The Impact of the Affordable Care Act on New Jobs

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Introduction

The health care industry in the United States accounted for $2.7 trillion in spending in 2011. More people are employed in health care (including those working in the private and public sectors) than in any other private industry in the United States, accounting for 13% of the workforce. Job growth in the health care industry has been consistently positive, even during recessions. Between 2007 and 2013, employment in health care grew 10.7%, with 1.85 million new jobs, while all other industries declined 2.8%, losing 3.85 million jobs (Wright, 2013).

There are many career fields in the health care sector for individuals at all skill levels. Opportunities range from positions that require little formal training, such as personal care assistants and nursing assistants, to occupations that require postgraduate degrees, such as medicine and pharmacy. The most common occupation in the health care industry is registered nurse (RN) (14%), followed by nursing, psychiatric, and home health aides (12%) (Frogner & Spetz 2013). Of particular note across the different health care sectors is the prominence of clerks, personal care aides, and technicians among the most common jobs; these jobs often are entry-level positions requiring relatively little prior training (Frogner & Spetz 2013).

Unemployment rates are low in health care compared with the rest of the economy (Frogner & Spetz 2013). A primary reason for the low unemployment rates is that supply has not kept up with the growing demand for health services across all occupations and skill levels. Many health care services in high demand, such as home health services, do not require highly skilled workers. Due to the high demand for and low supply of most types of health workers, jobs in health care pay higher wages than in many other service industries, making these jobs particularly attractive (Gitterman, Spetz, & Fellows, 2004). The high demand for health workers across skill levels also provides an opportunity for those who enter the health care industry in lower-skill positions to move up a career ladder to high-skill occupations.

Most analysts expect health care spending and employment to continue to rise, in large part due to the growing population of older Americans who typically require more health care services than do younger people (Cuckler et al., 2013). Implementation of the Affordable Care Act (ACA) of 2010 also will contribute to continuing job growth in health care (Spetz, 2012). In total, Frogner and Spetz (2013) estimate that, over the next decade, the health care sector could add about 4.6 million jobs, which would be a 31% increase over current employment.

This report explores entry-level and low-skill job opportunities that will expand due to ACA implementation. The analyses draw from estimates of future health worker demand published by the U.S. Bureau of Labor Statistics (BLS) and a unique analysis of the effect of the ACA on job growth developed from a microsimulation model (Frogner & Spetz, 2013). This report discusses historic and projected growth rates for entry-level health care careers, defined as those that require a high school degree or lower, including certificate training. We also present case studies that highlight effective education programs that prepare workers for new and changing jobs under the ACA.

Provisions of the ACA That Will Affect Jobs

The ACA is projected to provide health insurance to about 25 million Americans who are currently uninsured (Congressional Budget Office [CBO], 2013). The expansion of health insurance will be the primary reason for health occupation growth under the ACA (Frogner and Spetz 2013). Adults with health insurance are more likely to visit a physician, receive preventive screening tests, access disease management services, and use prescription medications than are the uninsured (Buchmueller, Grumbach, Kronick, & Kahn, 2005). In addition, the demand for care among those previously insured might increase if they are able to change to new health insurance plans with lower out-of-pocket costs (Coffman & Ojeda 2010). Demand is expected to rise for health occupations that support primary care services, such as medical assistants, clinical laboratory professionals, imaging technicians, pharmacy assistants and technicians, phlebotomists, and health educators (Bates, Blash, Chapman, Dower, & O'Neill, 2011; Coffman & Ojeda 2010; Rohleder et al., 2010). In addition, administrative occupations in health care, such as financial operations and administrative support, are likely to expand (Staiger, Auerbach, & Buerhaus, 2011). New jobs are also emerging, such as patient navigators and health coaches, though no state or national data source systematically tracks the numbers of people employed in these new roles.

A number of ACA provisions are designed to increase the use of preventive services to improve Americans' health status and control costs. Many of the same occupations that will be in greater demand due to insurance expansion also will be affected by the emphasis on preventive care. Community health centers are expected to serve about 50 million people by 2019, which will be a substantial increase from the 19 million people served now (Robert Wood Johnson Foundation, 2011).

Incentives in the ACA will encourage greater use of home and community care services. This is anticipated to increase demand for health workers who specialize in community-based care, such as community health workers, as well as lay health workers such as promotoras, who are lay Hispanic/Latino community members who provide basic health education in their community. Demand for home health assistants and personal care aides also is likely to rise to help more individuals remain in their homes rather than be cared for in institutional settings (Spetz, 2012).

Payment reforms that will be piloted for Medicare will incentivize hospitals to invest in services that prevent rehospitalizations and postdischarge complications. Postacute care services are likely to include home health visits and better patient education, further increasing demand for home health aides and assistants (Spetz, 2012). Accountable care organizations will face financial incentives to coordinate care to increase quality and reduce costs, which will also increase the need for patient educators and medic al assistants. Patient-centered medical homes will further drive job growth for medical assistants (Bates et al., 2011).

The increased focus on preventive care and home and community care services under the ACA could imply a reduction in demand for some services like emergency care, resulting in a reduction in demand for certain occupations. However, overall demand for services like emergency care is not likely to decrease in absolute terms. Past research suggests that, as individuals gain health insurance, their use of health services generally increases. Even though the ACA promotes primary care, capacity constraints in some areas will likely prevent full access to that care (Pines, Schneider, & Bernstein, 2011). One study found that, after Massachusetts passed state health reform, emergency room visits increased by 4% overall despite the reduction in the number of uninsured. At the same time, low-severity visits for publicly subsidized or previously uninsured patients decreased slightly, indicating that care-seeking behavior did change slightly among the population most affected by reform (Smulowitz et al., 2011).

Not only will the demand for health care jobs grow, but the roles for some jobs are changing and new types of jobs are being created. Accountable care organizations, patient-centered medical homes, and other new models are leading to more team-based care and enhanced roles for certain professions. One study found that the roles of frontline health care workers, such as medical assistants, community health workers and patient representatives, and those of nonclinical health care workers, such as medical office specialists, office supervisors, and medical records technicians, require a more complex set of skills than they have in the past. This broader set of competencies includes “specific and technical communication and information skills, teamwork abilities, an increased understanding of the health care system, and information technology fluency” (Alssid & Goldberg, 2013, p.11).

New types of jobs are also being created as a result of the changing market. For example, “community health workers, patient navigators, health coaches, care coordinators, and more—are attempting to create

their own space in the health care delivery system as their contributions to the new payment and organizational models become more apparent" (Ricketts & Fraher, 2013, p.1877). However, at present most health care delivery organizations are reimbursed on a fee-for-service basis, and the services these new occupations fulfill are generally not considered reimbursable expenses. Until new payment models, such as bundled payments and performance-based payment, are more widespread, it is not clear to what extent demand for these new occupations can grow (Thom et al. 2013).

The ACA authorized a number of grant and loan-repayment programs that are intended to support education in entry-level and career-ladder programs, most of which Congress has not funded. These programs include:

- A scholarship program was authorized to provide scholarships for mid-career allied health workers to receive additional training. The ACA also authorized the Allied Health Loan Forgiveness Program to encourage graduates of allied health training programs to work in public health settings and/or with underserved populations.

- The ACA authorized funds to provide new training opportunities for direct care workers who are employed in assisted living facilities, skilled nursing facilities, intermediate care facilities for individuals with mental retardation, and home and community-based settings. Those receiving financial assistance and completing training are expected to work in geriatrics, disability services, long-term services and supports, or chronic care management.
- New grants were authorized for demonstration projects to prepare people receiving Temporary Assistance for Needy Families and other low-income people to pursue health occupation education.

Projections of Job Growth

We projected job growth using two methodologies. The first focused on the projected occupation-industry growth rates provided by BLS. The projection methods are detailed elsewhere, but, in brief, the BLS has published estimates of job growth from 2010 through 2020 (BLS, 2013a). These projections were completed after the ACA passed, so the projections take into account the ACA, but the exact methodology is not published. We report the total number of new jobs that will be added to the current number of jobs.

To identify the share of job growth that can be attributed to the ACA, compared with previously established trends, we used a microsimulation model, the Adjusted Risk Choice & Outcomes Legislative Assessment (ARCOLA) model, to estimate the impact of health policy proposals at federal and state levels (see the Technical Appendix for details on the ARCOLA model). The model predicts individual adult responses to proposed policy changes, such as expansions of Medicaid programs and subsidies to purchase private health insurance, and generalizes to the U.S. population with respect to health insurance coverage and the financial impact of the proposed changes. The ARCOLA model first was used for the Office of the Assistant

Secretary for Planning and Evaluation (ASPE) of the Department of Health and Human Services (DHHS) to simulate the effect of the Medicare Modernization Act of 2003 (MMA) on take-up of high-deductible health plans in the individual health insurance market (Feldman, Parente, Abraham, Christianson, & Taylor, 2005). The model was refined later to incorporate the effect of prior health status on health plan choice.

We used the demand growth rates from the ARCOLA mode to decompose the growth rates projected by BLS into "baseline" growth and ACA-driven growth. To calculate the share of occupation growth that would arise from the ACA, we use the BLS National Employment Matrix, which decomposes industry-level employment growth into occupations within each industry. Newly emerging jobs such as patient navigators are not taken into account in the projections. However, because these occupations are new and their long-term financial viability is unproven, it is likely that these new occupations will have a negligible impact on overall employment growth through 2020.

Education and Training for Health Care Jobs

Table 1 (page 16) presents the demographics and socioeconomic status of workers in the health care industry and within health care sectors. Women are substantially more likely to work in health care than in other industries; they represented 75% of health workers, compared with 44% of the overall U.S. workforce. Health care workers are somewhat older than the average for other industries. Other research has found that about one-third of workers in the health care industry are from minority racial and ethnic groups (Frogner & Spetz, 2013). The representation of racial and ethnic groups within occupations was consistent with patterns of educational attainment. For example, the most common occupations for Hispanics, Blacks, and American Indians/Alaskan Natives were aides, assistants, and clerks; health care workers from these racial and ethnic groups also had comparatively low educational attainment levels. The diversity of the future workforce, however, is expected to improve, given that new graduates of health occupation education programs are more diverse than the current workforce (Frogner & Spetz, 2013).

About 38% of health care workers have a bachelor's or higher degree, which is slightly higher than the approximately one-third bachelor's degree share among all occupations in the United States. Nonetheless, many health occupations—including those projected to grow rapidly over the next decade—require no more than an associate degree (**Table 2,** page 17). For example, the BLS projects job growth of over 28% between 2010 and 2020 for pharmacy technicians, medical assistants, and pharmacy aides—occupations in which at least 60% of workers do not have any postsecondary degree and for which a high school diploma is sufficient for entry. Many other occupations require some postsecondary education, but not a degree, such as emergency medical technicians, dental assistants, licensed practical nurses, nursing aides, surgical technicians, and psychiatric technicians. Projected growth in these fields ranges from 15.4% to 33.3%. Job growth for personal care aides and home health aides, which are occupations that do not require a high school diploma, is forecast at about 70% between 2010 and 2020.

Many of these high-growth occupations also are anticipated to have substantial turnover due to people leaving the occupations and retirements, according to BLS projections. As seen in **Table 3** (page 18), a greater number of LPNs and psychiatric technicians will be needed between 2010 and 2020 to replace workers due to turnover than to fill newly created jobs. For other occupations, such as personal care aides, most of the need for new workers will come from newly created jobs. The need for new workers that will arise due to both job creation and turnover is substantial among entry-level occupations that do not require postsecondary education, with 837,483 new home health aides required, 675,109 personal care aides, and over 750,000 workers in the listed occupations that require a high school diploma. Among the occupations that require some postsecondary education, new worker requirements also are substantial; for example, 496,084 nursing aides and orderlies and 369,364 LPNs will be required.

Is Training Capacity Adequate?

Many rapidly growing occupations do not require any formal training, but on-the-job training is important to ensure that workers have the skills needed to provide high-quality, patient-centered care. Home health aides and personal care aides do not need to have completed postsecondary education and typically go through short-term training with their employers. Medical assistants, pharmacy technicians, and medical secretaries typically have at least a high school diploma and receive moderate-length training from employers. Postsecondary vocational school and community college education programs are often available for people interested in pursuing these occupations.

Other health professions require some postsecondary education or certificates and often are aimed at preparing graduates to take a licensing examination. For example, licensed practical and vocational nurse education programs prepare students to take exams approved by their state board of nursing or vocational/practical nursing. Licensure requirements vary across states; for example, psychiatric technicians are licensed in California, but not in most other states.

In 2011, 978,213 postsecondary health occupation degrees and certificates were awarded. The greatest numbers of awards for occupations that generally do not require completion of a degree were for medical/clinical assistants (140,461 awards, 14.4%;, licensed practical nursing (LPNs) (61,647 awards, 6.3%); nursing assistant/aides (50,298 awards, 5.1%); emergency medical technicians (EMTs)/paramedics (26,536 awards, 2.7%); dental assisting (25,043 awards, 2.6%); pharmacy technicians (24,822 awards, 2.5%); and medical insurance coding (23,122 awards, 2.4%) (Table 3).

The last two columns of Table 3 compare the average annual number of new workers required per year for each occupation. For the occupations in which no high school diploma is required—home health and personal care aides—very few people are completing postsecondary education programs, which is not surprising. However, there may be significant training needs among these workers to facilitate the delivery

of high-quality care, and home health aides working in certified home health and hospice agencies are required to obtain formal training (BLS, 2013b). Some states have additional training requirements that exceed federal standards for home health aides, and there is substantial variation across states in the requirements for personal care aides (Paraprofessional Healthcare Institute [PHI], 2013). Among the high-growth occupations that require some postsecondary education, it appears that training capacity is adequate for LPNs, medical assistants, dental assistants, EMTs and paramedics, and surgical technicians. However, there may not be enough capacity for nursing aides and orderlies or for psychiatric technicians, and the number of people completing physical therapy assistant and aide education programs is substantially lower than is required to meet future needs.

While training capacity may appear adequate for certain occupations on a national level, the demand for certain health care occupations and the number of degrees and certificates awarded vary by region. There also may be problems with the accessibility of education. Fortunately, because many high-growth, entry-level occupations do not require formal postsecondary education, students pursuing postsecondary education can often avoid financial barriers. For people who want to pursue occupations for which some postsecondary training is desirable or required, financial support—in the form of scholarships or loans—is often necessary. Nonfinancial barriers often may be more important for some students. For example, many mid-career students face challenges in accessible affordable child care that aligns with their student schedules. Transportation to clinical training sites also can be a challenge.

Gaps in training capacity may exist even within occupations in which training appears to be adequate. For example, an exceptionally large number of people completed a medical assistant education program in 2011, with 140,461 awards conferred. This educational category includes medical secretary programs. Overall, the data suggest that nearly three times as many people complete postsecondary programs in these fields as are needed per year. However, according to documentation, many of these programs graduate people who do not have the skills needed to be successful, particularly in labor markets that are saturated with graduates (San Diego Workforce Partnership, 2011). The same can be said of many other occupations that appear to have adequate postsecondary education capacity; there often is not good alignment between education programs and employers' needs.

Finally, the adequacy of training programs cannot be assessed fully based on Table 3 because the data focus on training programs housed within educational institutions and do not include training that occurs at worksites. On-the-job training is an important way to upgrade health care workers' skills, but comprehensive data on worksite-based training are not available. Growth of new models of health care delivery, such as the primary care medical home, will likely increase the role of on-the-job training, particularly for frontline occupations such as medical assistants (Safety Net Medical Home Initiative,2011).

On-the-job training is particularly important given the documented mismatch between many formal education programs and employers' needs.

Sectoral Training Strategies

One way to ensure that local health workforce needs are met is through the use of sectoral employment strategies. Since the early 1990s, sectoral employment strategies have grown significantly as an approach to workforce training (Maguire, Freely, Clymer, & Conway, 2009). The Aspen Institute Workforce Strategies Initiative describes sectoral employment strategies as those that use a systems approach to workforce development—typically on behalf of low-income individual—that:

- Targets a specific industry or cluster of occupations, developing a deep understanding of the interrelationships between business competitiveness and the workforce needs of the targeted industry;
- Intervenes through a credible organization, or set of organizations, crafting workforce solutions tailored to that industry and its region;
- Supports workers in improving their range of employment-related skills, improving their ability to compete for work opportunities of higher quality;
- Meets the needs of employers, improving their ability to compete within the marketplace; and
- Creates lasting change in the labor market system to the benefit of both workers and employers (Conway, Blair, Dawson, & Dworak-Muñoz, 2007).

Research has demonstrated the effectiveness of sectoral employment strategies. One study with a randomized research design found that participants in three well-established sector-focused training programs earned significantly more and were more likely to work and work more consistently, compared to similar low-income individuals who did not participate in the sector-focused training programs but were free to receive services from any other training programs (Maguire et al., 2009).

Workforce intermediaries, who are often at the center of sectoral employment strategies, are "homegrown, local partnerships that bring together employers and workers, private and public funding streams, and relevant partners to fashion and implement pathways to career advancement and family-supporting employment for low-skilled workers" (Giloth, 2004).

The two case studies below reflect examples of model education programs that were developed in partnership with employers in direct response to the changing needs of the health care industry. These case studies focus on medical assistants as an example of a fast-growing health care occupation for whicha high school diploma is sufficient for entry. Medical assistant education programs were chosen as

examples because medical assistants' roles are expected to change significantly under the ACA. Both education programs reflect a sectoral employment strategy and involve workforce intermediaries.

The first case study describes a program run by the Health Care Workforce Development Program in partnership with Los Angeles County that prepares health care workers, primarily nurse attendants, for new certified medical assistant jobs created as part of the new Patient-Centered Medical Home model being implemented at county clinics in response to the ACA. The second case study describes a program in San Diego County that is upgrading the skills of existing medical assistants by adapting and implementing a newly revised curriculum developed by the statewide Health Workforce Initiative with the involvement of industry experts. This program is being implemented at two clinics with dozens of locations throughout the county in response to those clinics' changing needs, which stem in part from the ACA.

Case Study: Medical Assistant Program in Los Angeles County

Los Angeles (L.A.) County is home to approximately 1.7 million uninsured residents, or nearly one-third of uninsured Californians (California Health Interview Survey [CHIS], 2011-2012). It is projected that between 1.0 and 1.3 million L.A. County residents are expected to remain uninsured under the ACA by 2019, depending on the effectiveness of outreach and enrollment efforts. Some of these uninsured individuals will be ineligible for coverage due to their immigration status, while others will be eligible for Medi-Cal or insurance through the State Health Benefit Exchange but remain uninsured due to lack of awareness of the programs or eligibility requirements, barriers in the enrollment process, or inability to afford coverage (Lucia et al., 2012).

Many of these uninsured L.A. County residents currently receive care from 19 stand-alone County Department of Health Services (DHS) clinics, including 2 multiservice ambulatory care centers, 6 comprehensive health centers, and 11 health centers. Overall, the L.A. County safety net public health system, including the four hospitals and emergency rooms, treats 800,000 patients. The clinics provide nearly 1.4 million ambulatory care visits and 100,000 urgent care visits annually (L.A. DHS, 2011-2012). Of the patients served by L.A. DHS, approximately 70% are uninsured, 62% are Latino, and 50% speak a primary language other than English. The median annual income of patients is between $5,000 and $10,000 (L.A. DHS, 2011).

Under the ACA, L.A. County is expecting to see an influx of new Medi-Cal enrollees. In 2014, nearly 400,000 of the 1.4 million Californians expected to be newly eligible for Medi-Cal live in L.A. County (California Simulation of Insurance Markets [CalSIM], 2013). According to Dr. Mitchell H. Katz, director of L.A. DHS, "There is no scenario where there are enough primary care physicians, so the answer has to be: something different" (Gorn, 2012). Under Dr. Katz's leadership, L.A. DHS is implementing a Patient-Centered Medical Home model to prepare for the anticipated growth in patients under the ACA. This new

model will represent a significant departure from the episodic care pattern, which has long been the norm in the county (L.A. DHS, 2010-2011).

In this Patient-Centered Medical Home model, all patients are assigned to a primary care provider who leads a team of nurses, certified medical assistants (CMAs), and other staff. According to Dr. Katz, medical homes enable:

- Better coordination of care (e.g., decrease unnecessary duplication of tests; improve handoffs between primary care and specialty care; etc.),
- Improved timeliness of care (e.g., better access when patients need it), and
- More appropriate care in the right setting (i.e., outpatient care early in the course of a problem rather than care in the ER; etc. (Katz, 2013a).

The county set a goal of creating 144 Patient-Centered Medical Homes and had already reached 92% of that goal by October 2013. The county estimates that it needs approximately 195 CMAs to coordinate care for patients in these medical homes (Katz, 2013b). As a first step toward achieving that goal, the L.A. DHS created a new classification for CMAs in fiscal year 2011 (L.A. DHS, 2010-2011). L.A. DHS then hired CMAs from thousands of applications received for posted positions (interview of Diane Factor, director, Worker Education & Resource Center, September 20, 2013). In addition to hiring from the outside, another critical component of the county's strategy for meeting the need for well-trained CMAs is training existing nurse attendants as CMAs. Between both strategies, the county already had filled 156 CMA positions by October 2013 (Katz, 2013b).

The L.A. Health Care Workforce Development Program (HCWDP) Medical Assistant Program targets a specific industry—health clinics; targets a specific occupation—medical assistants; and was designed in direct response to the needs of an employer—L.A. DHS. These are all key aspects of a sectoral employment strategy. The Medical Assistant Program began training a small group in 2011, and then expanded in 2012. To date, 43 have completed the program, 32 have passed their state certification exam, and the remaining participants are expected to receive certification by the end of 2014. One hundred DHS staff, primarily nurse attendants and some clerks, are currently enrolled in the program and were expected to finish by January 2014. Two more cohorts of 50 participants total will start in January 2014, for a total program enrollment of 190. The program is funded by the county and the training is being provided via contracts with local colleges, such as Pasadena City College, West Los Angeles College, and Boston Reed College. All of the colleges are accredited by one of three professional boards, a requirement to take the state certification exam. Many proprietary schools offer a medical assistant program, but HCWDP chose to work with accredited colleges that have a history of successful accreditation. Boston Reed is a proprietary college and HCWDP was able to negotiate a cost-effective rate for the college to offer this special program

for the public sector (interview of Diane Factor, director, Worker Education & Resource Center, September 20, 2013).

The education program intervenes through a trusted organization that focuses on the health workforce in L.A., which is another important aspect of sectoral employment strategies. The L.A. HCWDP is a labor/management partnership between L.A. DHS and Service Employees International Union (SEIU) 721, a union that represents public employees, including many health care workers, across southern California. The HCWDP is operated by the Worker Education & Resource Center (WERC), a 501(c)(3) nonprofit organization that "offers high quality workforce development programs for workers to improve their skills and prepare for high demand occupations in the public healthcare sector." Established in 2002, WERC offers training programs in a variety of professions and has had more than 18,000 participants in its training programs over the last decade (WERC, 2013).

The intensive Medical Assistant Program provides the classroom and clinical experience necessary to qualify to take the state certification exam in both clinical and administrative skills. The program length varies between nine and 18 months. Full-time L.A. County DHS employees are eligible to apply for the program if they:

- Pass a computer, math, and English assessment (and depending on the assessment score, may need to complete a math, English, and/or computer class provided by HCWDP);
- Complete a medical assistant bridge class;
- Have current cardiopulmonary resuscitation (CPR)/basic life support certification;.
- Have a good performance evaluation and attendance record at their job at the county; and
- Have a high school diploma or GED.

A labor/management committee interviews all applicants prior to selection.

The program arranges for participants to complete their externships in county clinics, and participants who complete the program successfully are eligible to apply through the civil service process. While placement as a CMA with the county is not guaranteed, the likelihood of placement is high (interview of Diane Factor, director, WERC, September 20, 2013). This indicates that the program improves workers' skills and ability to compete for work opportunities.

The county currently employs most of the participants in the Medical Assistant Program and pays them approximately $12.50 per hour, with county benefits. Many currently live in poverty, though this varies depending on marital status and number of dependents. Those who become medical assistants will see their compensation increase to between $16 and $21 per hour, with county benefits (interview of Diane Factor, director, WERC, September 20, 2013). Across all of WERC's training programs, the average wage increase after training is $16,600 annually (WERC, 2013).

While the program is still relatively new, it seems likely that it will meet the final criteria for sectoral employment strategies of "creating lasting change in the labor market system to the benefit of both workers and employers" (Conway et al., 2007).

Case Study: Health Workforce Initiative Medical Assistant Model Curriculum

The Health Workforce Initiative (HWI) is a statewide program established by the California Community College Chancellor's Office and its Workforce and Economic Development Program. The 10 HWI centers based at community colleges throughout the state seek to:

- Identify the workforce needs of California's health care delivery systems and develop solutions through a comprehensive problem-solving process that includes assessment and analysis, planning and development, and implementation and evaluation;
- Provide education and training programs to meet emerging demands for California's health care industry workers;
- Determine needs, facilitate development of innovative solutions, and locate resources to implement planned responses; and
- Evaluate health-related educational programs (HWI, 2013).

The HWI developed a Medical Assistant Model Curriculum in 1999, revised it in 2008, and then updated it most recently in 2013. The curriculum revision in 2013 began with a Developing A Curriculum (DACUM) Job Analysis performed by a panel of experts, including representatives from educational institutions, community health centers, medical groups, and other health care providers. A DACUM Job Analysis is a structured method of analyzing the duties, tasks, knowledge, skills, and traits involved in a particular occupation. Based on the results of the analysis, the medical assistant curriculum was revised by a group of experts, also representing educational institutions and health care providers.

The new curriculum has four components: core, administrative, and clinical, plus a new component—emerging/enhanced roles. "The fourth component was added to focus on topics especially important to Medical Assistants who will be working in organizations seeking designation as Patient Centered Medical Homes [PCMH]" (Chancellor's Office, California Community Colleges, 2013). The new curriculum, which was funded using Carl D. Perkins Vocational and Technical Education Act of 1998 (VTEA), Title 1, Part B funds, can be used and adapted by any educational institution in California that trains medical assistants. San Diego is one of the first counties to adapt the curriculum to upgrade the skills of incumbent medical assistants as their roles evolve. This is an essential component of the process as clinics seek designation as Patient-Centered Medical Homes (interview of Linda L. Zorn, sector navigator of health/director, Health Workforce Initiative, October 11, 2013).

The San Diego/Imperial Health Workforce Initiative, in partnership with the Workforce Funders Collaborative and University of California San Diego (UCSD) Extension, is developing a Career Ladder Training Program for medical assistants by adapting the statewide curriculum to meet the needs of local clinics. The customized curriculum will be implemented at Family Health Centers of San Diego, which operates 34 locations throughout the county, and North County Health Services, which has 10 locations in the county.

Implementation of the education program, funded by the Workforce Funders Collaborative, has been in development since 2012, and training was launched in 2013. It is too early to determine what impact the program will have on incumbent medical assistants' job titles and compensation, as clinics will determine those changes (interview of Ann Durham, deputy sector navigator/director, San Diego/Imperial Health Workforce Initiative, October 15, 2013).

Medical assistants in these clinics have expressed a strong interest in upgrading their skills, and those in training have already begun instituting best practices in their work environment (interview of Ann Durham, deputy sector navigator/director, San Diego/Imperial Health Workforce Initiative, October 15, 2013).

This education program meets nearly all of the criteria of a sectoral employment strategy. HWI's focus on health workforce solutions in California and its grounding in the industry and region through its Statewide Advisory Committee reflect intervening through a credible organization that crafts workforce solutions tailored to that industry and its region. The involvement of industry experts is one way of "developing a deep understanding of the interrelationships between business competitiveness and the workforce needs of the targeted industry" (Conway et al., 2007). The clinics' direct involvement in the education program is evidence of its meeting the needs of employers and improving their ability to compete. It is clear that the program is likely to improve medical assistants' range of skills. The positive response of medical assistants and the employers' involvement in the program's development are indicators that the program has the potential to create "lasting change in the labor market system to the benefit of both workers and employers" (Conway et al., 2007). However, the extent to which the program improves workers' ability to compete for higher-quality work opportunities will depend on whether the clinics create new career ladders or other opportunities.

Recommendations

As health care workforce needs continue to evolve under the ACA, we recommend implementing strategies to align education programs with the quickly changing, region- and industry-specific needs of employers.

- Training programs that use sectoral employment strategies and involve workforce intermediaries should be supported. These approaches have had a demonstrated impact on worker earnings and employment. And because these approaches involve employers, they help ensure that training programs meet the needs of the health care industry.
- Unions and employers should partner to expand training and career growth opportunities for current health services workers. Organized labor has supported numerous education and scholarship programs across the United States, usually in partnership with employers and care delivery systems. By working together, unions and employers can easily identify new areas of need and encourage current workers to obtain more skills and greater earnings.
- Health care industry employers can reduce turnover and foster the career development of their workers by developing on-the-job training programs. These programs are particularly important for high-growth occupations with moderate training needs, such as medical assistants, medical secretaries, pharmacy technicians, and substance abuse and behavioral disorder counselors.
- Training programs are needed to upgrade skills as roles evolve based on changes in the health care industry. For example, some occupations, such as medical secretaries and medical assistants, are increasingly expected to use electronic medical records. Greater opportunities are needed for workers in these occupations to increase their knowledge of electronic health records and database searches, so that they can help primary care providers better manage the overall needs of patients.
- To the extent possible, community college programs should be linked to the workforce needs of the local health care industry to promote job placement of graduates.
- Workforce Investment Act funds can and should be used to support regionally based education programs to ensure adequate workforce supply.
- The ACA-authorized federal grant and loan-repayment programs to support education in entry-level and career-ladder programs should be funded.

Conclusion

The health care industry has been growing rapidly in the last few decades, and the expansion of health insurance coverage and the emphasis on primary care under ACA will spur additional job growth this industry. Our study finds that about 60% of health care workers have less than a bachelor's degree. The jobs that are expected to experience the highest job growth (over 28% between 2010 and 2020) are the jobs in which at least 60% of workers do not have a postsecondary degree. The jobs with the largest forecast growth (70% between 2010 and 2020) are home health aides and personal care aides, but turnover in these jobs is high, so replacements need to be trained quickly and often. Many of these high-growth jobs require only short-term or on-the-job training rather than a higher degree.

Two separate programs training medical assistants in L.A. County and San Diego County are exemplars that were developed based on the needs of area employers and are tied to actual jobs. Both programs could serve as models in others areas to meet the demands for low-skilled health care jobs.

Appendix

Table 1. Economic Inclusion Tools

	Non-Health Care Industries	Health Care Industries							
		All	Offices of health practitioners	Private hospitals	Outpatient/ ambulatory	Drug stores	Medical devices	Long-term/ residential care	Home health
Female	44%	75%	78%	76%	73%	59%	44%	81%	89%
Unemployed	11%	5%	5%	3%	5%	7%	6%	8%	10%
Education									
Less than high school	12%	5%	2%	3%	3%	5%	6%	11%	15%
High school diploma or equivalent	27%	19%	18%	14%	16%	22%	25%	31%	29%
Some college	24%	24%	25%	21%	24%	24%	21%	30%	25%
Associate's degree	8%	15%	15%	19%	14%	7%	10%	12%	12%
Bachelor's degree	19%	21%	13%	26%	23%	25%	26%	12%	14%
Master's degree	8%	8%	6%	8%	13%	7%	10%	4%	4%
Professional school/ doctorate degree	3%	9%	22%	9%	7%	10%	3%	1%	1%
Age									
16-24	15%	9%	8%	6%	8%	17%	6%	15%	8%
25-34	22%	22%	22%	23%	24%	24%	19%	21%	20%
35-44	21%	23%	23%	23%	25%	22%	25%	20%	23%
45-54	23%	24%	24%	26%	24%	20%	28%	23%	25%
55-64	15%	18%	18%	19%	16%	13%	20%	17%	19%
65-74	4%	4%	5%	3%	3%	3%	3%	4%	5%
75 and over	1%	1%	1%	0%	0%	1%	0%	1%	1%

Source: Ruggles et al., 2010.

Table 2. Occupation Projections and Training Standards for Large and Rapidly Growing Occupations, 2010–2020

Occupation	2010 employment	Total growth in new jobs by 2020 (#)	Total growth in new jobs by 2020 (%)	Growth due to ACA, 2010-2020 (#)	Share of growth from ACA, 2010-2020 (%)	Percent of workers with no postsecondary degree (2010)	On-the-job training required
No High School Diploma Required							
Home health aides	1,017,700	706,200	69.4%	2,800	0.4%	84.8%	Short-term
Personal care aides	861,000	607,000	70.5%	1,721	0.3%	82.5%	Short-term
High School Diploma Required							
Medical assistants	527,600	162,800	30.9%	133,114	81.8%	71.8%	Moderate-term
Medical secretaries	508,700	210,200	41.3%	90,154	42.9%	70.2%	Moderate-term
Pharmacy technicians	334,400	108,200	32.4%	83,148	76.8%	64.6%	Moderate-term
Substance abuse & behavioral disorder counselors	85,500	23,400	27.4%	1,270	5.4%	18.6%	Moderate-term
Pharmacy aides	50,800	14,500	28.5%	12,610	87.0%	71.8%	Short-term
Nondegree Postsecondary Education Required							
Nursing aides & orderlies	1,505,300	301,900	20.1%	-17,682	-5.9%	84.8%	None
Licensed practical/ vocational nurses	752,300	168,500	22.4%	-25,309	-15.0%	76.9%	None
Dental assistants	297,200	91,700	30.9%	27,932	30.5%	74.8%	None
EMTs & paramedics	226,500	75,400	33.3%	18,757	24.9%	64.4%	None
Surgical technicians	93,600	17,700	18.9%	2,471	14.0%	64.6%	None
Psychiatric technicians	74,900	11,500	15.4%	336	2.9%	64.6%	Short-term
Varied Entry Requirements							
Recreation workers	339,100	64,300	19.0%	6,006	9.3%	47.8%	
Physical therapy assistants & aides	114,400	51,100	43.3%	82	0.2%	30.5%	Assistants: AD; Aides: no degree; moderate on-the-job

Source: Authors' calculations using HEPSS-ARCOLA and U.S. Bureau of Labor Statistics, *National Employment Matrix.* Retrieved August 30, 2013, from http://data.bls.gov/oep/nioem/empiohm.jsp

Table 3. Total New Workers Required Due to Employment Growth and Turnover, 2010–2020

Occupation	Total growth to 2020 (#)	Number of replacements needed (2010-2020)	Total new workers needed by 2020	New workers needed per year (2010-2020, average per year)	Graduates per year from postsecondary programs, 2011
No High School Diploma Required					
Home health aides	706,200	131,283	837,483	83,748	1,602
Personal care aides	607,000	68,019	675,109	67,511	
High School Diploma Required					
Medical assistants	162,800	80,723	243,523	24,352	140,461
Medical secretaries	210,200	68,166	278,366	27,837	
Pharmacy technicians	108,200	58,186	166,386	16,639	24,822
Substance abuse & behavioral disorder counselors	23,400	18,297	41,697	4,170	4,938
Pharmacy aides	14,500	7,772	22,272	2,227	
Nondegree Postsecondary Education Required					
Nursing aides & orderlies	301,900	194,184	496,084	49,608	50,298
Licensed practical/vocational nurses	168,500	200,864	369,364	36,936	61,647
Dental assistants	91,700	62,412	154,112	15,411	25,043
EMTs & paramedics	75,400	45,300	120,700	12,070	26,536
Surgical technicians	17,700	16,286	33,986	3,399	10,902
Psychiatric technicians	11,500	13,033	24,533	2,453	2,435
Varied Entry Requirements					
Recreation workers	64,300	54,256	118,556	11,856	
Physical therapy assistants & aides	51,100	51,100	102,200	10,220	6,167

Note: Some occupations are not listed in the Integrated Postsecondary Education Data System (IPEDS). Pharmacy technician category includes pharmacy aides. Personal care aide is not listed as a postsecondary field of focus. The medical assistant category in IPEDS includes some medical secretary programs.
Source: Authors' calculations using HEPSS-ARCOLA, Integrated Postsecondary Education Data System, and U.S. Bureau of Labor Statistics, *National Employment Matrix*. Retrieved August 30, 2013, from http://data.bls.gov/oep/nioem/empiohm.jsp

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Technical Appendix

This Technical Appendix provides further detail on the data sources and methodology used in this study.

American Community Survey

Data from the U.S. American Community Survey (ACS) were used to describe the demographics (Ruggles et al., 2010). We used the most recent year available, 2011, along with data from 2008 to understand trends in job opportunities and the demographic mix of workers in the health care industry.

The ACS data were extracted from the Integrated Public Use Microdata Series, Version 5, housed at the University of Minnesota (Ruggles et al., 2010). ACS provides detailed information on demographics, industry, and occupation, among other individual- and household-level details. This household survey has been administered annually by the Bureau of the Census since 2000 and replaces the long form of the Decennial Census. ACS aims to provide a national census by surveying approximately three million people on a rotating basis during each decade. The sample size in 2011 is 3,028,981 individuals (unweighted). This analysis uses stratified sample probability weights to make the sample nationally representative, so the total number of individuals represented in the 2011 ACS is 242,303,207.

We focus our analyses on the subset of individuals who are in the labor force, which is defined as people who are 16 years old and older and had a job or looked for work during the previous week. This subset represents 65% of the ACS weighted sample. Those in the labor force may be employed or unemployed; people who are unemployed are assigned an industry and occupation code based on their most recent job. The definition of "labor force" is consistent starting in 2008. Labor force participation is defined as the number of people working or seeking work. In other words, individuals who are employed and unemployed are in the labor force. This report focuses on a noninstitutionalized, civilian population 16 years and older. Labor force participation is a complex measure that is influenced by the entry rate of individuals available to work, and the exit rate of individuals who decide to stop seeking employment. The most common entry rate factors include fertility, immigration, and graduation rates. The most common exit rate factors include retirement, disability, and mortality rates.

We identified occupations in the general categories of health care practitioners and health care technical and support occupations as well as specific administrative and managerial occupations commonly found in health care. We also examined job trends in the health care industry, including health care services and device manufacturing.

ACS versus BLS

ACS and the Bureau of Labor Statistics (BLS) use different sampling frameworks that result in slightly different baseline weighted population estimates. Given the large sample size of ACS, we use the ACS to report current demographic, industry, and occupation trends. BLS has a sophisticated labor projection methodology. We rely on BLS estimates to project occupational trends, which results in our using BLS estimates of the number of people in each occupation in the baseline year.

ARCOLA Model

ARCOLA is an acronym for Adjusted Risk Choice & Outcomes Legislative Assessment. The ARCOLA model covers Medicare and Medicaid simulation; supply prices from the physician and medical technology industries; and private insurance market components, including the use of claims data trends information to update premium pricing for microsimulation. The latest model also uses insurance expenditures from actual claims data to refine premiums, and then predict choices again with the new premiums. The claims data include about 15 insurance plans from across the United States. The model then iterates until

premiums and choices converge to an equilibrium state. A subsequent change to the model permitted state-specific predictions of policy changes as well as their total federal health policy impact.

For a recent study, the ARCOLA model was used to estimate the effects of the ACA on both expanding private and Medicaid coverage and shifting consumers from one type of plan to another. The effect of the change in coverage on the demand for health care services was then estimated using insurance claims data from 2008. Use of services by type of insurance plan was estimated for physician office visits (which includes visits to nurse practitioners and physician assistants); inpatient admissions to hospitals (including mental health and specialty hospitals); outpatient services provided at hospitals (emergency department visits, laboratory/radiology, ambulatory surgery, etc.); prescriptions; durable medical equipment; subacute care; and home health visits. For example, the ARCOLA model does not predict changes in long-term and residential care use, because these services are not part of the claims data. The ACA, however, does not have any substantial provisions that would be expected to affect demand for long-term care, so we assume that the ACA has no effect on this demand and the BLS projections are based on preexisting trends and projected demographic changes.

The projections in the demand for services attributed to the ACA are based on the ARCOLA model (table not shown). Growth in demand for some health care services—specifically, long-term and residential care, drug stores, and home health—is anticipated to be high with or without the ACA. The ACA will likely lead to notable increases in the demand for office visits. Note that the ARCOLA model currently does not estimate use of nonhospital outpatient services, such as physical therapy in freestanding centers, nonhospital radiology and laboratory tests, and ambulatory surgery in freestanding surgery centers. For this analysis, we assume that the rate of growth in these services will be proportional to the rate of growth of office visits.

Defining the Health Care Industry

We use the 2000 Standard Occupational Classification (SOC) system to identify specific occupations with a concentration on health care practitioner, technical, and support occupations (SOC 29-0000 and 31-0000 series). We examine job trends within the health care industry, which is defined using the 2007 North American Industry Classification System (NAICS). We use a definition of the "health care industry" that encompasses services as well as pharmaceuticals and devices (Appendix Table 1). The ARCOLA categories roughly align with NAICS categories with a few gaps.

Technical Appendix Table 1. Crosswalk Between NAICS and ARCOLA Model

NAICS	ARCOLA Model
Offices of health care practitioners[1] **NAICS: 6211, 6212, 6213**	Office visits
Hospitals **NAICS: 622**	Hospital admissions
Ambulatory outpatient settings[2] **NAICS: 6214, 6215, 6219**	Outpatient hospital services
Pharmacies and drug stores **NAICS: 44611**	Prescriptions
Medical equipment supplies and manufacturing **NAICS: 3391**	Devices
Nursing care facilities and residential care[3] **NAICS: 623**	Subacute care days
Home health care services **NAICS: 6216**	Home health visits

[1] Includes offices of mental health practitioners, excluding physicians; physical, occupational, and speech therapists and audiologists; podiatrists; and other miscellaneous health practitioners.
[2] Includes family planning centers; outpatient mental health and substance abuse centers; HMO medical centers; kidney dialysis centers; freestanding ambulatory surgical and emergency centers; medical laboratories, diagnostic imaging centers; and blood and organ banks.
[3] Includes residential mental retardation; mental health and substance abuse facilities; community care retirement communities; and homes for the elderly.

About the Big Ideas for Job Creation Project

Big Ideas for Job Creation, a project of the Institute for Research on Labor and Employment at the University of California, Berkeley, with the support of The Annie E. Casey Foundation, tapped into the innovative thinking of leading experts across the nation to develop job creation proposals. Every idea had to meet the following criteria: designed for implementation by cities and/or states and will lead to net new job creation in the short-term; practical, sustainable, scalable and already tested; and all jobs created should be accessible for low-skilled workers and offer some career opportunity. Taken together, these Big Ideas can create millions of new jobs for our country.

The Annie E. Casey Foundation