

Assessing the Impact of Health Reform on the Health Care Workforce

November 2010

Prepared for

Michigan Center for Health Professions
Michigan Health Council
Okemos, Michigan
www.mhc.org

Prepared by

Public Sector Consultants Inc.
Lansing, Michigan
www.pscinc.com

Table of Contents

INTRODUCTION 5

CURRENT WORKFORCE ISSUES 6

 HEALTH PROFESSIONAL SHORTAGES 6

 UNDERREPRESENTATION OF MINORITIES 9

 INADEQUATE INCENTIVES 10

 LIMITED CAPACITY TO TEACH NEW STUDENTS..... 10

PROVISIONS TO ENHANCE RECRUITMENT AND TRAINING 11

 PRIMARY CARE WORKFORCE PROVISIONS 11

 PUBLIC AND COMMUNITY HEALTH WORKFORCE PROVISIONS 14

 NURSING PROVISIONS 15

 OTHER HEALTH WORKFORCE PROVISIONS 15

 PROVISIONS TO INCREASE DIVERSITY AND CULTURAL COMPETENCY WITHIN THE HEALTHCARE
 WORKFORCE 17

 PROVISIONS TO INCREASE FACULTY 18

WORKFORCE ASSESSMENT AND PLANNING..... 20

 NATIONAL HEALTH WORKFORCE COMMISSION 20

 NATIONAL CENTER FOR HEALTH WORKFORCE ANALYSIS 20

NEW MODELS OF CARE DELIVERY AND REIMBURSEMENT..... 21

 HOSPITAL, POST-ACUTE, AND PHYSICIAN BUNDLED PAYMENTS DEMONSTRATION..... 21

 ACCOUNTABLE CARE ORGANIZATION DEMONSTRATIONS 21

 PATIENT-CENTERED MEDICAL HOME MODEL..... 22

CONCLUSION..... 23

LITERATURE CITED 25

Introduction

Shortly after the passage of the Patient Protection and Affordable Care Act, often called the Affordable Care Act (ACA), in March 2010, the Michigan Center for Health Professions asked Public Sector Consultants to assess the legislation's potential impact on the health care workforce. The ACA includes a number of provisions that will directly affect health care workers through grants and incentives for recruitment, retention, and training. The act will also have indirect effects through initiatives that will test new models of care delivery and reimbursement. Perhaps most significantly, reform will challenge the health care workforce by expanding health coverage to millions of Americans and hundreds of thousands of Michigan residents.

This report sets the stage for reform by illuminating the current challenges facing the health care workforce in Michigan and across the United States, including shortages in several professions, undervaluing of primary care services, insufficient numbers of faculty to teach new students, underrepresentation of minorities, and inadequate incentives to bring people into the professions.

The Affordable Care Act authorizes hundreds of millions of dollars to address these health care workforce issues. This report details the provisions found in the ACA designed to:

- Improve the recruitment and training of primary care, public health, nursing, and other health professionals
- Increase the number of health care professionals within medically underserved areas
- Increase the diversity and cultural competency of the workforce
- Increase the number and enhance the training of faculty in health professional training institutions
- Test innovative models of care delivery and reimbursement that recognize the value of primary care services and improve the coordination of care for patients

These provisions are wide-ranging, yet targeted to address the specific needs of the nation's health care workforce and care delivery system. To ensure that Michigan's health care workforce reaps the full benefit of the ACA provisions, the Michigan Department of Community Health and its private sector partners must actively pursue any federal grant opportunities and other federal funds that promise to enhance this key component of the health care system.

Current Workforce Issues

The health care workforce is responsible for meeting the needs of the millions of people nationwide who seek prevention of and care for a variety of conditions and illnesses every year. For many reasons, however, the health care workforce is challenged to meet those demands. These challenges are discussed below, with specific emphasis on Michigan when possible.

HEALTH PROFESSIONAL SHORTAGES

Shortages of health care providers are anticipated in several professions. The Council on Graduate Medical Education (COGME) estimates there will be a shortage of about 200,000 physicians throughout the United States by 2020 (Derksen and Whelan 2009). The shortage of physicians in Michigan could be between 426 and 4,445 by the year 2020 (MHC 2009). Both primary care physicians and some specialists are expected to be in short supply. In 2009, physicians actively practicing in Michigan reported having particular difficulty scheduling, obtaining, or arranging appointments for patients seeking services from specialists in adult psychiatry, child psychiatry, dermatology, endocrinology, and rheumatology (PSC 2009), suggesting potential shortages in these specialties. Among those specialties explicitly addressed in the Affordable Care Act (ACA) that are likely to experience shortages nationally are geriatricians, psychiatrists, and dentists.

The U.S. shortage of nurses is expected to be close to one million by 2025, according to COGME (Derksen, Whelan 2009). In Michigan, there will be an estimated shortage of slightly more than 5,000 registered nurses (RNs) by 2018¹ (MCN July 2009).

One of the primary factors likely to affect workforce demand and increase the potential for shortages is the aging of the population. According to the U.S. Census, the number of people aged 65 and older is expected to increase by over fifty percent between 2001 and 2020 (Etzioni, et al. 2003). People in this age group are twice as likely to seek the services of a primary care practitioner as those in younger age groups (Colwill, Cultice, and Kruse, 2008). Certain surgical specialties are expected to see an increase in demand due to the aging of the population. Some of these specialties include ophthalmology, cardiothoracic, orthopedics, urology, and neurosurgery (Etzioni, et al. 2003).

The aging of the US population is a double-edged sword: just as a large segment of the population will begin requiring more health care services, health care professionals of the same generation will be retiring. Unless new professionals come into the workforce to replace them, shortages will intensify. There are provisions in the ACA that target several aspects of this issue directly.

¹ A rough estimate of the future shortage of nurses in Michigan was calculated by comparing the number of nurses who report that they plan to stop practicing nursing within the next five to ten years to the number of nursing school graduates anticipated to enter the workforce in the same time period. A number of other assumptions were also taken into consideration and can be found in the *Profile of Michigan's Nursing Workforce 2009* (MCN, July 2009).

Another factor that may contribute to shortages in the health professions is the fact that younger generations of physicians and other health professionals are striving for a greater balance between work and home. Younger physicians are more likely to seek a work schedule that permits them to spend more time with family, travel, and engage in other activities. These physicians are spending fewer hours in the clinical setting compared to physicians of a generation ago, which reduces access to care for patients (Flaherty 2003).

Physicians also spend time working in other professional activities that may reduce the amount of time they might otherwise spend caring for patients. In Michigan in 2009, 17 percent of active physicians reported spending time in research related activities; 18 percent reported teaching in a classroom setting, and 15 percent were working as administrators of medical schools, hospitals, health plans or nursing homes (PSC 2009).

Health Professional Shortage Areas

Areas with too few health professionals to meet the needs of the population are designated by the federal government as Health Professional Shortage Areas (HPSAs). HPSA designations are made for primary medical care, dental care, and mental health care. There are three types of HPSA designations: geographic areas, population groups (e.g., low-income populations), and facility-specific (e.g., federally qualified health centers or correctional facilities).

Geographic HPSA designations are based on the ratio of an area's resident civilian population to the number of providers in the area. Population group HPSAs are based on the ratio of a specific population group (e.g., low-income residents) to the number of providers who serve that population (e.g., physicians who accept Medicaid or uninsured patients paying on a sliding fee scale). In order to receive HPSA designation, specific facilities must serve patients from previously designated geographic areas or population groups and must show that there is a need for services that is greater than the facility can provide (DHHS/HRSA N.d.).

As of December 2009, 67 of Michigan's 83 counties had either a partial or full-county geographic or population group primary care HPSA designation. While some of the population group designations are for migrant seasonal farm workers and Native American tribal communities, most are for low-income populations. Sixty counties in the state have either a partial or full-county geographic or population group dental health care HPSA designation. All of the population group dental HPSAs are for either low-income or Medicaid-eligible populations. Approximately half (52 percent) of dentists who provide patient care services indicate that they provide care to children covered by Medicaid or MICHild in a typical month, but only 10 percent of dentists are currently accepting new Medicaid patients (PSC January 2010a). Mental health care HPSAs exist in 70 of Michigan's 83 counties. All of the mental health HPSAs are for geographic areas or specific facilities.

Studies have shown that physicians and other providers tend to practice where they are trained, which may lead to disproportionate clusters of certain types of providers in some areas and shortages in others. In order to encourage providers to practice in underserved areas, the ACA includes Title VII grants that will create primary care residency training in federally qualified health centers (FQHCs) and Title III grants for community teaching

programs (Adashi, Geiger, and Fine 2010). The ACA also includes provisions to address the willingness of providers to accept patients covered by Medicaid.

Shortages in Primary Care

The ratio of primary care physicians to specialists is an important factor in population health. Most countries with economies similar to that of the United States support a primary care workforce of 50 percent to 60 percent of its practicing physicians. Studies have shown that countries in which the physician workforce is more evenly distributed between primary care providers and specialists enjoy better health outcomes (Goodson 2010). In the United States, approximately 70 percent of all physicians are specialists; the ratio of primary care physicians to specialists in Michigan is similar to the U.S. proportion. In a 2009 survey, only 34 percent of active physicians in Michigan identified themselves as primary care doctors (PSC December 2009).

Undervaluing of Primary Care Services

Factors that influence the number of practicing primary care physicians include, but are not limited to, lower income and typically longer hours than their specialist counterparts. Studies have shown that primary care physicians are likely to earn half as much as a specialty physician. Primary care physicians often maintain a higher patient load than specialists in order to generate more income. Under the current payment system, primary care physicians are generally not reimbursed for the time they spend coordinating care, consulting patients about treatment options, and facilitating preventive services, even though it is precisely these services that can improve health outcomes and promote cost-effective health care (Derksen and Whelan 2009). The ACA includes provisions to test innovative payment models that recognize the value of primary care providers in the health system.

Limited Use of Alternative Primary Care Providers

Some researchers suggest that physician assistants and advanced practice nurses (e.g., nurse practitioners, nurse midwives, and clinical nurse specialists) can help alleviate the shortage of primary care physicians (Derksen and Whelan 2009). The Michigan Council of Nurse Practitioners (MICNP) reports that 59 percent of nurse practitioners practice in primary care settings (PSC May 2010). However, only 35 percent of the nearly 3,200 active physician assistants in Michigan surveyed in 2009 reported practicing in primary care, while 65 percent practiced in other specialties (PSC January 2010b).

A recent national study compared physician assistant specialty distribution in 1997 with that of 2006. The data from this study indicates that while the number of physician assistants increased overall, the percentage of those who are choosing to practice in specialties such as cardiothoracic surgery, orthopedic surgery, and neurosurgery among others, grew at a faster rate than those choosing to practice in primary care specialties. (Morgan and Hooker 2010).

The ACA contains provisions to enhance education and training for physician assistants and advanced practice nurses in primary care, as well as provisions that promote the patient-centered medical home model utilizing multidisciplinary teams that include physician assistants and nurse practitioners.

UNDERREPRESENTATION OF MINORITIES

Lack of diversity within the workforce creates a lack of access to care for minority populations. Physicians who are themselves from minority groups are considerably more likely to practice in areas that are typically underserved (AMSA 2010). Findings from an American Association of Medical Colleges (AAMC) study suggest that only 12 percent of medical students are African American, Hispanic, or Native American, whereas these minority groups together make up at least 25 percent of the U.S. population. The study shows the cost of tuition as the top reason why minority students do not apply to medical school (AAMC 2007).

In recent years, the Michigan Department of Community Health has surveyed a number of health professionals to collect data on a variety of employment characteristics, as well as gender, race, and ethnicity. Exhibit 1 shows that African Americans and Hispanics/Latinos are underrepresented among physicians, nurses, physician assistants, and dentists. The ACA includes a number of provisions targeted to enhance the recruitment, training, and academic performance of minorities interested in the health professions.

EXHIBIT 1
Demographic Characteristics of Selected Health Professionals in Michigan

| | Michigan | Physicians | Nurses (RNs) | Physician Assistants | Dentists |
|-------------------------------------|----------|------------|--------------|----------------------|----------|
| Gender | | | | | |
| Female | 51% | 28% | 95.2% | 63% | 17% |
| Male | 49 | 73 | 4.8 | 37 | 83 |
| Race/Ethnicity | | | | | |
| American Indian/Alaskan Native | 1% | <1% | 1% | 0% | 1 |
| Asian | 2 | 16* | 4.1 | 3** | 3 |
| Black or African American | 14 | 4 | 5.8 | 2 | 3 |
| Hispanic/Latino | 4 | 3 | 1.3 | 2 | 1 |
| Middle Easterner | NA | NA | 0.3 | NA | NA |
| Native Hawaiian or Pacific Islander | 0 | NA | 0.3 | NA | NA |
| White | 81 | 72 | 87 | 92 | 90 |
| Some other race/ethnicity | NA | 3 | 1.1 | 1 | 2 |

SOURCES: U.S. Census Bureau 2009 population estimate; Michigan Department of Community Health (MDCH) *Survey of Physician*, (PSC December 2009); *Survey of Nurses* (MCN 2009); MDCH *Survey of Physician Assistants* (PSC January 2010b); and MDCH *Survey of Dentists* (PSC January 2010a).

NOTE: NA = Not available.

*Physicians who chose "Asian/Pacific Islander" as their race/ethnicity are reported within the percentage of Asian physicians.

**Physician Assistants who chose "Asian/Pacific Islander" as their race/ethnicity are reported within the percentage of Asian physicians.

INADEQUATE INCENTIVES

One of the most significant disincentives for eligible students to enter medical school is the growing cost of tuition and associated debt incurred. Medical students who graduated in 2010 incurred an average debt of about \$30,000 more than those who graduated in 2006 (AAMC 2010b). According to the American Medical Student Association, medical students are increasingly likely to come from wealthy backgrounds as opposed to lower income families. Only 3 percent of medical students come from families with an annual income in the bottom 20 percent of the nation's households. This trend compounds the shortage of primary care physicians: studies also show that students from wealthy backgrounds are less likely to choose to specialize in primary care (AMSA 2010). The ACA offers a number of incentives to encourage students coming from modest means to enter into health professions.

LIMITED CAPACITY TO TEACH NEW STUDENTS

Another barrier to expanding the supply of providers is limited capacity among education programs to teach new health professionals. Primary issues include a limited supply of faculty in health care education programs and limited availability of physician residency slots and clinical placement slots for other health care professionals.

The crisis of recruiting and retaining faculty appears to be most significant in nursing education programs. The shortage of nursing faculty has led nursing schools to deny qualified applicants to their programs (Derksen and Whelan 2009). Across the country, 50,000 otherwise eligible applicants were rejected by a nursing program in 2008 (Alssid 2010). In 2006, the majority of academic nursing programs in Michigan were together able to provide only 6,176 admission slots for the more than 10,000 qualified applications received.² Thirty-three out of the 49 educational programs surveyed in 2006 reported having difficulty filling full-time faculty positions, and 30 programs reported having difficulty filling adjunct faculty positions in particular specialty areas (MCN 2006). Michigan institutions have an opportunity to make use of the incentives provided in the ACA to increase faculty in their medical, nursing, and dental schools.

While medical schools in Michigan have been expanding their capacity to train doctors, the number of residency slots has not been keeping pace. Observers suggest that expanding residency programs will be critical to addressing a potential physician shortage in the state. Likewise, nursing and other health professional programs that require on-site clinical training are struggling to find enough clinical placement slots for their students. This limits their ability to graduate students, creating a bottleneck in the workforce pipeline. While the ACA does not directly address the need for additional clinical placement slots for nurses and other professions, it does provide for the redistribution of graduate medical education residency slots.

² Students apply to more than one institution and may enroll at one institution, but be counted as not enrolled at another institution; therefore these numbers are likely to exaggerate the size of the overall applicant pool.

Provisions to Enhance Recruitment and Training

Under the provisions of the ACA, it is estimated that 32 million Americans not currently insured will gain health coverage. In Michigan, the Michigan Department of Community Health (MDCH) anticipates enrollment of 400,000 newly eligible Medicaid beneficiaries due to the expansion of eligibility to include childless adults up to 133 percent of the federal poverty level (Olszewski 2010). The Kaiser Commission on Medicaid and the Uninsured estimates that by 2019 there could be up to 589,965 new Medicaid enrollees in Michigan as a result of health reform. Of these new enrollees, 430,744 individuals would have been uninsured prior to the implementation of the health care reform law (CHRT 2010). In addition to the increase in Medicaid beneficiaries, the Center for Health Care Research and Transformation (CHRT) estimates that the ACA's individual mandate will require nearly 460,000 currently uninsured individuals to purchase private health insurance (CHRT 2010).

People who lack health insurance are less likely to use a wide variety of health services, or to use those services on a regular basis, than those who are insured (Spolarich and Seng 2009). A 2008 study published in the *Annals of Internal Medicine* reports that about 30 percent of uninsured adults aged 64 and younger have at least one chronic condition, including cardiovascular disease, hypertension, diabetes, hypercholesterolemia, active asthma or chronic obstructive pulmonary disease, or previous cancer. The same study reports a strong association between the lack of health insurance and access to care, suggesting that individuals who are uninsured and have one or more chronic conditions may find that health care services are unobtainable (Wilper, Woolhandler, et al. 2008). Thus, those who were previously uninsured are very likely to begin seeking care, perhaps at a rapid rate, placing an increased burden on the health care workforce.

Considering current and projected health professional shortages prior to the passage of federal reform, the ACA requirement that nearly all Americans obtain health care coverage by 2014 could exacerbate these shortages if nothing is done to increase the number of providers. Consequently, many of the Affordable Care Act's provisions related to the workforce are intended to address the need for more and better-trained health care providers. The new law includes a number of incentives to recruit and/or train primary care providers (e.g., physicians, physician assistants, and other providers specializing in primary care); public health workers; nurses; and other health professionals. Each of the incentives authorized through the ACA is described in detail below by profession.

PRIMARY CARE WORKFORCE PROVISIONS

Primary care providers may be especially challenged by the implementation of the ACA due to provisions that are likely to increase demand for preventive care. The ACA includes provisions to ensure prevention and wellness services for Medicare and Medicaid beneficiaries and those with private insurance at no cost to the consumer. Medicare beneficiaries will be able to have a comprehensive health risk assessment and create a personal prevention plan with their physician. The ACA also requires new health

plans to provide basic coverage for recommended immunizations; preventive care for infants, children, and adolescents; and preventive care and screenings for all women.

Many of the workforce provisions in the ACA focus on the need to build capacity in primary care, given the current imbalance between primary care providers and specialists that exists in the United States and the anticipated increase in demand for preventive care.

Enhanced Payments for Primary Care Providers

The Affordable Care Act addresses the probability that demand for primary care services among Medicaid recipients will increase by raising Medicaid reimbursements made to primary care physicians to the same level as Medicare reimbursements for 2013 and 2014. This could increase the likelihood that primary care physicians will accept additional Medicaid patients, or at least help prevent more doctors from reducing the number of Medicaid patients that they see in their practices—a trend that has been noted in recent reports (Kane 2010).

The ACA mandates that the Centers for Medicare and Medicaid Services (CMS) review and adjust the Resource Based Relative Value Scale (RBRVS) to ensure that service codes are up to date and do not continue inequitable payment for primary care services. The RBRVS was created to determine physician reimbursement by assigning accurate relative values to each service provided.

Recruitment and Training Incentives

The ACA amends the existing federal primary care student loan program to make it more attractive to medical students by making it easier for medical students to receive federal aid and to pay back loans if they choose a primary care specialty (e.g., family medicine, general medicine, internal medicine, or general pediatrics). The law also amends federal medical student loan requirements to include a new repayment option that expands the required length of service in primary care to 10 years (including training years) in order to receive repayment benefits. The loan will acquire a 2 percent interest rate increase (the ACA decreases this rule from 18 percent) if a borrower does not complete their service requirement or repay their loan in full within the designated time frame (DHHS/HRSA 2010).

In addition, the ACA approves an increase and extension of funds available to the National Health Service Corps (NHSC) through fiscal year 2015. The NHSC is a U.S. Department of Health and Human Services program that provides scholarships and loan repayment options to physicians and dentists who choose to practice in a HPSA, providing care for the uninsured and underserved for two to four years. The ACA authorizes the following funding to support the NHSC through fiscal year 2015 (Morgan 2010):

- \$320,461,631, FY 2010
- \$414,095,394, FY 2011
- \$535,087,442, FY 2012
- \$691,431,432, FY 2013
- \$893,456,433, FY 2014

■ \$1,154,510,336, FY 2015

Primary Care Residency Programs

Under the ACA, 65 percent of unused residency slots in the United States will be redistributed to other hospitals according to criteria laid out in the law. The ACA reforms the way in which Medicare-funded residency slots are distributed to support increasing the capacity of primary care services. Redistribution of these slots and their corresponding payments will begin July 1, 2011. Most of the redistributed slots (70 percent) will be given to hospitals located in states or territories that have the lowest resident-to-patient population ratios. Priority will be given to the following states (or territory) in the listed order of: Montana, Idaho, Alaska, Wyoming, Nevada, South Dakota, North Dakota, Mississippi, Florida, Puerto Rico, Indiana, Arizona, and Georgia. The remaining slots (30 percent) will be given to states (or territories) with the highest proportion of population living in a federally designated HPSA. Those states (listed in order of federal priority) are Louisiana, Mississippi, Puerto Rico, New Mexico, South Dakota, District of Columbia, Montana, North Dakota, Wyoming, and Alabama. Other criteria include a hospital's ability to fill any additional residency slots within the first three quarters of 2011 and a hospital's demonstrated capacity to expand its current cap of residency slots. Hospitals will be required to use the majority of the new slots for primary care residents (AAMC 2010a). The ACA authorizes \$25 million for FY 2010 and \$50 million for FYs 2011–2012 for the implementation of this provision (Morgan 2010).

In addition, the ACA mandates residency slots to be permanently redistributed from hospitals that have closed since March 23, 2008. Available slots will be redistributed to other hospitals according to the following sequence of priority: (1) hospitals that are in the same Graduate Medical Education affiliated group (e.g., Michigan Graduate Medical Education programs); (2) hospitals located in the same core-based statistical area as defined by the U.S. Census Bureau's CBSA wage index (e.g., metropolitan, micropolitan); (3) hospitals located in the same state; and, finally, (4) hospitals located in the same Census Bureau region (AAMC 2010a).

According to data from the National Resident Matching Program (NRMP), there were 25,520 residency positions available in the United States in 2010, with about half in primary care disciplines. A total of 1,142 residency positions went unfilled; approximately 450 of these were in primary care. In Michigan, 1,119 residency positions were available in 2010, with nearly two-fifths in primary care disciplines. A total of 65 residency positions were left unfilled in the state; 20 were in primary care disciplines (NRMP, 2010).

Training and Enhancement Grants for Primary Care

The ACA permits planning and program grants totaling \$120 million for FY 2011 and FY 2012 for states to establish a Primary Care Extension Program that engages the state health department, Medicaid and Medicare programs, and colleges and/or universities training primary care providers. The grants will require states to assist in the implementation of patient-centered medical homes; develop learning communities for the dissemination of evidenced-based research; gain support from other programs through a

national network of programs; and create a sustainability plan for when federal funds will no longer be available.

The Primary Care Extension Program is intended to provide opportunities to help primary care providers (e.g., physicians, physician assistants, and nurses) gain new skills in areas such as preventive medicine, health promotion, chronic disease management, mental health and behavioral health services, evidence-based medicine practices, and evidence-informed therapies and techniques. In addition, the ACA authorizes training and enhancement grants for the planning, development, and operation of accredited residency or internship programs in primary care training, including training for physicians and physician assistants.

Another provision in the ACA approves grants for institutions to improve clinical training and research in primary care. The funds will enable collaborative projects to research innovative approaches to teaching primary care providers. Projects with the greatest number of participants from underrepresented populations (ethnic and geographic) or programs providing training to care for the most vulnerable populations will be given priority for funding. The law authorizes an initial \$125 million in FY 2010, and requires 15 percent of those funds to be allocated to physician assistant training programs (Morgan 2010).

PUBLIC AND COMMUNITY HEALTH WORKFORCE PROVISIONS

Grants have been permitted through the ACA to support public health schools, state and local health agencies, and other public health training programs to cover tuition and fees for training in public health and health administration and public health residency programs in preventive medicine and dental public health (\$195 million for FY 2010, plus any additional sums needed to support programs for FYs 2011–2015). To receive funding, professionals must agree to work for three years in a federal, state, local, or tribal public health agency. For educational loans of more than \$105,000, \$35,000 will be paid for each year of obligated service. Smaller loans will be paid not to exceed one-third of the loan balance for each year of service. Eligible individuals must currently be enrolled in or have graduated from a public health degree or certificate program within the past ten years.

The ACA also provides an expansion of public health fellowship programs (\$118.5 million) through the Centers for Disease Control for applied public health epidemiology, public health laboratory science, and informatics (Morgan 2010).

Grants for Community Education and Outreach

States, public health departments, clinics, hospitals, federally qualified health centers (FQHCs), and nonprofit organizations are eligible for grants through the ACA to support the community education and outreach in medically underserved areas provided by community health workers. This includes educating community members on enrollment in health insurance and maternal and child health home visitation services (Morgan 2010).

Alternative Dental Health Care Providers Demonstration Project

The ACA sanctions grants to increase access to dental health care services in rural and underserved communities by establishing a demonstration project training program for alternative dental providers (e.g., community dental health coordinators; advanced practice, independent, and supervised dental hygienists; primary care physicians; dental therapists; dental health aides; or other appropriate health professionals). The ACA has authorized \$4 million for 15 eligible entities, including accredited educational institutions, FQHCs, Indian Health Services facilities, public health clinics, or public hospitals or systems (Morgan 2010)

NURSING PROVISIONS

The ACA includes provisions that assist in building the overall supply of nurses by increasing federal and other nursing student loan funding; expanding eligibility for advanced practice nursing education grants; and establishing a nurse retention grant program. The ACA raises the cap on federal nursing student loans from \$2,500 to \$3,300 annually; and for the final two years of nurse training there is an increase from \$4,000 to \$5,200 annually. The overall amount of federal loans available to nursing students will increase by \$4,000 per student, from \$13,000 to \$17,000, for FYs 2010 and 2011. Federal loan amounts will adjust annually after FY 2011, formulated on cost-of-attendance increase.

In addition, the ACA amends current restrictions on advanced practice nursing education grants by making nurse-midwifery students attending accredited institutions eligible for grant money. To support the efforts of retaining nurses currently in the workforce supply, the ACA establishes a Nurse Retention Grant Program (\$338 million FY 2010) to support career ladder training programs that promote career advancement (e.g., LPN to RN), develop and implement internships and residency programs, and assist in recruiting individuals into the nursing field. The ACA also authorizes grant money through this program to enhance patient care delivery systems related to nursing activities (e.g., collaborative communication) (Morgan 2010)

OTHER HEALTH WORKFORCE PROVISIONS

Geriatrics

Career incentive awards, education center grants, and the establishment of traineeships for advanced nursing education degrees in geriatrics are supported by the ACA to encourage health professionals to enter geriatrics, long-term care, and chronic care management. The Geriatric Career Incentive Awards are intended to increase the number of faculty teaching geriatrics at accredited medical schools. Internal medicine and family practice physicians, advanced practice nurses, psychiatrists, clinical social workers, dentists, pharmacists, and psychologists pursuing an advanced degree in geriatrics are eligible for this award. Career awardees must agree to teach or practice in geriatrics, long-term care, or chronic care management for at least five years in order to receive the incentive. The ACA authorizes \$10 million through 2013 for this incentive.

The ACA mandates the establishment of Geriatric Education Center Grants to operate geriatric education centers; develop fellowship programs focusing on geriatrics, chronic

care management, and long-term care; supplement faculty training in medical and nursing schools; and build the capacity of family caregivers and direct care workers. The ACA authorizes \$10.8 million for 24 centers to each be awarded \$150,000 annually between FYs 2011 and 2014.

The ACA also requires HRSA's Comprehensive Geriatric Education Program funding to be extended to support the establishment of traineeships for advanced practice nursing students pursuing degrees in geriatric nursing, long-term care, gero-psychiatric nursing, or other geriatric nursing fields (Morgan 2010).

Pediatric Sub-Specialties

The ACA approves \$30 million for 2010–2014 for a loan repayment program for physicians in a pediatric medical subspecialty or pediatric surgical specialty. Applicants for this loan repayment program would be required to be employed full-time in one of these specialty areas for at least two years and to provide services in an underserved area for that specialty. Undergraduate, graduate, or graduate medical education loans will be paid not exceeding \$35,000 of repayment for each year of service (for no more than three years) (Morgan 2010).

Direct Care

The ACA provides incentives to increase the number of direct care workers. Direct care workers assist in an estimated 70–80 percent of hands-on care of long-term care patients (PHI 2010). These skilled workers include nursing assistants or aides, home health aides, and personal and home care aides. Sixty million dollars are authorized to recruit and \$10 million to train direct care workers. Grants for scholarships are available to eligible individuals at mid-career to receive additional training, 50 percent for those working in public health settings and 50 percent for direct care workers in nursing homes, assisted living and skilled nursing facilities, and home and community-based care settings (Morgan 2010).

Dentistry

The ACA makes available grants to support training programs for general, pediatric, and public dentistry. Grant funds will go to dental students in the form of financial assistance, and to education programs and hospitals for planning, development, and operation of dental training programs. The law authorizes \$30 million in 2010 and necessary funding for fiscal years 2011 through 2015 for these grants and a faculty loan repayment program (Morgan 2010). In 2009, only 2 percent of active dentists in Michigan identified themselves as practicing pediatric dentistry (PSC 2010a).

Mental and Behavioral Health

The ACA sanctions \$20 million for 2010–2013 for a loan repayment program for physicians practicing in child and adolescent mental and behavioral health (including prevention and treatment services). Applicants for this loan repayment program would be required to be employed full-time in one of these specialty areas for at least two years and to provide services in an underserved area for that specialty. Undergraduate, graduate, or

graduate medical education loans will be paid not exceeding \$35,000 for each year of service (for no more than three years).

The ACA also establishes a number of grants available in FYs 2010–2013 to support mental and behavioral health education and training. Funding includes grants to support institutions of higher education that provide education and training in social work (\$8 million), interdisciplinary training (\$12 million), child and adolescent mental health (\$10 million), and paraprofessional training (\$5 million). To be eligible for funding, institutions must be accredited, plan to expand internships in child and adolescent mental health, and be able to demonstrate a strong diversity in their student population. Funding is also authorized to (1) train mental and behavioral health specialists in emergency care during public disasters, and (2) train practitioners on new care models to provide patients with coordinated care (Morgan 2010).

Emergency Preparedness Training

The ACA establishes a United States Public Health Sciences Track (ACA authorizes funds as needed for the emergency fund) and a Commissioned Corps and Ready Reserve Corps to train and prepare health care professionals for events of national and public disaster. The U.S. Public Health Sciences Track will be funded by the Public Health and Social Services Emergency Fund and will train physicians, dentists, nurses, physician assistants, mental and behavioral health specialists, and public health professionals in team-based service and emergency preparedness to better respond to natural disasters. The Commissioned Corp and Ready Reserve Corps are being established to have on-call, active duty health care professionals ready to serve in a national emergency or public health crisis. The ACA authorizes \$5 million for recruitment through 2014 and \$12.5 million through 2014 for training (Morgan 2010).

PROVISIONS TO INCREASE DIVERSITY AND CULTURAL COMPETENCY WITHIN THE HEALTHCARE WORKFORCE

The ACA amends existing workforce diversity grant language in the Public Health Service code to include funding opportunities (e.g., scholarships or stipends) for nurses in a minority population with a nurse diploma or associate's degree in nursing to enter into a bridge or degree completion program; scholarships or stipends for accelerated nursing degree programs; preparation prior to entering a nursing degree program, including an advanced education program; and nurse retention activities. The ACA also approves \$50 million for the Centers of Excellence program, which was designed to enhance the recruitment, training, and academic performance of minorities interested in health professions. In addition, the ACA calls for demonstration projects to be funded across the country for low income individuals to receive health care profession education and training (Morgan 2010).

The ACA amends section 741 of the Public Health Service code, calling for the development and dissemination of best practices for training health professionals in the areas of cultural competency, prevention and public health, and treatment of individuals with disabilities. The law supports health profession schools and continuing education programs in developing, evaluating, and disseminating research and model curricula, and implementing demonstration projects.

Area health education center (AHEC) programs, which are designed to increase access to care in medically underserved areas, are also supported by the ACA (\$125 million FYs 2010–2014). The ACA amends section 751 of the Public Health Service code to call for the establishment or enhancement of AHEC programs to provide community-based workforce training programs. The goals of these programs as laid out in the law are to:

- educate and train students to become culturally competent health professionals who will provide health care in underserved areas and to health disparity populations;
- increase the number and variety of primary care health professionals who provide care to underserved populations in HPSAs and other medically underserved areas; and
- recruit individuals from underrepresented minority populations or from disadvantaged or rural backgrounds into health careers.

The ACA also allots \$5 million through 2014 to establish grants to support the enhancement of continuing education—with priority given to primary care training—for professionals serving in underserved communities by funding distance learning, collaborative conferences, electronic and tele-learning, and other continuing education activities (Morgan 2010).

PROVISIONS TO INCREASE FACULTY

The ACA offers incentives to increase the number of faculty and enhance the education of faculty at medical, nursing, and dental schools and training hospitals and clinics. Incentives to encourage practitioners to teach include:

- **Primary Care:** The primary care training and enhancement grants include grants to plan, develop, and operate accredited programs and provide financial assistance to physicians and physician assistants to teach family medicine, general internal medicine, general pediatric medicine, and geriatric medicine. Grants will be given for five years, with specific amounts yet to be determined.
- **Nurses:** The ACA establishes a student loan repayment program (funded with “sums as necessary to carry out the provision”) for nurses who pursue a career in nursing education. To be eligible, nurses must have outstanding school debt and must agree to teach at an accredited institution or program for at least four years within a six-year time period.
- **Geriatric Specialists:** The Geriatric Education Center grants support supplemental faculty training focusing on geriatrics, chronic care management, and long-term care. The law supports \$10.8 million for FYs 2011–2013.
- **Dentists:** The ACA authorizes \$30 million for a dental faculty loan repayment grant program. The authorized funds can be used to plan, develop, and operate a loan repayment program for dentists who agree to serve as full-time faculty members for general, pediatric, or public dentistry programs. Institutions are encouraged to collaborate with primary care medical programs, as well as (a) programs that recruit dental students from rural areas, disadvantaged backgrounds, or underrepresented minorities; (b) programs that target serving vulnerable populations; and (c) programs that include cultural competency and health literacy in their curricula.

- **Mental and Behavioral Health Professionals:** As part of the mental and behavioral health education and training grants, grants could be established for institutions offering programs of social work inclusive of faculty development and enhancement in social work. Eight million dollars is authorized for this faculty training (Morgan 2010).

Workforce Assessment and Planning

As studies of the ACA have pointed out, careful tracking of the number of health care practitioners, their specialties, and where they practice will be crucial to the success of health care reform (Derksen and Whelan 2009). The Affordable Care Act includes provisions to address these challenges by establishing a National Health Workforce Commission and the National Center for Health Workforce Analysis.

NATIONAL HEALTH WORKFORCE COMMISSION

The National Health Workforce Commission is intended to fill the need for centralized workforce assessment and planning. The commission will provide a variety of essential services, including identifying barriers of coordination between federal, state, and local agencies, and will assess national workforce supply and demand (Derksen and Whelan 2009). The commission will also be responsible for aligning federal resources to meet training needs and examining the barriers professionals have in entering and remaining in primary care. The commission will evaluate current federal funding for workforce training and provide recommendations to Congress for appropriating funding authorized in the ACA.

The workforce commission may also be charged with evaluating current federal spending on workforce education. This provision would better align federal spending with workforce training based on patient demographics and needs. The commission would provide oversight and require accountability on the part of training facilities for performance, outcomes, and meeting the health care workforce needs of the population (Derksen and Whelan 2009).

NATIONAL CENTER FOR HEALTH WORKFORCE ANALYSIS

The purpose of the National Center for Workforce Analysis will be to provide statistical analysis of workforce issues to be evaluated by the National Health Workforce Commission (Derksen and Whelan 2009). Under the ACA, several regional centers will be established and will coordinate with state and local agencies in order to collect and analyze labor and workforce statistics.

New Models of Care Delivery and Reimbursement

The Affordable Care Act provides opportunities to explore a variety of innovative models of care delivery and reimbursement, each of which will affect how health care professionals do their jobs and are paid. The ACA establishes bundled payment and Accountable Care Organization demonstration projects and authorizes grants for the development of community health teams to implement patient-centered medical homes.

HOSPITAL, POST-ACUTE, AND PHYSICIAN BUNDLED PAYMENTS DEMONSTRATION

Bundled payments are single reimbursements made to hospitals, physicians, long-term care facilities, or other post-acute care facilities for a series of services provided to patients being treated for a specific condition. In 2009, the Centers for Medicare and Medicaid Services (CMS) and the Medicare Payment Advisory Commission (MedPAC) implemented the Acute Care Episode (ACE) Demonstration project to test the efficacy of bundling payments for cardiovascular and orthopedic procedures. The ACA authorizes development of additional demonstrations to study the effectiveness of this payment methodology. Michigan could have an opportunity to build collaborations between physician groups and hospitals that provide these procedures, therefore becoming eligible to apply for federal money to implement a demonstration project to test and support best practices in payment reform.

ACCOUNTABLE CARE ORGANIZATION DEMONSTRATIONS

An Accountable Care Organization (ACO) is another model of health care delivery that uses innovative reimbursement methods to encourage the delivery of high-quality care across an individual's continuum of care. An ACO is "a local entity and a related set of providers, including at least primary care physicians, specialists, and hospitals, that can be held accountable for the cost and quality of care delivered to a defined subset of traditional Medicare program beneficiaries or other defined populations, such as commercial health plan subscribers" (RWJ Urban Institute Oct. 2009). Because a greater number of patients can be efficiently cared for in team-based ACOs, these delivery models could have a potentially positive impact on the primary care workforce by easing the strain of forecasted workforce shortages (Shortell 2010). Specific demonstration programs are established within the ACA for pediatric ACOs as well as the Medicare shared savings program for ACOs.

Pediatric ACO Demonstration

The Affordable Care Act requires the establishment of a demonstration project that encourages pediatric providers seeing Medicaid patients to participate in an ACO. Each pediatric ACO is required to meet certain performance guidelines. As a reward, the participating providers will share in any cost savings (DPC 2010). The ACO model also allows physicians to coordinate a patient's care and share skill sets with providers across a geographic region (Arvantes Aug. 2009)

Medicare ACO Demonstration

The Medicare shared savings program rewards ACOs for engaging in activities that reduce costs and improve the quality of care they provide (ACA Section 3022). Under the provisions of the ACA, providers who participate in qualifying ACOs are paid according to the original Medicare fee-for-service plan and are also eligible to receive payment for shared savings. To receive the additional payments, the participating ACO must meet designated standards relating to quality and cost performance (Davis 2010). The ACO model provides an opportunity for primary care physicians to be compensated for high-quality work and providing “value-added services” such as coordinated care.

PATIENT-CENTERED MEDICAL HOME MODEL

The patient-centered medical home (PCMH) model, originally developed by pediatricians in the early 1990s, encourages patients to be active participants in their health. The model incorporates accessible, continuous, comprehensive, family-centered, coordinated, and compassionate care while changing the way providers are reimbursed. A PCMH generally includes the following elements:

- Enhanced access to care
- Coordinated or integrated care (e.g., patient tracking, patient registry) across all care settings
- Performance reporting
- A multi-disciplinary team approach to care
- Use of evidence-based guidelines in patient care
- A customized plan for preventive services or chronic disease management (e.g., generation of patient reminders)
- Patient self-management support
- Electronic prescribing
- Test tracking (i.e., a systematic approach to follow up on test results)

The ACA sanctions grants (amounts to be determined) to support the development of community health teams to increase access to the comprehensive, community-based, coordinated care found to be achieved by the patient-centered medical home model. A community health team will be further defined, but may include physicians, physician assistants, nurses (including nurse practitioners), pharmacists, nutritionists, dietitians, social workers, behavioral and mental health providers, and chiropractors. Teams will be required to create a care management and monitoring plan, including health promotion and preventive education for patients with chronic illness, in collaboration with local health providers, caregivers, and patients. Reorganizing how care is delivered in a PCMH and reimbursing for services like coordinating care, consulting patients about treatment options, and facilitating preventive services demonstrates a recognition among policymakers of the value of primary care services and those who deliver them.

Conclusion

On March 23, 2010, President Barack Obama signed the historic Patient Protection and Affordable Care Act into law. The legislation includes provisions that are intended to improve the quality and accessibility of health care for American citizens. While some believe the law goes too far in its requirements on states, businesses, and individuals, others are certain it could do more. The probability exists that health care reform will continue to evolve, with the ACA acting as a catalyst toward improvements in the nation's health care system, including the ways in which its workforce delivers high-quality care affordably.

Among the many provisions of the Affordable Care Act, the requirement for individuals to obtain health insurance will add millions of new beneficiaries to the current system, increasing the *demand* for health care services. The fact that the ACA will require health plans to cover certain preventive screenings without cost to consumers will place additional burden on the primary care providers who typically deliver these services.

The ACA offers a wide variety of provisions to increase the *supply* of health care professionals to meet these demands. Health profession shortages are addressed in a number of ways, with provisions to expand the health care workforce by increasing the number of primary care providers, public and community health workers, physician assistants and advanced practice nurses, nurses, dentists, and mental and behavioral health providers. Programs are established to encourage low-income and minority individuals to join the workforce and many provisions encourage providers to practice in typically underserved areas. Provisions are in place to encourage practitioners in a variety of professions to teach, thus fulfilling the need for additional faculty across the health professions.

It will take time to ascertain whether or not any of the provisions of the Affordable Care Act will be adequate to address the deficiencies in the current workforce or to provide the additional workers that will be needed to meet the increased demand for services created by the newly insured. Experts question whether the legislated increase in Medicaid payments to primary care physicians will be sufficient to encourage those providers to see more Medicaid patients. They are also concerned that the two-year window allowed for those increased payments to primary care providers will not be a long enough period of time to improve access meaningfully. In addition, observers caution that programs to increase the number of health care providers must be implemented such that supply is increased where providers are needed most.

The sustainability of the programs and pilots in the ACA that will affect the health care workforce is also uncertain. Much of the funding for recruitment and training programs and incentives is allocated on a short-term basis. A new president or Congress may not support the continuation of these provisions in the future. Numerous demonstration and pilot projects are expected to be implemented through the ACA. It is difficult to know how success or failure of these demonstrations will be measured, much less whether successful pilots will be incorporated into broader practice.

The impact of national health care reform on Michigan's health care workforce specifically is also difficult to forecast. Much of the state's ability to build and improve its workforce, which in turn will improve access to care for the state's population, will be determined by its ability to secure federal grants made available by the ACA. It will be incumbent upon the state and its public and private partners to aggressively pursue these opportunities to ensure that Michigan reaps the maximum benefit of federal health care reform.

Literature Cited

- Adashi, Eli Y., Jack Geiger, and Michael D. Fine. April 28, 2010. Perspective: Health Care Reform and Primary Care—The Growing Importance of the Community Health Center. *New England Journal of Medicine, Health Policy and Reform, Remaking Health Care* [Online, accessed 8/27/10.] Available: <http://healthcarereform.nejm.org/?p=3377>.
- Alssid, Julian L. March 18, 2010. Finding a Cure for the Health Care Workforce Shortage. [Online, accessed 9/3/10.] Available: www.huffingtonpost.com/julian-l-alsid/the-promise-of-green-and_b_595750.html.
- Arvantes, James. August 26, 2009. New Jersey Prepares to Launch Accountable Care Organization: Model Links Providers, Enables Them to Deliver Integrated Care. *American Academy of Family Physicians News Now* [Online, access 09/08/10.] Available: <http://www.aafp.org/online/en/home/publications/news/news-now/professional-issues/20090826nj-aco.html>
- American Medical Association (AMA). April 7, 2010. Major Medicare savings under health reform legislation. [Online, accessed 9/3/10.] Available: www.ama-assn.org/ama1/pub/upload/mm/399/hsr-medicare-savings-under-reform.pdf.
- American Medical Student Association (AMSA). 2010. *Medical Student Debt*. [Online, accessed 8/27/10.] Available: www.amsa.org/AMSA/Homepage/About/Committees/StudentLife/StudentDebt.aspx.
- Association of American Medical Colleges (AAMC). 2010a. *AAMC Summaries of DGME and IME Sections of the Health Reform Bill and CMS Proposed Rules Implementing These Provisions*. [Online, accessed 09/01/10.] Available: <http://www.aamc.org/reform/summary/dgmeime.pdf>.
- . 2010b. *GQ Medical School Graduate Questionnaire: All Schools Summary Report Final* (Prepared by Academic Affairs: Washington, D.C.: AAMC). [Online, access 09/07/10.] Available: http://www.aamc.org/data/gq/allschoolreports/gq_allschools_2010.pdf
- . October 2007. *Medical School Tuition and Young Physician Indebtedness: An Update to the 2004 Report* (Washington, D.C.: AAMC). [Online, accessed 09/07/10.] Available: https://services.aamc.org/Publications/index.cfm?fuseaction=Product.displayForm&prd_id=212&prv_id=256.
- Center for Health Care Research and Transformation (CHRT). June 2010. *Impact of Health Reform on Coverage in Michigan*. [Online, accessed 09/01/10.] Available: <http://www.chrt.org/publications/cover-michigan/issue-brief-2010-06-impact-of-health-reform-on-coverage-in-michigan/>.
- Colwill, Jack M., Cultice, James M., and Kruse, Robin L. April, 2008. Will Generalist Physician Supply Meet Demands of an Increasing and Aging Population? *Health Affairs*. [Online, accessed 10/11/10.] Available: <http://content.healthaffairs.org/cgi/content/abstract/27/3/w232>.

- Davis, Gary Scott, and J. Peter Rich. April 14, 2010. Health Care Reform: ACOs and Developments in Coordinated Care Delivery, Shared Savings and Bundled Payments. *McDermott Newsletters*. [Online, accessed 8/27/10.] Available: http://www.mwe.com/index.cfm/fuseaction/publications.nldetail/object_id/6699b22c-127a-4cf0-a80b-bab7a75767de.cfm.
- Democratic Policy Committee. (DPC) N.d. *The Patient Protection and Affordable Care Act: Section-by-Section Analysis with Changes Made by Title X and Reconciliation included within Titles I – IX where Appropriate*. [Online, accessed 8/27/10.] Available: http://dpc.senate.gov/dpcissue-sen_health_care_bill.cfm.
- Derksen, Daniel J., and Ellen-Marie Whelan. December. 2009. *Closing the Health Care Workforce Gap: Reforming Federal Health Care Workforce Policies to Meet the 21st Century*. Center for American Progress. [Online, accessed 9/3/10.] Available: www.americanprogress.org/issues/2010/01/pdf/health_care_workforce.pdf.
- Etzioni, David A., MD, MSHS, Liu, Jerome H., MD MSHS, Maggard, Melinda A., MD, Ko, Clifford Y., MD, MSHS. August, 2003. The Aging Population and Its Impact on the Surgery Workforce. *Annals of Surgery*. [Online., accessed 10/11/10.] Available: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1422682/>.
- Flaherty, Moira. Work less, enjoy more. *Physicians Financial News*. New York. September 15, 2003. vol 21. Issue 11; page S6.
- Goodson, John D. April 19, 2010. Patient Protections and Affordable Care Act: Promise and Peril for Primary Care. *Annals of Internal Medicine (annals.org)*. [Online, accessed 8/27/10.] Available: <http://www.annals.org/content/early/2010/04/15/0003-4819-152-11-201006010-00249.full#ref-list-1>.
- Kane, Leslie. What Does the Health Care Reform Bill Really Mean for Doctors? *Medscape Business of Medicine*. Posted March 23, 2010. [Online, accessed 8/27/10.] Available: <http://www.medscape.com/viewarticle/719014>.
- Michigan Center for Nursing (MCN). July 2009. *A Profile of Michigan's Nursing Workforce* Prepared by Public Center Consultants Inc. Okemos, Mich.: MCN.
- . *Survey of Nurses 2009*. 2009. Prepared by Public Sector Consultants Inc. Okemos, Mich.: MCN.
- . *Survey of Nursing Education Programs: 2005–2006 School Year*. 2006. (Prepared by Public Sector Consultants Inc.) Okemos, Mich.: MCN.
- Michigan Health Council (MHC) and Michigan Center for Health Professions. January 2009. *A Profile of Michigan's Physician Workforce 2009*. Prepared by Public Sector Consultants Inc. Okemos, Mich.: MHC.
- Morgan, Perri A., and Hooker, Roderick S. Choice of Specialties Among Physician Assistants in the United States. *Health Affairs*. 29, no. 5 (2010): 887–892.
- Morgan, Rachel. National Conference of State Legislatures (NCSL). March 2010 *Summary of the Health Workforce Provisions in the Patient Protection and Affordable Care Act: HR 3590*. Washington, D.C.: NCSL. [Online, accessed

- 09/01/10.] Available: <http://www.ncsl.org/documents/health/HlthWrkfrceProvHR3590.pdf>.
- National Resident Match Program (NRMP). April 2010. *Results and Data: 2010 Main Residency Match*. Washington, D.C.: NRMP. [Online, accessed 10/25/10] Available: <http://www.nrmp.org/data/resultsanddata2010.pdf>.
- Olszewski, Janet. May 12, 2010. Health Care Reform and Michigan. PowerPoint presentation prepared for State Roles in Health Care Reform Roundtable. [Online accessed 09/01/10] Available: www.michigan.gov/documents/healthcare_reform/5-25-10_House_Health_Policy_Health_Care_Reform_322234_7.ppt.
- Paraprofessional Health Care Institute (PHI). February 2010. *Who are direct care workers?* Bronx, N.Y.: PHI. [Online, accessed 09/01/10] Available: <http://www.directcareclearinghouse.org/download/NCDCW%20Fact%20Sheet-1.pdf>.
- Patient Protection and Affordable Care Act (ACA), Enrolled Bill (Final as Passed both House and Senate) – ENR. [Online, accessed 9/7/10.] Available: <http://thomas.loc.gov/cgi-bin/query/D?c111:7:./temp/~c111eByJ7A::>.
- Public Sector Consultants Inc. (PSC). *Nurse Practitioner/Physician Assistant Profile*. May 2010 draft. (Prepared for the Michigan Health Council) Lansing, Mich.: PSC.
- . January 2010a. *Michigan Department of Community Health Survey of Dentists, Survey Findings 2009*. (Prepared for the Michigan Department of Community Health.) Lansing, Mich.: PSC.
- . *Michigan Department of Community Health Survey of Physician Assistants, Survey Findings 2009*. January 2010b. (Prepared for the Michigan Department of Community Health.) Lansing, Mich.: PSC.
- . *Michigan Department of Community Health Survey of Physicians, Survey Findings, 2009*. December 2009. (Prepared for the Michigan Department of Community Health.) Lansing, Mich.: PSC.
- Shortell, Stephen M., Lawrence P. Casalino, and Elliott S. Fisher. 2010. How the Center for Medicare and Medicaid Innovation Should Test Accountable Care Organizations. *Health Affairs* 29, no. 7 (2010): 1293–1298.
- Spolarich, Audrey, and John Seng. July 2009. *The Insured Versus the Uninsured: Data from the Spectrum Health Value Study™*. Washington, D.C.: Spectrum. [Online, accessed 8/27/10.] Available: www.healthvaluestudy.com/insured-and-uninsured.html.
- U.S. Department of Health and Human Services (DHHS), Health Resources and Services Administration (HRSA). Legislative Changes to Primary Care Loan Program Authorized Under Title VII of the Public Health Service Act. *Federal Register* 75, n. 121 (June 24, 2010): 36099. [Online accessed 09/01/10.] Available: <http://edocket.access.gpo.gov/2010/pdf/2010-15354.pdf>.

- . N.d. *Shortage Designation: Health Professional Shortage Areas (HPSAs) HPSA Designation Criteria*. [Citing relevant excerpts from 42 Code of Federal Regulations (CFR), Chapter 1, Part 5 (October 1, 1993, 34–38).] [Online, accessed 9/3/10.] Available: <http://bhpr.hrsa.gov/shortage/hpsacrit.htm>.
- Wilper, Andrew P., Steffie Woolhandler, Karen E. Lasser, Danny McCormick, David H. Bor, and David U. Himmelstein. 2008. A National Study of Chronic Disease Prevalence and Access to Care in Uninsured U.S. Adults. *Annals of Internal Medicine* 149 (3): 170–76. [Online, accessed 9/3/2010.] Available: www.annals.org/content/149/3/170.full?sid=43ffded3-0cec-4359-b4a3-06eb4e3e157f.

