sarno	Mayor	City of Springfield	Mr. Sarno is mayor of Springfield, a position in which he demonstrates his expertise in many community health and safety issues.	Interview
Jeff Ciuffreda	President	Affiliated Chambers of Commerce of Greater Springfield	Mr. Ciuffreda is president of the Affiliated Chambers of Commerce of Greater Springfield; in this capacity, he has demonstrated his familiarity with healthcare and insurance issues for the greater community.	Interview
John Barberi	Sergeant	City of Springfield Police Department	Sergeant Barberi is an expert on community issues and law enforcement, due to his service with the City of Springfield Police Department.	Interview
Kate Kane	Managing Director	Northwestern Mutual Financial Services	Ms. Kane is the managing director of Northwestern Mutual Financial Services. She has expertise in area health needs based on her experience as a business leader in the community.	Interview
Nicholas Fyntrilakis	Vice-President of Community Responsibility	MassMutual	As the Vice-President of Community Responsibility at MassMutual, Mr. Fyntrilakis shows expertise in community health and social determinants of health.	Interview
Shawn Sullivan	Communications and Infectious Control Officer	City of Springfield Police Department	As a communications and infectious control officer at the City of Springfield Police Department, Mr. Sullivan is an expert in community issues and law enforcement.	Interview
William Messner	President	Holyoke Community College	As president of Holyoke Community College, Mr. Messner is familiar with many community needs, particularly those of community college students.	Interview

APPENDIX

VILLAGES AND ZIP CODES WITHIN THE COMMUNITY

Mercy Medical Center's community is comprised of 51 ZIP codes in the 21 towns/cities in Hampden County.

Several of these towns/cities include other unincorporated areas or villages. For the purposes of this assessment, all data are presented at the town/city level. The following exhibit identifies the villages and ZIP codes that are part of each town/city assessed.

County, Town/City, and Villages	ZIP Code
Hampden Towns	
Agawam	
Agawam	01001
Feeding Hills	01030
Blandford	
Blandford	01008
Brimfield	01010
Chester	01011
Chicopee	01013
	01014
	01020
	01021
	01022
East Longmeadow	01028
Granville	01034
Hampden	01036
Holland	01521
Holyoke	01040
	01041
Longmeadow	01106
	01116
Ludlow	01056
Monson	01057
Palmer	
Palmer	01069
Bondsville	01009
Thorndike	01079
Three Rivers	01080
Russell	01071

County, Town/City, and Villages	ZIP Code
Hampden Towns	
Southwick	01077
Springfield	
Springfield	01101
	01102
	01103
	01104
	01105
	01107
	01108
	01109
	01115
	01118
	01119
	01128
	01129
	01138
	01139
	01199
Indian Orchard	01151
Wales	01081
West Springfield	01089
	01090
Westfield	
Westfield	01085
	01086
Woronoco	01097
Wilbraham	01095
	01195

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SURVEY QUESTIONNAIRE

balance

HEALTH & WELLNESS NEWS FOR WESTERN MASSACHUSETTS SP+SU|13

Become an **Empowered Patient**

IN THIS ISSUE:

Coming Soon!
Mercy Medical Center will soon be providing a patient portal, a way to allow patients to access their own health information in a safe and protected way—delivered to your desktop, smartphone, or tablet app!

Take Two Apps and Call Me in the Morning

Make your smartphone or tablet your health coach.

HEALTH TRACKERS AND symptom checkers can help keep you well, and also provide valuable guidance when you do get off track. Applications (apps) lack the depth of a conversation with a health provider and cannot be substituted for professional medical advice, but for everyday use, they're portable, speedy, and often free.

No app is perfect. Try out several, and then weigh the good and bad of each until you find the app that's right for you.

Health Trackers

If you have a chronic health condition, it can be tough to juggle metrics and medications. That's where health trackers come in.

An app such as **HandyLogs** (www.handylogs.com) can make monitoring and medicating simple. For instance, if you have diabetes, you can record your glucose readings and input medications. More than a memory assist, HandyLogs has a function that allows you to collect data from multiple devices to help look for trends over time and share your historical data with a health provider. HandyLogs offers specific versions for high blood pressure, weight-loss goals, and more.

The good: Powerful analytics allow you to drill deep into your monitoring logs.

The bad: To combine analytics for different conditions, such as cholesterol tracking with glucose tracking, you need to invest in the paid, premium version.

Available for: Android, Blackberry, iPhone, and iPad

Symptom Checkers

Symptom apps may include dictionaries or graphic illustrations to help users explore symptoms. The apps help you determine what's wrong, how to fix it, and when you need outside help.

Supported by a portable app and a website, **iTriage** (www.itriagehealth.com) offers a simple, user-friendly interface. Click on the illustration to isolate a body part, then scroll through lists of symptoms associated with that body part. After helping you narrow down your symptoms, the app suggests a possible condition and directs you to several appropriate facilities (clinics, emergency rooms, or specialists) for the problem. It even includes an estimated price list for treatment.

The good: There's no cost to use iTriage. The interface has simple pictures, clear text, and helpful information about medical conditions and medications.

The bad: Some guidance may be generalized. For instance, a user can drill down to identify a strained ligament. The app may recommend a podiatrist, among other providers, which may not be most appropriate for the location of the injury.

Available for: Android phones or tablets, iPhone, and iPad

HAVE YOU TRIED THE ITRIAGE APP? VISIT WWW.ITRIAGEHEALTH.COM TO LEARN MORE.

contents

ON THE COVER:
Become an Empowered Patient

Mercy
MEDICAL CENTER

A member of the Sisters of Providence Health System and Catholic Health East, sponsored by the Sisters of Providence.

Committed to providing great care, delivering it efficiently, and living up to our Mission of being a "transforming, healing presence in the communities we serve."

Dear Friends,

Mercy Medical Center continues to focus on initiatives that reflect our "zero defect" mentality regarding quality and safety measures. For example, Mercy's CareLink electronic medical record initiative incorporates evidence-based care and best practices to ensure the coordination and continuity of the highest quality of care, through the implementation of enhancements to our electronic medical record system, the development of evidence-based orders and documentation, and changes in workflow processes.

Mercy is also developing a Health Information Exchange to seamlessly and safely exchange data between physicians and Mercy. The health information exchange will also include a patient portal that provides patients with safe electronic access to their medical information such as laboratory test results.

We are in the process of converting 75 percent of our inpatient rooms to private rooms; studies show that patients in private rooms have lower infection rates and rest more comfortably in a quieter, peaceful environment of care.

With deductibles and co-pays on the rise, the issue of health care costs is more relevant to patients. Mercy has partnered with Noble Hospital, leading local physicians, and Accountable Care Associates to launch the Accountable Care Organization of New England (ACONE). The ACONE is designed to provide high-quality care at a lower cost by improving the management of chronic disease, reducing hospital admissions and readmissions, and providing shared incentives for better outcomes.

Mercy has launched our CareConnect initiative, a care integration system that will transform care delivery using evidence-based protocols, a computerized patient tracking system and new care coordinator positions. In combination, these elements are effective in improving the patient experience of care in our hospital and reducing costs.

Construction is underway for a new Medical Office Building on the Mercy campus. The three-story building will include 25,000-square feet of medical office space on each floor. The building will be constructed utilizing "green" technologies and will be an environmentally friendly and responsible structure.

As we move through 2013, ever mindful of our role as caretakers, we look forward with confidence in our ability to innovate and transform in ways that are best for our patients and our entire community. We strive to provide the best health care and the best health care experience possible. Take a closer look in this issue of *Balance* to see how we are taking important steps to improve your health care experience and learn about some of the amazing Sisters of Providence Health System services spotlighted here.

Your partner in good health,

Daniel P. Moen
PRESIDENT AND
CHIEF EXECUTIVE OFFICER
Sisters of Providence Health System

One of Mercy's newly renovated healing spaces

Become an Empowered Patient

Navigating your way through the health care system can be daunting. Mercy Medical Center can help.

ILLNESS IS A complicated matter. From understanding your condition to finding its best care, the whole process can easily be overwhelming. But there are many steps you can take to feel more empowered.

To begin, improve your health literacy. Health literacy involves understanding the information you're receiving and being able to put it to good use. Don't be put off if you don't immediately understand everything you read or hear; everyone experiences trouble understanding at times.

Help Yourself

You can improve your health literacy by:

❑ **Asking questions.** Ask for clarification of anything you don't understand.

"When we go to the doctor, often we get nervous and forget the questions we wanted to ask," says Sharon Adams, RN, senior vice president-patient care services and chief quality officer at Mercy Medical Center. "That's why we should think about questions beforehand, write down signs and symptoms, and note any changes in our health care. Don't be frightened to ask what tests are being done and why, and ask lots of questions about any recommended medications. We need to take ownership of our care and make sure we're in control of the situation."

Physicians count on communication as a primary diagnostic tool. Feel free to ask about anything that concerns you, even embarrassing matters; your physician has seen and heard it all before.

❑ **Repeating information** back to the doctor or nurse will give him or her a chance to correct any misunderstandings or provide additional information. Physicians and patients often have very different understandings of information.

❑ **Bringing medications**—including over-the-counter medications, herbs, or other supplements—to your doctor's appointment. This gives the doctor the opportunity to discover any potential adverse drug interactions.

❑ **Carrying a card with information on all your medications** (including OTC medications, herbs, and supplements). As you go through the system, you'll be amazed at how many times you are asked about this.

❑ **Using the Internet** to learn about specific conditions and other information. If you go online, use reliable sources, such as www.my.clevelandclinic.org, www.mayoclinic.com, or www.ahrq.gov.

Bring Along a Friend or Loved One

Consider taking another adult with you during visits to act as your advocate. Having someone with you during an appointment may be especially helpful if you are anxious or expect to receive critical or potentially upsetting test results. What you hear may affect your ability to follow the physician's discussion, so having someone there will help with understanding and remembering specific details.

The person accompanying you to the appointment should be well-informed about your situation, including your medical history, your concerns, tests you've had, medications you are taking, whether you need help with reading or don't use English as your primary language, and how to get in touch with family members. Mercy provides interpreters for non-English speaking patients and family members and special equipment for hearing-impaired persons.

In the Hospital

Navigating your health care can be a real challenge, especially when you're admitted to a hospital. Mercy Medical Center's new CareConnect program can make the process easier. Among the program's many patient-friendly features, CareConnect provides patients and families with an itinerary of each day's activities, from admission to discharge.

"Many times patients feel they don't have control while in the hospital, and things come as a surprise," Adams says. "CareConnect creates a hospital-wide coordination of patient flow so it appears seamless to the patient. The new system makes patients feel comfortable about what's going on and how it will impact their day. CareConnect is a prime example of Mercy's commitment to high-quality patient care and to being the Greater Springfield area's provider of choice."

TO LEARN MORE ABOUT CARECONNECT, CALL 413-748-9032.

Reinventing Care Coordination

CareConnect will soon make health care navigation at Mercy Medical Center even easier.

"CareConnect is a complete transformation of our model of care," says Scott Wolf, DO, MPH, senior vice president of medical affairs, chief medical officer, and chief operating officer, Mercy Medical Center and Sisters of Providence Health System. "It will be like having an air traffic controller for the hospital."

CareConnect at Mercy, the only hospital in the region with such a program, operates from a new Care Coordination Center hub. Information passes to and from the hub, and it is used to orchestrate the flow of activity throughout the hospital.

"From the beginning, patients are made aware of how many days they can expect to stay," says Sharon Adams, RN, senior vice president-patient care services and chief quality officer at Mercy. "This allows patients to have a sense of control."

The Care Coordination Center makes patient hand-offs from unit to unit more efficient than ever and improves scheduling. Patients benefit by decreased wait times for tests to be completed.

"The operation focuses on the patients' experiences and outcomes," says Dr. Wolf. "This is an enormous investment to ensure patients at Mercy receive optimal, world-class care. At the end of the day, we're here to serve patients and the community in the best way we can."

careCONNECT

Together, doing the right thing, the right way, every day for every patient

clip and save

Personal Medication Profile

Please fill out in pencil

Name: _____

Address: _____

City: _____

State:_____ **Zip:**_____

Phone # (Home): _____

Primary Care Physician Name:

_____

Phone #: _____

Other Physician's Name:

_____

_____

Physician's Phone #:_____

Pharmacy #1:_____

Phone #:_____

Pharmacy #2:_____

Phone #:_____

Emergency Contact: _____

Phone #:_____

Name of Health Care Proxy:

_____

Vaccination:

- Influenza – Date:_____
- Tetanus® – Date:_____
- Pneumococcal – Date:_____

List of Medications

Name	Dose	Times

Over-the-counter Medications/Herbals

Allergies: _____

Mercy MEDICAL CENTER

Our mission is to heal. Our passion is to care.

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Mercy Medical Center is a member of the Sisters of Providence Health System and Catholic Health East, sponsored by the Sisters of Providence.

M905PHA • Rev. 8/07

Innovations & Improvements

Mercy Medical Center's commitment to excellence drives an even higher standard of care. As a result, we are continously making improvements, and we have a lot to share.

MyHealth
JOURNEY TO BETTER HEALTH

Want to support the important work of Sisters of Providence Health System? Our fund development team offers a wide array of opportunities to be part of our work, including "Catch the Spirit" programs to learn more, an annual fundraising lunch, charitable gift annuity opportunities, online giving and online store, and much more. Discover more at **www.sphsfunddevelopment.com.**

FROM IMPROVING PATIENT safety to launching new technological systems, every change that takes place at Mercy means enhanced care. Here's the latest.

Finding the Evidence

Mercy team members have been utilizing the most up-to-date research on best care practices, patient safety, and evidence-based medicine. Putting their heads together to turn these studies into day-to-day processes, leaders of programs such as Mercy's CareLink have implemented enhancements to the electronic medical record system, created new workflow routes, and updated hospital documentation. Our goal is total safety, or "zero defects."

Information Revolution

On the subject of developing new programs, Mercy is also working on a new communication program to connect care providers and patients directly. Called a health information exchange, the program—which contains portals for both patients and providers—takes the form of an online system that can be used for physician-to-hospital and physician-to-physician exchange of information. In addition to the physician portal, patients also use the patient portal to access their health records from home with all the security that medical records require. Whether patients want access to laboratory tests or medical histories, they'll be able to find the information instantly through the exchange.

Offering More Privacy

When poring through the evidence for patient safety programs, it was discovered that not only do patients prefer private rooms during a hospital stay, but in some cases it can help lower the infection rate. As a result, 75 percent of all inpatient rooms are being transformed into private rooms, allowing patients a more peaceful stay at Mercy.

Lowering the Costs

To fight rising costs, Mercy has joined Noble Hospital and numerous local physicians to start the Accountable Care Organization of New England (ACONE). Through ACONE, the groups will help each other manage chronic disease, reduce unnecessary readmissions, prevent unnecessary emergency department visits, and share in the benefits of achieving excellent outcomes and lower costs.

ACONE
Accountable Care Organization of New England

Expanding Your Options

We're working on a new three-story, 75,000-square-foot medical office building, which will provide access plus convenience by housing several medical practices, including Hampden County Physician Associates, two Mercy physician practices, Weldon Rehabilitation Hospital's outpatient programs, and Mercy Hearing Center. All construction is being done with environmental responsibility, recognizing not only the inherent value of protecting our natural resources but also the health benefits to our neighbors of building in a "green" manner.

STAY ON TOP OF THE LATEST NEWS FROM MERCY MEDICAL CENTER AT WWW.MERCYCARES.COM.

Brightside
33rd Annual Golf Classic

Teeing Up for Brightside

As we continue to enhance our programs across Sisters of Providence Health System, our fund development team works to foster new partnerships. One way they do that is through the Annual Brightside Golf Classic.

The 33rd Golf Classic takes place Monday, July 22, at the Springfield Country Club and the Ranch Golf Club. Participants will enjoy a dinner reception at the Springfield Country Club immediately after golfing, but that's just a small part of the great feeling they'll have that day. By sponsoring or taking part in the Classic, golfers support Brightside's important work with children and their families throughout Western Massachusetts. What could be better than helping a child in need?

Golf for a Good Cause

The founding ministry of Sisters of Providence Health System, Brightside continues to offer essential home-based counseling services for children and their families in our community. Offering wraparound services for children facing potential psychiatric hospital placements, the program helps young people have brighter, healthier futures.

While many more families would love to take part in this wonderful program, the need for funding requires many children to wait until Brightside can expand its services. That's where the community comes in. Giving to Brightside, whether through the Golf Classic or through a personal donation, offers children hope for tomorrow. Brightside continues its proud legacy of caring for children, serving more than 500 children and their families each year. It is with great pride that we celebrate the 140th anniversary of the Sisters of Providence this year and note their 120th year as a Diocesan Congregation.

Please contact Brenda McCormick at 413-748-9920 to find out more about supporting Brightside through the 33rd Annual Golf Classic, or visit www.sphsfunddevelopment.com/events.

Taming Teen Angst

Many parents are bewildered when an affectionate, happy child suddenly turns into a teenager—sullen and distant, or moody and melodramatic. With patience and persistence, you can navigate the turbulent teen years together and become a stronger family in the long run.

YOU MAY RECALL life as a teenager, but your child's experience is likely to be very different. Children become preteens earlier now—as young as age 9 for girls and 12 for boys. Also, the effects of peer pressure and media influences are greater today.

"Parents can best prepare by educating themselves on what is normal and explaining what the child can expect," says Maria Zygmont, LMFT, director of Brightside's Family Stabilization Team and Community Support Program. "Sharing what you've read helps validate the advice, so it's coming from an expert—not just mom and dad."

Remember the "terrible twos?" The teen transformation is similar; in both stages, children develop independence and identity. But teens have to contend with much more rapid and significant changes in hormones and brain structure. Confusing physical sensations, unfamiliar emotions, and the influence of parents, peers, and popular characters all collide in the teenage mind, requiring time and effort to sort out.

Making the Transition

During the teen years, your child may disengage, becoming engrossed in electronic devices or disappearing into activities and friendships that exclude you. When your child shuns you and questions your values, it's tempting to overreact, but that approach can backfire. Open communication helps you maintain a solid connection with your teenager, while you simultaneously begin to "let go."

Work to build that bond at an early age, and your preteen child will be more receptive for it to continue. Participate in your child's activities, and talk about his or her interests. Be willing to listen objectively to his or her concerns. Your child will be more likely to open up if you do not judge, blame, or shame him or her.

"Teens are going to make mistakes," Zygmont says. "Let your child know you are there to help."

Accepting that your child is growing into an independent adult does not mean you have to tolerate unacceptable or dangerous behavior.

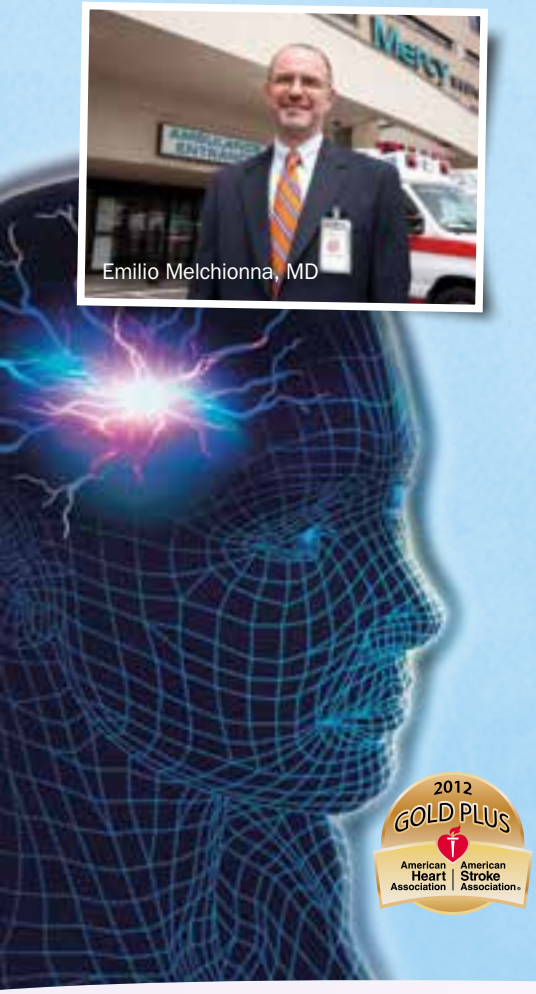
"Parents should not try to force their own viewpoints on a child," Zygmont says. "However, parents must set firm and consistent limits and consequences."

If you worry your child's behavior is more than normal rebelliousness, don't be afraid to step in. If an outgoing child suddenly grows silent and solitary or has always earned good grades but is now failing, it may signal a problem.

If your child participates in very risky behaviors—such as cutting, drinking, drugs, running away, sneaking out, or isolation—don't let it escalate. Consider individual or family therapy. Identify how family members can contribute to solutions. If you feel unable to handle your child's behavior yourself, seek professional help.

Maria Zygmont meets with a client in her home.

IF YOU ARE CONCERNED ABOUT YOUR TEEN'S BEHAVIOR, BRIGHTSIDE FOR FAMILIES AND CHILDREN CAN HELP. TO LEARN MORE, CALL 413-788-7366.



Stroke—No Time to Wait

Every four minutes in America, a person dies of a stroke. However, a clot-busting medication known as tissue plasminogen activator (tPA), when given within three hours of symptom onset, can save lives.

WHEN AN ISCHEMIC stroke strikes suddenly, an artery supplying blood to the brain is blocked. The longer the blockage is left untreated, the more fragile brain cells die.

"Approximately 2 million brain cells are lost every minute a stroke continues without treatment," explains Patti Henault, RN, stroke coordinator at Mercy Medical Center. "For an ischemic stroke, medication can be given to help dissolve the clot. But as with any type of stroke, time is brain and every second counts. Getting a patient to the hospital's emergency department [ED] is an important first step."

When medically appropriate, tPA can be given intravenously or by arterial catheter.

"Clot-busting drugs dissolve the clot and reestablish blood flow. Studies show that patients who receive tPA have improved outcomes several months after a stroke," Henault says. "The ED nurses at Mercy have been specially trained to recognize stroke symptoms and call a 'stroke alert' when appropriate. We can then begin to administer tPA, if necessary, and get the patient on the road to recovery faster."

Once the stroke alert is sounded, a dedicated stroke team responds. This group of highly skilled professionals consists of the ED provider (a medical doctor or physician assistant), ED nurse, neurologist on call, neurosurgeon on call (if the stroke is hemorrhagic—caused by a ruptured blood vessel), computed tomography scan technician, radiologist, phlebotomist/ED technician, and stroke coordinator.

STROKE IS ALWAYS CONSIDERED AN EMERGENCY. IF YOU EXPERIENCE COMMON STROKE SYMPTOMS, SUCH AS SUDDEN ONSET OF NUMBNESS OR TINGLING OF THE ARMS, LEGS, OR FACE, OR DIFFICULTY SPEAKING, CALL 9-1-1 AND DO NOT ATTEMPT TO DRIVE YOURSELF TO THE HOSPITAL.

Preventive Services For Good Health

Take an active role in your family's well-being with preventive health care.

AS PART OF the Patient Protection and Affordable Care Act, many routine screenings and other preventive care services may now be covered by your health insurance.

Preventive services are broken into three categories.

The adult category includes:

- adult immunizations
- aspirin counseling
- monitoring your basic health "numbers" such as blood pressure and cholesterol
- screening for conditions such as depression

A second category of free preventive services is specifically designed for women, including those who are pregnant, and includes:

- age-specific support, such as osteoporosis screenings
- counseling services
- gynecologic- and obstetric-specific screenings
- supplements

The largest category of complementary preventive services focuses on the needs of children. There are 27 unique preventive health services provided for children free of charge under the Affordable Care Act.

This category covers a wide range of health benefits, including:

- influenza and pneumonia vaccines
- obesity counseling
- oral health risk assessments
- routine vaccinations and screenings
- well-child visits for children until age 21

Work closely with your physician to make the most of these complementary health services and keep your family well.

FOR MORE INFORMATION ABOUT HEALTH CARE REFORM AND THE PREVENTIVE SERVICES COVERED BY THE AFFORDABLE CARE ACT, VISIT WWW.HEALTHCARE.GOV. CONTACT YOUR INSURANCE PROVIDER FOR A DETAILED LIST OF ALL PREVENTIVE SERVICES INCLUDED IN YOUR PLAN.

A Surgical Innovation You Should Know About

In January 2013, Mercy Medical Center acquired a new, leading-edge surgical technology that is changing the norm for biopsy of lung lesions (damaged tissue due to injury or disease) in the central part of the chest. Endobronchial ultrasound (EBUS) provides a way to diagnose and remove lesions in the central chest without having to make incisions.

Conventional diagnosis for lung lesions in the central chest involves a more invasive procedure known as mediastinoscopy. Traditionally, mediastinoscopy required an incision in the neck that could leave noticeable pain and scarring. EBUS combines the internal views of a flexible bronchoscope with the added capabilities of ultrasound imaging at the tip of the scope. This provides the same level of visualization as a traditional mediastinoscopy, but it can be performed as an outpatient procedure with no incision. Because of this, EBUS—conducted while the patient is under minimal sedation—eliminates postoperative pain and allows for a quicker recovery from the procedure.

Behind the Scenes: Thoracic Surgery

When you hear the words "thoracic surgery," you might picture an invasive, open-chest procedure. As Neal Chuang, MD, explains, today's thoracic procedures aren't anything like that.

THORACIC PROCEDURES, WHICH are used to diagnose and treat diseases of the chest, lungs, diaphragm, and throat, have long been considered some of the most invasive procedures surgeons perform. That's because the chest wall—a solid mass of bone and muscle—blocks access to the thoracic region.

"When patients hear they have to undergo chest surgery, most are afraid about their ribs needing to be opened or removed altogether," says Dr. Chuang, thoracic surgeon and director of thoracic surgery at Mercy Medical Center. "Such painful, invasive measures aren't necessary anymore. In fact, many of the diseases we treat can now be addressed through advanced, minimally invasive approaches."

From Technology to Technique

Increasingly, the Thoracic Surgery Clinic at Mercy uses video-assisted thoracic surgery, or VATS, to treat once-complex procedures less invasively. VATS gives Dr. Chuang the ability to clearly visualize the surgical area without having to open the chest cavity through large, painful incisions.

Dr. Chuang specializes in a form of VATS known as thoracoscopic lobectomy. This surgery removes a lobe of the lung affected by cancer or other disease using a thoracoscope—a rigid scope with a lighted camera at the end. The thoracoscope is inserted through small incisions, instead of the larger incision required by traditional surgery. Mercy is one of the few hospitals in the area to offer this minimally invasive approach to removal of lung cancer or diseased tissue.

Neal Chuang, MD

"Thoracic surgery is moving firmly in the direction of minimally invasive procedures, thanks to technologies such as VATS and state-of-the-art instrumentation," Dr. Chuang says. "Patients who undergo minimally invasive thoracic procedures experience less postoperative pain and faster recovery times and can often return home the following day."

TO LEARN MORE ABOUT THORACIC SURGERY AND MERCY'S LUNG CANCER PROGRAM, VISIT WWW.MERCYCARES.COM AND SEARCH "LUNG CANCER."

healthy balance

HEALTH & WELLNESS PROGRAMS FOR WESTERN MASSACHUSETTS

WELLNESS PROGRAMS/ CLASSES

BLOOD DONOR PROGRAM

Participating in the blood donor program enhances a patient's quality of life by providing a unique gift. There is no substitute for human blood. The Blood Donor Program at Mercy Medical Center is also out in the community sponsoring blood drives with local businesses. Donate blood. It's safe. It's simple. It saves lives. Please visit www.mercycares.com for more information, or call us at 413-748-9511. Follow us on www.Facebook.com/GiveLife.

CHILDBIRTH EDUCATION CLASSES

A variety of childbirth education classes are offered, including Childbirth and Teen Childbirth, Breastfeeding, Expectant Mothers' Fitness, Infant CPR, Breastfeeding and Returning to Work, New Mothers' Exercise, Sibling, and What to Eat During Pregnancy. All programs are open to the community, but preregistration is required. Please call 413-748-7295.

CPR CLASSES

CPR training and refresher classes are held at the Memorial House Auditorium on the Mercy Medical Center campus. For more information, please contact the department of nursing education at 413-748-9029.

DIABETES EDUCATION CLASSES

The Diabetes Education Center at Mercy Medical Center, 300 Stafford Street, Suite 253, offers a variety of classes open to people with diabetes, their family members, and their friends, as well as members of the general public. Join others with diabetes at our every-other-month support group, monthly diabetes self-management classes, and diabetes foot exams. Certified diabetes educators lead discussions and activities to assist in managing your diabetes day by day. To inquire about diabetes classes, please call 413-748-7000.

MERCY HOSPICE VOLUNTEER TRAINING

Touch a life; become a hospice volunteer. We welcome you to join the next Volunteer Training at 2112 Riverdale Street, West Springfield. For more information or to register, please call 413-540-0140, ext. 1143.

HEALTH SCREENINGS

CHOLESTEROL AND BLOOD GLUCOSE SCREENING

Monthly cholesterol and blood glucose screenings are held in Mercy Medical Center's Deliso Conference Center's Breck Room. The fee is $10 for the cholesterol screening and an additional $2 for the blood glucose screening. Fasting for 12 hours is required (water is permissible). Preregistration is not necessary. For more information, please contact the department of nursing education at 413-748-9029.

MERCY HEARING CENTER

The Mercy Hearing Center holds regular seminars, hearing screenings, and luncheons at no charge. Staffed with caring professionals who provide diagnostic, treatment, rehabilitation, and counseling services for people with hearing problems, the center has licensed, certified audiologists who hold advanced degrees in hearing assessment and rehabilitation of hearing loss. For more information, please call 413-748-6840.

LECTURE

HEALTH COACH

The Health Coach lecture series provides easy-to-understand information about important health care issues. For more information, please call 413-748-9733.

SUPPORT/THERAPY GROUPS

AMPUTEE SUPPORT GROUP

A peer-level support, education, and advocacy group for individuals who have experienced amputation and their families. Meets the third Tuesday of every month at 6:30 p.m. at Mercy Medical Center's Deliso Conference Center. For more information, please call 413-748-6892.

APHASIA SUPPORT GROUP

People with aphasia will find information and fellowship at these weekly meetings. The group meets every Friday from 9:30 to 11 a.m. at Weldon Rehabilitation Hospital's fourth floor dining room. For more information, please call 413-748-7486.

BRAIN INJURY SUPPORT GROUP

For people who have suffered a head injury as well as their family and friends. The group offers participants the opportunity to share their experiences, achievements, and challenges in an understanding and supportive environment. Meets the third Wednesday of every month at 6 p.m. at Mercy Medical Center's Deliso Conference Center. For more information, please call 413-748-6892.

CANCER CAREGIVER SUPPORT GROUP

For all people caring for someone with cancer and their family members. The group meets the second Monday of every month from 7 to 9 p.m. at Mercy Medical Center's Deliso Conference Center. For more information, please call 413-748-9453.

CANCER SUPPORT GROUP

Provides a safe environment in which people with cancer, family members, and caregivers can express their fears, concerns, questions, struggles, and successes. Meets every Monday from 7 to 9 p.m. at Mercy Medical Center's Deliso Conference Center. For more information, please call 413-748-9453.

GRIEF SUPPORT GROUP

Provides support for people who have experienced loss of a spouse, partner, family member, or friend. Meets every Monday from 5:30 to 6:30 p.m. (excluding holidays) at Mercy Medical Center's Deliso Conference Center. For more information, please call 413-748-9453.

MEMORY LOSS CAREGIVERS SUPPORT GROUP–MOUNT SAINT VINCENT CARE CENTER

The group's focus is to emphasize overall well-being and the spiritual and emotional needs of the caregiver. Meets the first Wednesday of every month from 6 to 7 p.m. at Mount Saint Vincent Care Center, 35 Holy Family Road, Holyoke. For more information, please call 413-532-3246.

SPINAL CORD SUPPORT GROUP

Provides information and support to people with spinal cord injury and their families. Meets the last Tuesday of the month at 6 p.m. at Mercy Medical Center's Deliso Conference Center. For more information, please call 413-748-6892.

STROKE SUPPORT GROUP

Stroke survivors, as well as their families and friends, are invited to attend. Meets the fourth Monday of every month at 7 p.m. at Mercy Medical Center's Deliso Conference Center. For more information, please call 413-748-7486.

TOUR

CATCH THE SPIRIT

A networking and friend-raising informational series. The brief program discusses current services, advancements, what distinguishes us from other providers, and future plans of the health system. Please call 413-748-9920 for more information.

Scan this QR code with your smartphone to access an up-to-date healthy balance schedule.

ASPARAGUS TAPAS
with Red Pepper Sauce

Asparagus, the classic spring vegetable, makes a fun, satisfying, and zesty appetizer. Each serving is bursting with flavor—and vitamins A and C, folate, calcium, and fiber.

INGREDIENTS

Sauce
1 Tablespoon olive oil
2 large red bell peppers, chopped, plus thin strips for garnish
2 cloves garlic, minced
Tapas
2 Tablespoons raspberry vinegar
2 Tablespoons fresh basil, chopped; reserve ½ tablespoon for garnish
¼ teaspoon salt
ground black pepper, to taste
1 ½ pounds asparagus spears, trimmed
Parmesan cheese, shaved for garnish
2 whole wheat bagels, halved and toasted

DIRECTIONS

To make the red pepper sauce, heat oil in large skillet. Add bell peppers and garlic. Stirring occasionally, cook until peppers are soft, about 15 minutes. Remove from heat and set aside to cool slightly.

In a blender or food processor, puree the red pepper mixture until smooth. Add vinegar, basil, salt, and black pepper, and stir until combined.

To prepare the asparagus, boil salted water in a large saucepan. Add asparagus spears and simmer, covered, until tender but firm, about 5 minutes. Drain and set aside.

To serve, pour red pepper sauce onto a large plate. Arrange asparagus over sauce. Garnish with pepper strips and chopped basil, and shave Parmesan over the top. Serve with toasted bagels.

NUTRITIONAL FACTS PER SERVING

254 Calories	**2mg** Cholesterol	**11g** Protein
5.1g Fat	**519mg** Sodium	**10g** Fiber

Source: fruitsandveggiesmorematters.org

Mercy
MEDICAL CENTER

SISTERS OF PROVIDENCE HEALTH SYSTEM, INC.
271 CAREW STREET
P.O. BOX 9012
SPRINGFIELD, MA 01102-9012

Catherine Spath, MD *Michael Craig, MD*

Bone and Joint Experts

We know you want to stay active, and the Orthopedic Care Center at Mercy Medical Center provides expert care for bone and joint injuries that can slow you down. Doctors Michael Craig and Catherine Spath at the Orthopedic Care Center deliver comprehensive care and treatment for conditions including sports injuries, fractures, joint replacement, and arthritis.

Doctor Craig is board-certified by the American Board of Orthopedic Surgery and his post-graduate medical training includes a fellowship in spinal surgery.

Doctor Spath is board-certified and has a Certificate of Added Qualification in Surgery of the Hand. Her particular area of interest is caring for patients with hand/wrist trauma.

From repairing broken bones to replacing joints, the Orthopedic Care Center at Mercy Medical Center can help you get back in the game!

ORTHOPEDIC
CARE CENTER

299 Carew Street, Suite 301
413-748-7300 • MercyCares.com

The best health care experience.SM

Mercy
MEDICAL CENTER

A member of the Sisters of Providence Health System and Catholic Health East, sponsored by the Sisters of Providence.

Exhibit 1 AGO Questions to Providers and Hospitals

Please email HPC-Testimony@state.ma.us to request an Excel version of this spreadsheet.

NOTES:

1. Data entered in worksheets is **hypothetical** and solely for illustrative purposes, provided as a guide to completing this spreadsheet. Respondent may provide explanatory notes and additional information at its discretion.
2. For hospitals, please include professional and technical/facility revenue components.
3. Please include POS payments under HMO.
4. Please include Indemnity payments under PPO.
5. **P4P Contracts** are pay for performance arrangements with a public or commercial payer that reimburse providers for achieving certain quality or efficiency benchmarks. For purposes of this excel, P4P Contracts do not include Risk Contracts.
6. **Risk Contracts** are contracts with a public or commercial payer for payment for health care services that incorporate a per member per month budget against which claims costs are settled for purposes of determining the withhold returned, surplus paid, and/or deficit charged to you, including contracts that do not subject you to any "downside" risk.
7. **FFS Arrangements** are those where a payer pays a provider for each service rendered, based on an agreed upon price for each service. For purposes of this excel, FFS Arrangements do not include payments under P4P Contracts or Risk Contracts.
8. **Other Revenue Arrangements** are arrangements for revenue under P4P Contracts, Risk Contracts, or FFS Arrangements other than those categories already identified, such as managements fees and supplemental fees (and other non-claims based, non-incentive, non-surplus/deficit, non-quality bonus revenue).
9. **Claims-Based Revenue** is the total revenue that a provider received from a public or commercial payer under a P4P Contract or a Risk Contract for each service rendered, based on an agreed upon price for each service before any retraction for risk settlement is made.
10. **Incentive-Based Revenue** is the total revenue a provider received under a P4P contract that is related to quality or efficiency targets or benchmarks established by a public or commercial payer.
11. **Budget Surplus/(Deficit) Revenue** is the total revenue a provider received or was retracted upon settlement of the efficiency-related budgets or benchmarks established in a Risk Contract.
12. **Quality Incentive Revenue** is the total revenue that a provider received from a public or commercial payer under a Risk Contract for quality-related targets or benchmarks established by a public or commercial payer.

2010 The Mercy Hospital, Inc.

					Risk Contracts						FFS Arrangements		Other Revenue Arrangements		
	Claims-Based Revenue		Incentive-Based Revenue		Claims-Based Revenue		Budget Surplus/ (Deficit) Revenue		Quality Incentive Revenue						
	HMO	``	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	Both
BCBSMA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 21,773,762	$ -	$ -	$ -	$ -
Tufts	$ 2,281,621	$ -	$ (22,816)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 81,854	$ -	$ -	$ -	$ -
HPHC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fallon	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CIGNA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,425,609	$ -	$ -	$ -	$ -
United	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aetna	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,345,793	$ -	$ -	$ -	$ -
Other Commercial	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,627,819	$ -	$ 1,812,693	$ -	$ -
Total Commercial	$ 2,281,621		$ (22,816)								$ 51,254,837		$ 1,812,693		
Network Health	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,403,489	$ -	$ -	$ -	$ -
NHP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,871,857	$ -	$ -	$ -	$ -
BMC Healthnet	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 17,026,942	$ -	$ -	$ -	$ -
other Managed care Mediaid	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Managed Medicaid	$ -	.									$ 25,302,287				
Mass Health	$ 20,342,843.39	$ -	$ 455,187.89	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,020,733.40	$ -	$ -
Tufts Medicare Preferred	$ -	$ -	$ -	$ -	$ 11,658,120	$ -	$ 3,707,513	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Blue Cross Senior Options		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,450,564	$ -	$ -	$ -	$ -
Other Comm Medicare			$ -	$ -	$ 4,259,373	$ -	$ 257,164	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Commercial Medicare Subtotal					$ 15,917,493		$ 3,964,677				$ 4,450,564				
Medicare	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 68,582,309	$ -	$ -	$ -	$ -
GRAND TOTAL	$ 22,624,465		$ 432,372	$ -	$ 15,917,493	$ -	$ 3,964,677	$ -	$ -	$ -	$ 149,589,998	$ -	$ 2,833,427	$ -	$ -

2011 The Mercy Hospital, Inc.

	P4P Contracts				Risk Contracts						FFS Arrangements		Other Revenue Arrangements		
	Claims-Based Revenue		Incentive-Based Revenue		Claims-Based Revenue		Budget Surplus/ (Deficit) Revenue		Quality Incentive Revenue						
	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	Both
BCBSMA	$ 20,095,651	$ -	$ 401,913	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,633,712	$ -	$ -	$ -	$ -
Tufts	$ 2,389,847	$ -	$ (23,898)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 167,026	$ -	$ -	$ -	$ -
HPHC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fallon	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CIGNA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,887,756	$ -	$ -	$ -	$ -
United	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aetna	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 973,947	$ -	$ -	$ -	$ -
Other Commercial	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 32,853,903	$ -	$ 1,595,256	$ -	$ -
Total Commercial	$ 22,485,499		$ 378,015								$ 38,516,345		$ 1,595,256		
Network Health	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,153,488	$ -	$ -	$ -	$ -
NHP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,230,389	$ -	$ -	$ -	$ -
BMC Healthnet	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,482,380	$ -	$ -	$ -	$ -
Fallon	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Managed Medicaid	$ -	.									$ 25,866,256				
Mass Health	$ 11,785,432.72	$ -	$ 912,216.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 947,743.97	$ -	$ -
Tufts Medicare Preferred	$ -	$ -	$ -	$ -	$ 13,497,832	$ -	$ 1,883,713	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Blue Cross Senior Options	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,148,721	$ -	$ -	$ -	$ -
Other Comm Medicare	$ -	$ -	$ -	$ -	$ 4,694,773	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Commercial Medicare Subtotal					$ 18,192,605		$ 1,883,713				$ 3,148,721				
Medicare	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 69,580,183	$ -	$ -	$ -	$ -
GRAND TOTAL	$ 34,270,931		$ 1,290,231	$ -	$ 18,192,605	$ -	$ 1,883,713	$ -	$ -	$ -	$ 137,111,505	$ -	$ 2,543,000	$ -	$ -

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	P4P Contracts				Risk Contracts						FFS Arrangements		Other Revenue Arrangements		
	Claims-Based Revenue		Incentive-Based Revenue		Claims-Based Revenue		Budget Surplus/ (Deficit) Revenue		Quality Incentive Revenue						
	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	HMO	PPO	Both
BCBSMA	$ 19,163,710	$ -	$ 383,274	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,362,862	$ -	$ -	$ -	$ -
Tufts	$ 2,461,952	$ -	$ (24,620)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 229,342	$ -	$ -	$ -	$ -
HPHC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fallon	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CIGNA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,271,207	$ -	$ -	$ -	$ -
United	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aetna	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,202,584	$ -	$ 1,736,523	$ -	$ -
Other Commercial	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 33,853,915	$ -	$ -	$ -	$ -
Total Commercial	$ 21,625,662		$ 358,655								$ 39,919,911		$ 1,736,523		
Network Health	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,182,280	$ -	$ -	$ -	$ -
NHP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,451,350	$ -	$ -	$ -	$ -
BMC Healthnet	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,855,655	$ -	$ -	$ -	$ -
Fallon	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Managed Medicaid	$ -	.									$ 27,489,285				
Mass Health	$ 11,627,485	$ -	$ 669,194	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,126,410	$ -	$ -
Tufts Medicare Preferred	$ -	$ -	$ -	$ -	$ 13,958,812	$ -	$ 876,404	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Blue Cross Senior Options	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,992,973	$ -	$ -	$ -	$ -
Other Comm Medicare	$ -	$ -	$ -	$ -	$ 8,365,438	$ -	$ (9,691)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Commercial Medicare Subtotal	$ -	$ -	$ -	$ -	$ 22,324,250	$ -	$ 866,713	$ -	$ -	$ -	$ 4,992,973	$ -	$ -	$ -	$ -
Medicare	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 81,748,208	$ -	$ -	$ -	$ -
GRAND TOTAL	$ 33,253,147		$ 1,027,849	$ -	$ 22,324,250	$ -	$ 866,713	$ -	$ -	$ -	$ 154,150,376	$ -	$ 2,862,934	$ -	$ -