



DEVELOPING CAREER-BASED TRAINING

EDITOR

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Introduction

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BACKGROUND

In an increasingly complex and rapidly changing global economy, Americans place a great premium on skills and education among workers. Recent work has suggested that advances in technology have fundamentally shifted the demand for labor towards workers who have significant skill (Goldin and Katz 2008; Autor, Levy, and Murnane 2003). The returns to education are very high and potentially increasing, yet it is clear that the vast majority of workers will not need to reach the highest levels of education—a bachelor’s degree or above—to succeed in the labor market today. In fact, many projections suggest that about 70 percent of all jobs will not require this credential. But postsecondary training is ever more important, as about half of all jobs will require some education—but not a four year college degree—beyond high school (Symonds, Schwartz, and Ferguson 2011). Many of these jobs will require a technical certification, license, associate’s degree, or other credential earned beyond high school.

In fact many people who hold a postsecondary credential or certification will earn more than those who hold a bachelor’s degree (Carnevale, Smith, and Strohl 2010). These middle-skilled, postsecondary-training-required positions are likely to be some of the fastest growing positions in the labor market (Holzer et al. 2011; Council of Economic Advisers 2009). These positions occur in many different industries, touching all parts of the economy. Many are service positions; many are administrative or executive support positions; many are in goods-producing positions (Wardrip et al. 2015).

Yet training for and focus on these positions can be very hard to create. A skilled technician in one city may need completely different skills than a technician in the same position in another city because of the needs of local industry. These different requirements are addressed through the development of localized training programs that are closely aligned with the needs of employers. The companion to this book, *Models for Labor Market Intermediaries*, shows how many organizations in different contexts made those connections.

This book focuses on a number of the different arenas that have a greater need for technical and career-based training. At the secondary level, the book contains examples of efforts and frameworks for expanding career and technical education. One chapter discusses the potential for competency-based education rather than the traditional “credit hours” model. The book looks at examples of companies working directly with their frontline workers to improve skills. Finally, it has several examples of using some of the general principles of industry-led training programs to serve hard-to-employ populations—ex-offenders and homeless residents and new immigrants.

Great potential exists for workers and great need for employers to build out the skills of many middle-skilled positions in the workforce today. A first start is developing more and better career-based training. This book highlights how different entities have done that.

ABOUT THIS BOOK

In chapter 1, Blosveren Kreamer and Zimmermann introduce new efforts to systematize and modernize new programs in career and technical education (CTE) using the National Career Clusters Framework. They note the history of CTE and its transformation from “vocational education” to “career and technical education.” The 2006 reauthorization of the Carl D. Perkins Act, the federal legislation that funds the CTE system in the country, introduced a new concept—programs of study—that helped to

develop stronger links between industry and secondary and postsecondary education. The National Career Clusters Framework developed core “careers” that include clear paths between different occupations in similar work areas.

In chapter 2, Foster and Kelley continue the discussion of developing frameworks for CTE through their analysis of CTE technical skills assessments—which are assessments developed by CTE subject matter experts that help to determine the level of expertise that program participants gain during their education. While these type of assessments have existed for quite some time, the authors argue for a stronger use of the information and data that come from technical skills assessments. They note that in the past the outcomes of assessments did not get communicated to CTE educators, who might be able to use the information for program improvement. They note the successes and improvements of CTE assessment usage in California and Minnesota, where technical skills assessments were used to develop better articulation between secondary and postsecondary technical education programs.

In chapter 3, Van Noy, Metzgar, and Jagneaux discuss competency-based education (CBE) and how Raritan Valley Community College in New Jersey implemented the model in several of its workforce development programs. Competency-based education eschews the traditional course hour model for a model that has teaching for programs that align with local industries, determine the skills and competencies needed for success in the workplace, and develop assessments that allow students to show mastery of the work. The CBE model allows students to progress and learn at their own pace. As students show mastery of the skills needed to succeed, they can move on to earn the credentials that will help them to access work. Analysis of the early results of the CBE programs at Raritan Valley Community College suggest that employment outcomes for students are better, program completion rates are higher, and employers report satisfaction.

In chapter 4, DiMario, Elvery, and Spence explore the potential for employer and industry sector investment in career pathways. They study Partners for a Competitive Workforce in the Cincinnati Metropolitan Area, covering the city and suburbs in Ohio, Kentucky, and Indiana. The program relies heavily on employers in similar lines of work to steer the programming and content of training programs. In the case study, they started with the health care industry. The organization then worked with community colleges, local workforce investment boards, and community-based organizations to develop and implement the programs that employers request. The programs are aligned to employer needs and have shown early success—both for students and the workforce development system. The organizations involved have been able to develop a shared data system that helps to manage where jobseekers are getting services and their outcomes, creating opportunities for more seamless service.

McKay and Giovannitti discuss frontline health care worker education programs in chapter 5. They focus on health care organizations that developed training programs for their current frontline workers—ranging from small health care centers with about 50 employees to very large university health-care-based systems of more than 8,000 employees. The health care organizations reported being interested in these investments to improve organizational efficiency and client care. Many of the challenges in skill upgrading for frontline workers were similar but approached in different ways—including the partners involved and the funding strategies for new training. Overall, the health care organizations that invested in their frontline workers found they had greater staff retention, and workers reported greater job satisfaction. Some of these outcomes were likely due to increased wages and greater opportunities to advance at the organizations.

In chapter 6, Dickson and Alston discuss linking sector-based training strategies with helping hard-to-employ workers. They discuss efforts at the Safer Foundation to improve both the labor market outcomes and post-release success in society of ex-offenders through skill-based training and other supports. The organization saw employment as a critical component of efforts to reduce recidivism and returns to jail among ex-offenders and developed training programs for the manufacturing industry in Chicago. The programs included several manufacturing industry credentials. Stakeholders are committed to the program

and believe that the comprehensive strategy helps to ensure success. Applying the ideas of in-demand skill training to special populations takes careful consideration to ensure the programs match clients' needs and life situations.

Similarly, Montoya and Fano discuss the Hospitality Institute at Miami Dade College in Miami, Florida, in chapter 7. The Hospitality Institute is an initiative of Miami Dade College, the largest postsecondary institution in the country, which focuses on training new immigrants and homeless residents in the Miami area for jobs in the hospitality industry. As a tourism and hospitality hub, South Florida has a great concentration of jobs in the food service, accommodation, and entertainment industries at the entry level. Many of these jobs offer great opportunities for re-entry or first-time entry into the labor force. The program is short and provides intensive training and certification in areas like food preparation and health and safety in food service. The program is well fit to the population as it helps get unemployed and marginally attached to the labor force homeless residents and new immigrants into the workforce and experience in the workplace. From these positions they can find future opportunities and pursue additional training.

HOW TO USE THIS BOOK

The cases in this book provide examples of ways to focus on specialized training that can lead to careers. Some of the cases focus on aligning education systems, career and technical education programs, or postsecondary education with industry and business—and places that are actively looking for new work. Some chapters provide broad overviews of new initiatives, with examples of how they play out in local areas. Others go deeply into the conditions in local communities and explore a local response in the context of state-of-the-art practice. What the whole of this work shows is that no one right way exists to develop career-based training. Each community and each jobseeker faces unique challenges. Still, some common threads often run through these challenges. Employer-funded-training partnerships like the Partnership for a Competitive Workforce have been replicated across the country, but no one is exactly the same. Some have different training focuses in different industries; others have different organizational approaches.

The broad model and practice have been adapted to local conditions. This book is meant to provide opportunities for readers to explore new approaches to developing training programs and learn about ways that other communities and organizations have approached similar challenges or training programs. Developing career-based training can provide significant opportunities for jobseekers, create new value for companies, and create benefits for society through expanded human capital and employment. I hope that this book adds to your understanding of and strategy towards developing career-based training.

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Setting a New Standard in the 21st Century: Career Technical Education and Programs of Study

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Career technical education (CTE) has a long history of serving as a bridge between education and workforce development, directly linking K–12, postsecondary, and workforce and economic development policies and practices. In the past decade in particular, CTE has aimed to transform itself to reflect the growing complexity of the 21st-century economy and the increase in knowledge and skills demanded by employers. Once known as “vocational education,” CTE historically focused primarily on providing training to secondary students in specific trades, but that model is no longer sufficient. CTE is committed to a new model—undergirded by the program-of-study framework¹—that embraces seamless alignment among secondary and postsecondary systems, strong and sustained business and industry partnerships, and rigorous standards, such as the Common Career Technical Core.

FROM VOCATIONAL EDUCATION TO CAREER TECHNICAL EDUCATION

The transition from “vocational education” to “career technical education” is more than just a name change. It has been an intentional shift from education focused on fairly narrow job preparation to a program model that blends academic knowledge and technical skills to prepare students for the careers of their choice.

A number of factors have driven these changes. The job market has changed dramatically, with most jobs now requiring education and training beyond high school. In 1973, more than 70 percent of jobs required a high school diploma or less. By 2020, it is estimated that about 65 percent of jobs will require more than a high school diploma (Carnevale, Smith, and Strohl 2013). If technical education is going to prepare students for the careers of their choice, it needs to be aligned with the realities of career requirements, which now typically include some form of postsecondary education. Often, that required postsecondary education is a shorter, career-focused training program rather than traditional college and university models of education.

The link between K–12 education and postsecondary training in CTE is strong. Seventy-five percent of all high school students who take three or more CTE courses enroll in postsecondary education within two years of graduation (U.S. Department of Education 2013).

At a more fundamental level, CTE has needed to evolve to ensure its survival. Vocational education has historically been viewed as a less rigorous pathway into which low-income and minority students were counseled or “tracked” (Oakes et al. 1992). This was a view that even many teachers held. In 1992, 55 percent of vocational teachers cited the placement of “problem” students (academic or socio-emotional) into their classes as an issue, and another 54 percent said the status of vocational education in their schools was a problem.

The negative perception of traditional vocational education contributed to declining student participation over the past two decades. Between 1990 and 2009, the average number of CTE credits earned by high school seniors dropped from 4.2 to 3.6. This drop is attributable in part to an increase in academic requirements by states and districts, but it can also be partly credited to a drop in participation in “nonoccupational” courses such as home economics or industrial arts, with an increase in graduates completing more CTE-focused courses in areas like health science and communications (NCES 2013).

While there is mixed evidence that tracking by abilities can be beneficial to students, there is increased support for an education system that provides multiple—but equally rigorous—pathways that align to students’ interests rather than to their perceived abilities (Symonds, Schwartz, and Ferguson 2011). Along those lines, a recent survey of CTE students found that 63 percent say they are taking CTE courses to “prepare for life after high school,” which includes college and careers (ACTE 2013).

ACCELERANTS OF CHANGE

Two major national efforts that have helped accelerate and give shape to the recent shift from vocational education to CTE are the National Career Clusters[®] Framework and the 2006 reauthorization of the Carl D. Perkins Career and Technical Education Act (Perkins). Perkins introduced *programs of study* and encouraged more integration with academics.

Educators, business and industry, and policymakers first developed the National Career Clusters Framework in the 1990s. This framework aimed to transform CTE from occupational training at the secondary or postsecondary level into programs preparing students for a broader range of careers within their industry of choice. Using 16 career clusters, the framework identifies knowledge and skills statements that provide learners with foundational, industry-specific knowledge that is often transferable across careers, as well as more specialized knowledge and skills aligned with career pathways, which are still broader than any single job. (See table 1.1 for a list of the 16 career clusters.)

Table 1.1 The 16 Career Clusters

Agriculture, Food, & Natural Resources
Architecture & Construction
Arts, A/V Technology, & Communications
Business Management & Administration
Education & Training
Finance
Government & Public Administration
Health Science
Hospitality & Tourism
Human Services
Information Technology
Law, Public Safety, Corrections, & Security
Manufacturing
Marketing
Science, Technology, Engineering, & Mathematics
Transportation, Distribution, & Logistics

SOURCE: National Association of State Directors of Career Technical Education Consortium

The Career Clusters have been updated and revalidated multiple times, most recently in 2012 in a process that engaged more than 640 subject matter experts, including classroom educators and faculty, employers, industry association representatives, and state and local policymakers. The validation committees reviewed requirements for industry-based certifications, industry association standards, job

descriptions and course-level standards. The validation process included two opportunities for public comment and review, with another 1,800 stakeholders engaged, providing a total of 40,000 ratings and nearly 800 comments.

To date, nearly every state in the nation uses the National Career Clusters Framework, or an adapted version, to organize CTE programs. In most cases, states are using this framework, along with state or locally developed expectations, as the basis for specific courses and curricula (NASDCTEC 2013). This common foundation allows for comparability in terms of types of programs offered across states, but the programs have more limited comparability in the standards undergirding them.

The next significant milestone was the 2006 reauthorization of Perkins, which introduced the concept of *program of study*. Every educational institution that receives Perkins funding is required to offer at least one “program of study”—a non-duplicative sequence of academic and technical courses that includes both secondary- and postsecondary-level content—as well as opportunities for high school students to earn industry-based credentials, certificates, or postsecondary degrees (Carl D. Perkins Career and Technical Education Act of 2006). With multiple entry and exit points for students, programs of study provide a model that works at the secondary, postsecondary, and even workforce-development level to offer a more coordinated and comprehensive education and training experience.

This model is playing out in a number of ways. States such as Tennessee and Nevada are approving only CTE courses that fit within a multi-course sequence that will be articulated for credit at the states’ postsecondary institutions. Minnesota funds only CTE programs that are jointly developed by consortia of secondary and postsecondary partners to provide a seamless transition of courses and experiences for students. Montana, through its statewide programs of study initiative—Big Sky Pathways—is convening secondary and postsecondary educators to compare their program standards to eliminate redundancies and close gaps in the expectations to facilitate a student’s smooth transition across a program of study and level of education. While these efforts are still relatively new, and though they have limited outcome data, these models largely represent a new way of doing business around CTE.

Perkins also includes several provisions that aim to better connect CTE and academic teaching and learning. One provision directs the state to support programs that “include coherent and rigorous content aligned with challenging academic standards that have been adopted by the state.” Another promotes programs that “integrate rigorous and challenging academic and career and technical instruction” (Perkins Act 2006). According to recent surveys, 60 percent of CTE educators report integrating academics into their classes (Kantrov 2014) and 45 percent of students say their CTE courses provide them with “real-world examples that help in their academic classes” (ACTE 2013).

POSITIVE IMPACT OF CTE/PROGRAMS OF STUDY

The change from vocational education to CTE is producing results. CTE programs have proven effective in improving student achievement, engagement, and graduation rates. High school students who take three or more CTE credits, known as CTE concentrators, test significantly better than their peers on state assessments in reading and math (USDOE 2011). Eight-seven percent of states report that these same students graduate at a much higher rate than the general student population, with differences as great as 20 percentage points or more in Alaska, Arizona, Kentucky, Louisiana, Mississippi, and New Mexico (USDOE 2014). CTE is also being used as a tool for dropout prevention. High-risk students are eight to 10 times less likely than their non-CTE classmates to drop out of school in 11th or 12th grade (Kulik 1998), which one study estimates as a lifetime gain of \$168 billion to the U.S. economy (Kotamraju 2011).

This success follows students into postsecondary education and careers, due in part to the “built-in next step” of postsecondary education within a program of study (Castellano et al. 2014). Early postsecondary credit, such as dual enrollment courses, is a key feature of CTE programs of study. One study found that CTE students in Florida were 8.6 percent more likely than comparison students to enroll

in the state’s university system, persist in college, and have a GPA 0.26 points higher (Karp et al. 2007). A longitudinal field study of CTE programs of study in three urban districts found that many of the participating students not only persisted into college but also continued their education in the same program area, thus reaping the benefits of beginning that preparation in high school (Castellano et al. 2014).

A related finding is that postsecondary students completing a program within a CTE field of study—rather than an academic field of study—are also more likely to be employed within five years. At the associate’s degree level, for example, 86 percent of those who completed the degree in a CTE field of study were employed five years later, compared to 79 percent of those completing a degree in an academic field (NCES 2009). A rigorous national evaluation of career academies, which tracked the labor market and postsecondary outcomes of graduates from nine urban high schools eight years after graduation, found that participants earned an average of 11 percent more than their peers (about \$2,100/year) eight years after graduation (Kemple 2008).

The positive impacts at the secondary and postsecondary levels are keeping students in school and putting them on the path to a well-paying career in their field of choice.

LOOKING AHEAD: THE COMMON CAREER TECHNICAL CORE

In the United States, the CTE enterprise is incredibly diverse, which is both an asset and a challenge when we attempt to compare, scale, or replicate programs. CTE is delivered through about 1,400 high schools, 1,200 regional technical centers, and 1,700 two-year colleges. Roughly 7.5 million students are enrolled in CTE at the secondary level (about half of all high school students), and another 4.4 million at the postsecondary level (U.S. Department of Education 2014). The CTE system offers scale to technical education through a myriad of settings and learning environments.

CTE programs also rely on a variety of expectations and standards—state-required standards, locally developed standards, industry-endorsed standards, and so forth—making CTE programs differ from community to community and across areas of study. Comparability is not always an easy feat.

To build on and continue to accelerate the transformation happening in the field, the state CTE directors from all 50 states and U.S. territories came together in 2010 to release a new vision to guide CTE through the 21st century.

“Reflect, Transform, Lead: A New Vision for CTE,” the resulting document, which was signed and endorsed by every state CTE director, offers five principles. CTE

- Is critical to ensuring that the United States leads in global competitiveness.
- Actively partners with employers to design and provide high-quality, dynamic programs.
- Prepares students to succeed in further education and careers.
- Is delivered through comprehensive programs of study aligned to the National Career Clusters Framework.
- Ensures a results-driven system that demonstrates a positive return on investment. (NASDCTEC 2010).

One early outcome of this vision was the development of common CTE standards. In 2012, 42 states, the District of Columbia, and Palau collectively released a set of new standards for CTE, known as the Common Career Technical Core (CCTC). The states committed to being directly engaged in the development and validation of the new standards, but not directly held to the guidelines. The standards have two major components: 12 cross-cutting and cross-curricular career-ready practices and content standards for each of the 16 career clusters and their corresponding 79 career pathways.

More than 3,500 representatives from K–12, postsecondary, and business and industry were involved. More than 320 education and industry representatives served on writing teams, and another 3,200 individuals provided feedback through an online validation survey.

What makes the CCTC standards unique is they identify what students should know and be able to do at the end of a program of study, after completing a sequence of courses aligned with challenging academic and CTE content that spans both secondary and postsecondary settings. Comparatively, nearly every state that has CTE standards has course- or program-level standards, which typically are much more occupationally focused (NASDCTEC 2013). It is important to note that the CCTC standards are not necessarily intended to replace existing state standards, but rather to ensure that all students who participate in CTE programs of study leave with a common set of knowledge and skills. Given the wide range of diversity within the CTE enterprise, the CCTC standards serve as a set of anchor standards to help benchmark and raise the bar on existing state standards and programs of study and bring more consistency to the field.

The impact of the CCTC on the broader education, training, and workforce systems has the potential to be far-reaching and significant. Competency-based education is increasingly an area of focus, even beyond CTE. However, implementation is still in the early phases and happening in a variety of ways. At this time, only a handful of states have formally adopted the CCTC standards, including West Virginia and California—and Guam—in terms of the 12 career-ready practices. New Mexico is using the CCTC in an ongoing process to review existing courses to see whether they are rigorous and relevant enough to be part of a state-recommended CTE pathway. New Mexico also has commissioned an analysis of the alignment between the state’s secondary and postsecondary programs to see how they are meeting workforce needs, and the CCTC is part of the framework of the analysis.

CONCLUSION

Programs of study, the CCTC, and the broader vision for CTE all have a direct impact on the United States’ ability to build and sustain a skilled workforce. Baked into the foundation of these initiatives is the goal of providing individuals a broad range of skills within and across career fields to increase their adaptability and give them more opportunities in the workforce.

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¹The concept for "program of study" was formally introduced into law through the reauthorization of the Carl D. Perkins Career and Technical Education Act of 2006 [Public Law 109–270: (20 U.S.C. 2301 et seq.), Section 122(c)(1)(A)]. To help states and local recipients meet these new requirements, the U.S.

Department of Education's Office of Career, Technical, and Adult Education created the CTE programs-of-study framework (cte.ed.gov/file/POS_Framework_Unpacking_1-20-10.pdf), which comprises 10 components that should make up a rigorous program of study. States and local recipients are not required to use all 10 components during adoption, and are encouraged to consider their relative needs and priorities while implementing these elements into their own programs. The 10 components are legislation and policies; partnerships; professional development; accountability and evaluation systems; college and career readiness standards; course sequences; credit transfer agreements; guidance counseling and academic advisement; teaching and learning strategies; and technical skills assessments.

2

Data-Driven Improvement in Career Technical Education

John Foster, PhD

National Occupational Competency Testing Institute

Patricia Kelley, PhD

National Occupational Competency Testing Institute

BACKGROUND

The American education system lacks adequate focus on the importance of technical skill development. Compared to many of the other nations in the Organisation for Economic Co-operation and Development (OECD), the United States has an underdeveloped career and technical training system (Hoffman 2011). Many Americans view the skilled technical occupations training as a pathway for those who could not acquire a college degree. In Harvard's *Pathways to Prosperity* report, the authors state, "Most advanced nations place far more emphasis on vocational education than we [in the United States] do" (Symonds, Schwartz, and Ferguson 2011, p. 23). This view clearly needs to change because current publicly funded career and technical education (CTE) programs can provide reasonable alternatives (such as a good living wage) to traditional secondary and postsecondary education. The programs also provide applied, real-world methods of teaching academic skills such as math, science, and literacy that can help students succeed in postsecondary academic environments (Barton and Coley 2011; Holzer, Linn, and Monthey 2013).

This article discusses some transformative strategies for improving CTE—strategies that, when employed, improve instruction, improve curriculum, individualize instruction, and help align the instruction being delivered to the needs of the workforce.

CTE programs provide technical training for skills in occupations such as auto mechanics, nursing, welding, child care, carpentry, and accounting, among many other professions. In fact, many students who concentrate are not consigned to these technical occupations and often have better labor market outcomes than nonconcentrating CTE students (Bersudskaya and Chen 2011). Many modern CTE programs provide students with strong marketable skills in high-demand occupations (Holzer, Linn, and Monthey 2013). Sadly, many may perceive such programs and students to be "second-class citizens" in the educational world (Foster, Hodes, and Pritz 2014).

CTE programs can have unique connections to businesses, which help position such programs as strong alternatives for preparing to enter the workforce. CTE program centers are responsible for maintaining an occupational advisory committee. This committee of practitioners advises teachers on changes in the field (such as materials, processes, technology, or procedures) so instruction remains current. The committee can also serve as sources for such experiences as internships and job shadowing for students in the programs.

CTE teachers who come directly from their respective industries (direct-from-industry teachers are the most common type of CTE teacher) are often certified using an alternative teacher certification

process. In many of the states across the nation, a technical skills assessment is employed as part of the teacher credentialing process. This process ensures that CTE teacher candidates coming from industry have experience in all aspects of the industries that they will have to teach to future workers. This same third-party assessment of technical skills has come to be applied to students graduating from these programs as well. In fact, the federal legislation relating to CTE, the Carl D. Perkins legislation, requires industry-based technical skills assessment for program completers (students). This industry-based assessment of students has resulted in a trove of data that, when combined with professional development and a supportive group of peers, can be extremely effective in improving instruction. This case study will examine how these assessments have been used to improve CTE instruction.

A BRIEF DESCRIPTION OF THE MODEL

The National Research Center for Career and Technical Education developed a CTE-based data-driven improvement process and piloted it in nine schools in 2008–2009. Since then, schools in several additional states have adopted the program. The purpose of the program is to train CTE teachers how to interpret and apply technical skills assessment data as a part of their classroom improvement efforts.

Each school applied the model somewhat differently, but the basics of the model included collecting data related to student knowledge and skill levels, analyzing the data for student strengths and weaknesses, developing preliminary hypotheses on how to improve student outcomes, seeking out other data and information to verify and enrich the hypotheses, developing a classroom action plan based on the information, implementing and monitoring the plan, and reviewing outcomes to plan for subsequent years.

WHAT CTE TECHNICAL SKILLS ASSESSMENTS ARE AND HOW THEY ARE DEVELOPED

As indicated above, the use of data is central to this model, and technical skills assessment data play a large role. To collect data on their programs, many CTE institutions use third-party technical skills assessments as a supplement to classroom tests, teacher observations, projects, and other forms of assessment. The technical skills assessment helps provide an independent confirmation of student learning and program success, and also provides data anchored in industry-based standards, often at the national or state level.

This testing uses a rigorous development process, involving several steps that depend on industry-based standards and subject matter expert (SME) involvement from both industry and education. The tests generally have sound psychometric reliability and content validity. Another important aspect of third-party technical skills testing is that the assessments involve a standardized administration process and strong objective scoring rubrics that help in comparing results across entities, such as classrooms, schools, or districts.

Technical skills assessments are developed according to industry standards for the occupation. SMEs from both industry and education provide integral input at all phases of development, starting at the beginning of test development, including finalizing the standards on which the test is based, determining how much of the test to devote to particular topics, and knowing how to measure knowledge of those topics and the ability to perform critical functions (that is, writing test items for knowledge tests and constructing work sample jobs, instructions, and scoring rubrics for performance tests). After the test draft has been field tested and a variety of qualitative and quantitative data has been gathered, SMEs also review that data and suggest changes to the assessment as necessary. Finally, SMEs are integral to setting the cut score, or passing point, for tests.

Data from such assessments are often used for two purposes: (1) addressing regulatory requirements, and (2) improving school and program (NRCCTE 2011). Both are worthwhile goals, but traditionally the

focus has been more on higher-level analyses and reporting and less on more granular analyses at the classroom and student level.

USING DATA FROM TECHNICAL SKILLS ASSESSMENTS: THE MODEL IN PRACTICE

In the past, several disconnects have occurred in getting this type of information into the classroom. For example, student-level results may not be provided to teachers, or they may see only aggregated data. Teachers may not even be aware of how to access other available data. Additionally, instructors may not feel comfortable or have sufficient skill in interpreting or working with data (Foster, Hodes, Kelley, and Pritz 2013).

The basic process of this model is focused on using detailed third-party technical assessment results initially taken from a pretest. These pretest results provide the instructor with a glimpse into students' existing abilities. An instructor might find lower classroom scores in blueprint reading, for example. The next step would involve that instructor looking at other data available in the setting and “triangulating” that data to find possible reasons for the low classroom norms in blueprint reading—perhaps a math-related issue, a reading problem, or an inability to conceptualize a graphic image, for example. Next, the instructor would devise a plan with the potential to increase a student’s chance of improving his or her competence. A community of learners as well as an outside mentor and a supportive supervisor would then review this plan. This same supportive group would meet periodically throughout the year to review progress and provide assistance.

The model is based on the assertion that getting data into the hands of classroom teachers and training them how to use it will strengthen students, programs, and schools by letting the teachers view improvement efforts with a bottom-up as well as the traditional top-down focus.

Because they are intimately familiar with their students and programs, teachers are uniquely qualified to help diagnose and remedy instructional difficulties. Infusing data at this classroom level gives instructors another tool to help make improvements to a program and to their own pedagogical strategies. They are also in the best position to use this data to work with individual students, to remedy their weaknesses or build on their strengths.

To use data effectively, teachers must be trained in how to interpret it. This can be especially true for CTE instructors, who often enter the teaching field after years of industry experience and obtain teaching credentials through alternative routes (Bottoms and McNally 2005). During the research, it was determined that this training should include basic knowledge of test development and test-related terms, and extended hands-on experience with applying the data: developing improvement plans, monitoring effectiveness of those plans, and making adjustments as appropriate. Having teachers work with a team of fellow teachers provides a collaborative environment that fosters the continued use of data as a part of a school's data culture (Foster, Hodes, and Pritz 2014).

In this model, the process begins with the choice of a small team of teachers and administrators from selected CTE programs at participating schools (usually four to eight teachers and administrators per school). Once this is done, the students in those programs are pretested on a technical skills assessment. Teachers and administrators use that data as a part of a day-long workshop during which they learn about interpreting test data, practice the skill with data on their own students' pretests, and develop an initial action plan related to classroom improvement with their own students. After the workshop, the facilitator continues to work with the team for a period of almost a school year, facilitating ongoing team meetings (both within and across schools as appropriate) and a variety of postworkshop activities to complete the action plans and review and alter them based on additional data and student progress. Near the end of the year, the teams evaluate the success of the action plans based on a variety of student outcomes, discuss lessons learned, and plan for applying the process in subsequent years.

The exact form of the model will vary according to a state or school's unique challenges and needs. However, several years of self-reported evaluations from teachers and administrators have shown that they can use the core components and philosophy effectively in both rural and urban schools, in programs that are doing well and those that are struggling, with teachers who have a range of experience levels, and in both the secondary and postsecondary environment. Below are a couple of specific examples.

SUCCESS STORIES

California

This process has been used in California since 2012, within a mentor-teacher program designed for new CTE teachers who are transitioning from working in industry to teaching those skills in a classroom. The Teacher Induction Program (TIP), established in 2006, received state recognition because of its focus on nonevaluative classroom-based assistance. During 2012–2013, technical data were infused into this program and it was implemented in 13 schools across the state. Small data teams, consisting of a mentor and two teachers, were formed at each location. Mentors were trained in the model and worked with their teachers throughout the school year.

Mentors worked closely with their teachers to choose appropriate technical skills assessments, as well as to locate other student-related data, for use in developing an action plan for the year. Once students completed their pretesting and the results were available, mentors, teachers, and state-trained staff members came together for a one-day training event.

Teachers brought their students' test scores to the session as well as the other data they were able to gather and were guided through the process of analyzing that data and constructing a preliminary action plan. Teachers had additional time after the workshop to complete their action plans back at their home schools. They reviewed these plans with CTE TEACH administrators during local visits to each school. The administrators also reviewed the training given earlier and responded to any additional questions or issues that may have come up.

Administrators supported the mentors with monthly web meetings related to the project, allowing mentors to collaborate with each other and discuss issues that each of the school-based teams were facing as they implemented their action plans. State-supported staff also made a mid-project visit to each of the individual schools to meet with the project teams.

At the end of the project, the National Center for CTE Research made visits to each location to review the results of the project, including posttest scores on technical skills assessments and successes in the action plans. These visits and evaluations showed that teachers had seen a lot of value in the process and they strongly agreed that technical skills assessment data were a valuable tool for making instructional improvements. Based on the successes of the first year, the program was expanded in the following year to include both existing and new schools. The program continues and to date has trained more than 200 mentors providing direct support to more than 500 new teachers.

Minnesota

In 2009, the Minnesota Department of Education began a project within the state related to using technical skills assessment. This project involved community and technical colleges as well as high schools. The goals were to develop a system to provide useful information about student achievement in technical programs, to improve those programs, and to create strong connections between secondary and postsecondary entities.

Important to this project was not only establishing a system for administering technical skills assessments within the state but also training secondary and postsecondary instructors in the use of the data such assessments provide. Instructors were trained according to the model described in this article.

The implementation of this model helped to give instructors the skills they needed to use data effectively, to gather additional data to supplement technical skills assessments, and to construct action plans to guide program improvement efforts throughout the year. These local efforts provided instructors with the knowledge and tools necessary to effect instructional and resource improvements at the local level. This model also helped provide data for accreditation of postsecondary entities.

Schools used the aggregated results of testing to support and report on improvement efforts, but instructors used data with individual students and classrooms and have been able to track progress over time. These data have also been used to keep program advisory committees and local industry partners apprised with objective program performance data to keep them engaged in supporting improvements and modifications. Because of the success of this program, the state is currently reviewing the viability of using statewide technical assessment data to identify high-performing programs so that teachers in those programs can share, statewide, instructional improvement strategies. Broadly, wide-scale implementation of improvements based on data and evaluation of the effectiveness of these technical training programs provides opportunities to show their value so that they may be adopted more widely and recognized by employers.

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3

Implementing Competency-Based Education: Lessons from Raritan Valley Community College’s Workforce Development Project

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Competency-based education (CBE) has the potential to transform traditional academic programs to better prepare students for the workforce. With a CBE approach, colleges identify and articulate specific competencies that are required for success, evaluate student competency with direct assessments of mastery, and allow students to progress at their own pace as they demonstrate mastery (Klein-Collins 2013). CBE is thought to be a promising approach to promote better learning outcomes because of its emphasis on mastery of skill and knowledge (Klein-Collins 2013, Kamenetz 2013, Laitinen 2012). While CBE is a promising national practice with a great deal of current interest, research on its ultimate effectiveness on students’ outcomes is still under way. However, given the early stages of adoption of CBE, careful attention to lessons from early adopters can ensure that ongoing implementation is done in a way that is most likely to yield successful outcomes. This case study documents implementation lessons of a CBE approach in the context of community college workforce programs.

Because CBE diverges from the traditional credit-hour system, implementing CBE reforms requires rethinking a range of organizational conventions in how programs are offered. The CBE approach challenges key organizational assumptions around how learning is assessed and the time frame for learning. These assumptions are institutionalized into policies, practices, and long-held ideas about how to best educate students. Organizational change in higher education in general is difficult, and is particularly so when it involves core reforms to learning approaches (Kezar 2013). As colleges throughout the United States seek to develop competency-based learning approaches, lessons are needed on how to implement these reforms and address the organizational challenges involved. Some colleges are beginning to provide examples of how to approach CBE reforms, but much remains to be known (Klein-Collins 2012, Ashford 2013).

THE CASE OF THE WORKFORCE DEVELOPMENT PROJECT

Raritan Valley Community College (RVCC) in Branchburg, New Jersey, has been at the forefront of the CBE reform movement nationally with its Greater Raritan Workforce Development Project (WDP) funded by the U.S. Department of Labor’s Trade Adjustment Community College and Career grant program in 2011. Through this project, RVCC sought to reform 10 workforce programs by aligning its content with local employer needs, transforming the delivery of the content to use a CBE approach, and providing active student supports to promote completion and successful job placement. This case study

draws on lessons from the first two workforce programs at RVCC that were reformed through the grant: automotive and cosmetology. We examine two questions: What were significant organizational and instructional challenges in making the shift to a CBE model in its workforce programs? How did the WDP overcome these challenges?

The traditional academic model poses challenges for workforce education in several ways, including in its curriculum, calendar, faculty, grading, and instructional approaches. The WDP's CBE reforms generated an alternative model to the traditional academic model, in the context of a transfer-oriented institution. With this institutional orientation, these reforms may face greater challenges because the primary goal of workforce programs—to prepare students for jobs—is not well understood or integrated in the college at large. We discuss key changes that the WDP made in the organizational structures of the college and the instructional practices of its programs. In both areas, we discuss the implementation challenges the WDP faced and the ways it sought to address those challenges. Challenges included both procedural challenges—the processes and systems that govern how the college operates—and cultural challenges—how faculty and staff view certain ideas or approaches.

ORGANIZATIONAL STRUCTURES

The WDP faced several implementation challenges related to the traditional organizational structures of the college. A major challenge was the time frame for programs because CBE does not neatly fit into the traditional college semester. In its ideal form, CBE is open entry and open exit, with the timeframe dictated by students' learning needs. However, within the context of a traditional college, the practical solution to move towards this goal was to use quarters. This time frame allowed for more frequent entry and exit, as well as year-round operations through the summer and over breaks. Furthermore, since changing the time frame of programs requires procedural fixes to student information systems, moving to a quarter system was tenable because it worked with the system. Changing the time frame of programs also requires a cultural shift that involves changing conceptions about what constitutes success: mastery versus seat time. This cultural shift is still in progress, while the WDP continues to introduce the concept around the college.

The traditional faculty model was another organizational structure that required adaptation when moving to a CBE model. Traditional college faculty members typically do not teach year round and sometimes are not well connected to the local labor market, especially when the college requires that faculty meet certain credential requirements. The solution for the WDP was to create a new nonunion position of “workforce educator.” Instructors in this role work year round. Their work experience and industry connections are prioritized over credentials. The WDP worked within the college to create this new position procedurally. Culturally, the role was accepted as it was viewed as distinctively part of the college's workforce mission and not a role that would be applied to the rest of the college's traditional faculty.

Determining whether to locate the CBE program as a credit or noncredit program was another significant consideration in the implementation of this model. While CBE in concept moves beyond the idea of seat time that drives credit-based education, official college credentials are still awarded via credit-bearing programs. The college did not offer the CBE programs for traditional credit but rather as part of their noncredit offerings. The potential organizational barriers involved in the process of offering these programs for credit were too great and too uncertain to complete in the period of the grant-funded project. However, to ensure that students in these programs would be able to gain credit if they sought additional education, the WDP sought to create an agreement with the New Jersey Pathways Leading Apprentices to a College Education (NJ PLACE) program—a statewide program that provides a mechanism to translate competency-based education into credits accepted at New Jersey's community colleges.¹

Financial aid was another challenge in the implementation of this CBE model. The college lacked clarity on how to apply the federal financial aid option for CBE. Instead of using this option, they translated programs into a clock-hour program as an interim step to figuring out CBE financial aid. The issue remains a challenge until guidance on how to implement federal policy is clearer (Porter 2014).

INSTRUCTIONAL PRACTICES

The WDP developed instructional practices that were fundamentally different from the college's traditional approach. Industry engagement was a core foundation of the programs, as employers played a crucial role in articulating program competencies. The WDP used several strategies to engage with industry to assess competencies when developing the curriculum, including SCID (short for Systematic Curriculum and Instructional Development) and its DACUM (short for Developing a Curriculum) process. With these strategies, program staff engaged with both hiring managers and expert workers through structured meetings to gather information on the specific knowledge, skills, traits, and behaviors workers must possess to perform the job well. Program staff translated these into curriculum, classroom policy, and entrance requirements. While these processes are time consuming, they provided very detailed information that was very closely linked to local industry needs. In the case of the automotive program, the WDP learned that national credentials (that is, Automotive Service Excellence certification) were not prioritized by employers, so the resulting curriculum was based on local industry need with instructional materials developed by the instructor. In the case of the cosmetology program, the WDP needed to adhere to the state board requirements, but added and removed other materials in the curriculum based on local employer needs.

The WDP sought to ensure that the instructional approaches effectively conveyed competencies. The WDP had to find the right balance between hands-on versus classroom-based instruction. Providing adequate amounts of hands-on opportunities proved to be a challenge initially. The automotive program began with 17 students and one instructor. It quickly became obvious that multiple instructors had to be involved in the program to effectively provide hands-on learning opportunities for students. Additionally, this program encountered constraints with equipment, which were later resolved by changing facilities. However, the WDP's experience with instructor and equipment constraints points to two lessons. One is to plan carefully for ample staff and equipment. The other is to acknowledge that constraints in staff and equipment may exist, and to plan for alternative activities to supplement students' learning or to develop a plan to stagger the timing of students' hands-on activities. A fundamental challenge for instructors is to keep students on task and effectively customize learning to their individual levels. Since WDP students began as a cohort, with its benefits in terms of retention, instructors had to develop supplemental activities to help more advanced students move ahead with their learning while other students mastered the material.

The CBE model altered the standards for what constitutes success. With this model, soft skills as well as technical skills were included as core competencies for students to attain. The WDP sought to convey soft skills for the workplace through a variety of approaches: classroom norm setting, work-based learning experiences, faculty and program staff feedback, and some formal instruction on soft skills. This emphasis was a shift in how programs approach instruction and a challenge for instructors who typically did not directly focus on these competencies. To address this challenge, the WDP provided more professional development for faculty and plans to use Active Grade, a software program that will integrate soft skills into assessments and help faculty track students' soft skills development.

Assessments of learning were fundamentally different with the CBE model, since the program goal is to ensure that students possess all the competencies required to be a successful employee. How to record measures of learning for CBE within existing grading systems was not clear since CBE did not fit within traditional academic grading systems. The solution with the existing grading systems was to make the programs pass/fail. Even though the programs were officially noncredit, they were included in the academic grading system and grades were recorded. To conduct CBE assessments, instructors had to

develop formal assessments as well as systems to conduct those assessments. As with the hands-on experience for students, hands-on assessments required multiple instructors and a plan for how to best use the time of students not taking assessments. Finally, the WDP sought to validate the CBE assessments through employer feedback. Employers who provide internships for students at the end of the program rate the student's performance. If the employers report they would hire the student based on their experiences, the student successfully passes the program. If not, the program will take the student back and continue to work on the competencies the employer reported as lacking.

IMPLEMENTATION RESOURCES

Since the implementation of this CBE model occurred in the context of a federal grant to the college, the WDP had resources to support the implementation. They devoted resources to employer engagement that the college did not normally have: two full-time staff members who engaged with employers to assess competencies when building the program curriculum and to connect students with job-shadowing experiences, internships, and jobs upon completion. In addition, the program used the grant resources to try to develop relationships with others at the college and foster support for change in college practices. The federal grant's three-year timeline dictated the timeline for the implementation of these CBE reforms. The WDP developed the new automotive program within the first year of the grant, and reformed the cosmetology program within a similar time frame. Had the program sought to work within the credit programs of the college, however, the time frame would have been longer.

In addition to the grant resources, college leadership provided essential support for the CBE reforms to help work through the organizational changes required to implement the program. Replicating the program in other communities would require a focus on funding. Similar programs may be funded through similar federal grants, but funding could also come through local partnerships with industry organizations or community foundations.

CONCLUSION

Outcomes of this CBE model are positive but still short term. Among the first program cohorts, program completion and employment rates have increased, and employers have provided favorable feedback. In addition, time to completion has been significantly decreased. However, a full understanding of the outcome of this model is not known as long-term outcomes are still pending.

Adopting a CBE model is not a simple process but requires navigating a range of institutional obstacles, particularly in the context of a transfer-oriented college. Overcoming these obstacles was made easier by the presence of external funding as an incentive, although still not a full solution to the barriers. In the absence of such funding, college leadership plays an especially important role in creating a supportive environment for organizational change, as does the work of amenable program members who can illustrate the value of the approach more broadly in the college. Part of the challenge of implementing CBE is the specific knowledge about its implementation. As CBE becomes more common, more resources will be available to guide colleges in its implementation. The increasing knowledge about CBE, as well as the increasing pressure on higher education to transform, will likely build more support for it as an approach. Nevertheless, the tensions between traditional educational models and CBE are likely to persist to some degree.

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¹ Whether and how the credits from NJ PLACE are accepted by programs will vary by college program.

4

Employers’ Investment in Career Pathways Improves Retention and Enhances Employee Engagement in Cincinnati, Ohio

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INTRODUCTION

Partners for a Competitive Workforce (PCW, or the Partnership) is a community collaboration of more than 150 businesses, workforce investment boards, chambers of commerce, secondary and postsecondary institutions, service providers, and philanthropic funders. It is located in Greater Cincinnati, which includes portions of Ohio, Kentucky, and Indiana. The Partnership was established in 2008 to coordinate all of the region’s workforce efforts under a common umbrella to set joint priorities, track progress, and accelerate collaboration. The United Way of Greater Cincinnati manages PCW, with major support from the National Fund for Workforce Solutions and local funders. Its work creates industry-driven partnerships among employers, schools, colleges, and community organizations to close the skill gaps in key, in-demand industries specific to the Cincinnati economy: health care, advanced manufacturing, construction, and information technology.

The Greater Cincinnati region’s health care workforce initiative began in 1999 when employer, education, and workforce partners joined together to find a way to fill high-need hospital positions. In 2003, the Health Careers Collaborative of Greater Cincinnati (HCC) was formalized to assemble a career pathway system to address health care workforce shortages and enhance diversity.¹

EMPLOYERS STEER PROGRAMMING

Early conversations with employers focused on creating career pathways to encourage low-wage, incumbent workers to get training for key allied health occupations to move up within the organization. In turn, this created openings in the jobs previously held by the trainees that were potentially able to be backfilled by unemployed individuals. The group developed the following guiding principles, which are reviewed in annual planning sessions:

- Focus on job and educational advancement for low-income adults while also meeting employer needs.
- Map advancement pathways and opportunities in job sectors of importance to the region.
- Build on existing state-supported initiatives, such as the Higher Skills Partnerships, the Workforce Innovation and Opportunity Act (WIOA, formerly the Workforce Investment Act), and One-Stop Career Centers. (These centers, now called American Job Centers, offer training

referrals, career counseling, job listings, and more, according to the U.S. Department of Labor's website.)

- Commit to systemic change within and across institutions and not just implementation of unsustainable demonstration projects.

These principles have led to the creation of career pathways that lead to associate's degrees in nursing, medical lab technology, respiratory care technology, occupational therapy assistant technology, surgical assistant technology, and health information technology.

Most participants in the career pathways are recruited by employers. After finding that a number of incumbent workers needed additional assistance with basic skills in mathematics, reading, and writing before accessing college-level courses, employers adopted on-the-job technical and soft skills assessment and development. The on-the-job classes use a proprietary curriculum from Catalyst Learning called School at Work[®]. The classes are taught by job coaches who are embedded in each hospital system, or other trained employees. This has reduced employees' remedial coursework (and associated costs) once they start at community college and accelerated their progress. When the participants are ready to enroll in the pathway, employers offer prepaid tuition. Mid-level employees seeking educational opportunities are provided career exploration tools.

After researching available assessment tools, HCC and its partners selected the ACT assessments known as WorkKeys[®], which can lead to a National Career Readiness Certificate (NCRC).² These assessments were integrated into every phase of the HCC pathway work starting in 2011. They provide employers with a reliable method of predicting job performance beyond the basic skills of applied mathematics, locating information, and reading for information. The NCRC Plus ranks individuals in the soft skills categories of work discipline, teamwork, customer service orientation, and managerial potential. Combining the measurements of cognitive skills and work-related behaviors—or soft skills—can help employers predict an individual's success at work.

EDUCATION AND COMMUNITY PARTNERS

The career pathways programs also rely on partnerships with community colleges, the local one-stop employment centers, and community-based organizations. Each of these contributes vital pieces to the system. Several community colleges have worked with the HCC employers to identify funding to develop new pathways, develop a core curriculum, and create stackable credentials. Stackable credentials are ones that together add up to a greater credential. Advisers provide intensive support that improves the likelihood of certificate and degree completion. They have also implemented a cohort model, allowing participants to move together through all levels of training. Students benefit from the peer-based support and interpersonal connections of their cohort. To accommodate full-time work schedules, the associate's degree programs are offered a maximum of three days each week in late afternoon and early evening. Another college offers a Bioscience Manufacturing curriculum and a six-month Health Information Technology Support Professional certification in collaboration with HCC to round out a number of opportunities for employees.

Short-term certificate programs are also a crucial piece of the HCC's work. These certificates are often the first step in preparing students for a career in health care, where they can earn a sustainable wage with benefits. It is also the first rung on a career ladder that offers educational and employment advancement. The Health Professions Academy at Great Oaks Institute of Technology offers multiple short-term credentials such as patient care assistant and state-tested nursing assistant, as well as one-on-one career coaching and guidance to enhance participant employability.

The Southwest Ohio Region Workforce Investment Board (SWORWIB) is a key partner for the HCC. The board offers guidance to the HCC and helps connect prospective training participants with appropriate U.S. Department of Labor resources, including WIOA funds. SWORWIB's alignment of

federal training dollars to targeted sectors has been a tremendous enabler for the work of HCC. The HCC includes Mercy Neighborhood Ministries and Dress for Success Cincinnati as partners. These community-based organizations help identify and refer potential candidates to the training partners. Additionally, Mercy Neighborhood Ministries offers a home health care aide training program and a work-readiness preparation program called “Building Foundations for Life.” Recruitment for this program focuses on long-term unemployed, at-risk women who lack the basic skills required to enter the workforce. The curriculum includes essential workplace and life management skills, basic financial literacy, computer skills, WorkKeys assessments, and remediation in reading and math. Dress for Success, a community workplace clothing donation organization, supports the pathway participants by providing them with professional attire, a support network, and career development tools.

PROVEN RESULTS

HCC has placed major emphasis on developing the systems and discipline for performance management, continuous improvement, and evaluation. The most important component of this has been the adoption of a shared data system (initially invested in by SWORWIB) that captures participant data across many organizations. The system requires partnering service providers to input data about each participant into a central database, which helps maintain visibility on individuals and their progress as they transition across parts of the pathways. This has enabled HCC and PCW to rigorously evaluate their programs and identify what works.

A 2011 study that an impartial third-party organization conducted sought to determine the net benefits received by employers as a result of participation in the HCC partnership. The study compared 90 UC Health employees who participated in HCC’s associate degree cohort program to a matched comparison group of individuals hired in similar occupations at similar times. The analysis included participants who were HCC participants from 2005 through 2010 and extrapolated through the completion of in-progress cohorts in 2013. The set of costs and benefits to incorporate in the analysis was established in a facilitated discussion with hospital human resources staffs.³ One major hospital system provided individual-level data from its human resources database, including start and stop dates, occupations, absences, and promotions. Cincinnati State Technical and Community College, where participants attended school, provided data on tuition payments, including payment sources. The study made assumptions, based on a literature review, of the cost of hiring and turnover for each position, estimating the total present discounted value of costs to be \$1.82 million, mostly attributable to tuition payments and the cost of backfilling positions when participants were promoted. It estimated benefits to be approximately \$2.04 million, mostly attributable to recruitment cost savings when the employees completed training and were promoted to in-demand occupations. Finally, it estimated the net return to be \$216,137 on an investment of \$1.82 million, giving a return-on-investment of 11.9 percent (New Growth Group 2011).

A second analysis quantified the benefit to UC Health from certificate training programs provided by HCC, which prepare individuals for entry-level health care occupations requiring certificates below the associate degree. This certificate training cost the employers little due to the partnership’s leveraged public and grant funding but provided them substantial benefits. The net benefit to the employers per HCC participant hired was estimated to be \$4,869, due equally to lower turnover and reduced recruitment costs. Because of the large scale of the program (525 employees between 2005 and 2010), the present discounted value of the net benefits from the certificate program is more than \$2.6 million (New Growth Group 2011). In addition, UC Health reported additional, nonmonetary benefits: improved job performance among pathways participants, increased diversity of the workforce, and improved fulfillment of the organization’s community service mission.

A third study, commissioned by health system partner TriHealth in 2013, found a positive influence on return on investment. A number of different indicators were examined, such as turnover rate, employee satisfaction, diversity, performance counseling, employee evaluation, and percent change in pay. While a

variety of results were noted, some significant differences pointed towards the benefit of such programs. Positive results from this study included:

- Lower turnover rate for all groups participating in the HCC programs
- Greater employee satisfaction in patient care assistant and HCC treatment groups
- Greater diversity in all groups involved in the HCC programs, such as an increased percentage of African Americans, Hispanics, and Asian Americans
- High evaluation scores and minimal rates of performance counseling for those groups participating in the programs
- Greater percent change in pay over time for the School at Work and HCC groups (Moran and Bhardwaj 2013)

So far this case has focused on HCC, but PCW has developed similar employer-led career pathways for low-skilled individuals in the construction, manufacturing, and (more recently) information technology sectors. Since 2008, the partners collaborating to develop pathways in these four sectors have served more than 7,800 individuals. More than 8,300 credentials have been earned, with a completion rate of 87 percent. Eighty-one percent of those exiting the program have obtained employment, and 75 percent have retained employment after 12 months. These results include more than 1,600 incumbent workers who have taken some form of training and have nearly 1,300 credentials.⁴ Table 4.1 lists the types and numbers of credentials awarded.

The career pathways partnerships facilitate a number of different programs ranging from short, job-readiness training to longer-term associate degree programs. An analysis of 3,852 unique program completers revealed that the following credentials were earned:^{5,6}

Table 4.1: Completers, by Longest Program Completed

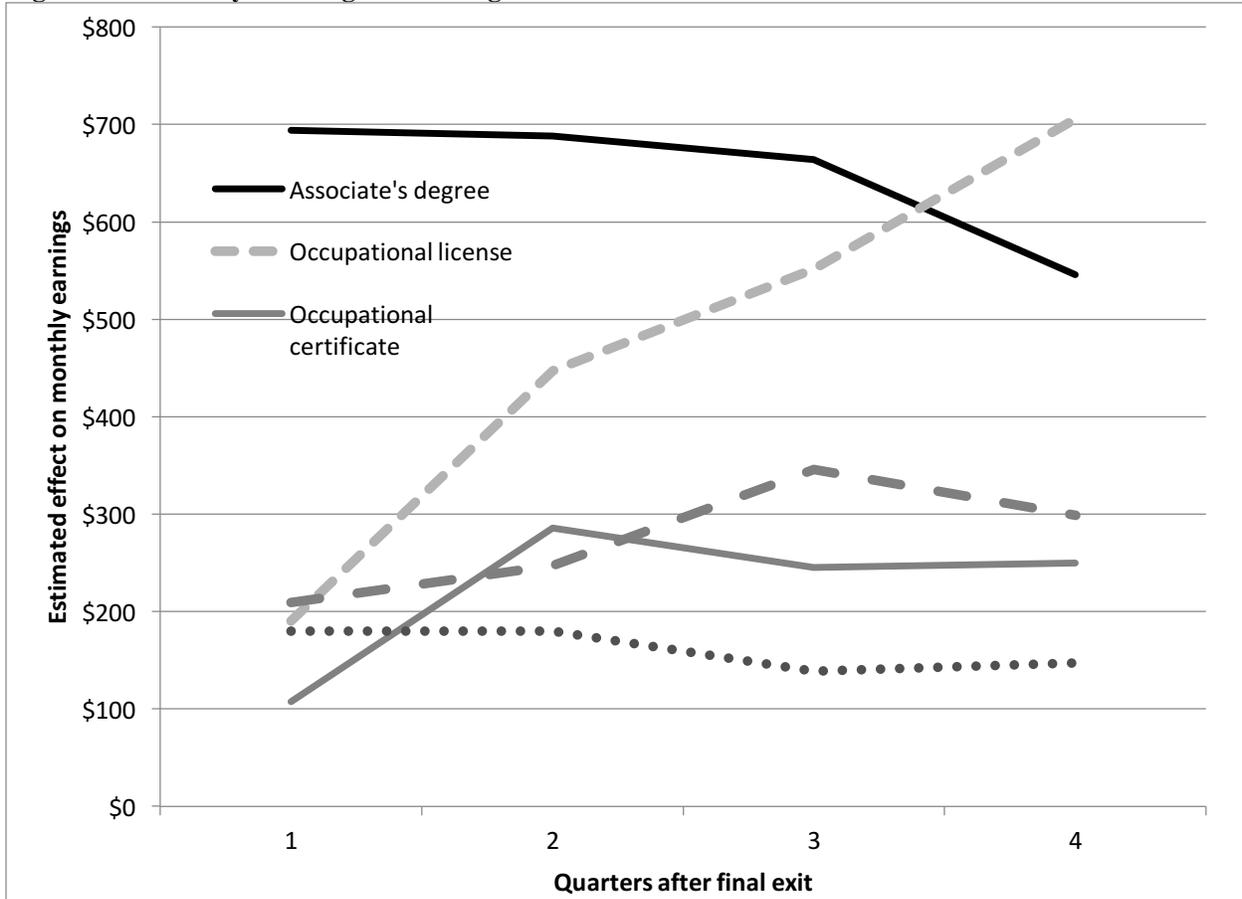
Highest exit type	Completers	
	Count	Percent
Associate's degree	66	1.7
Occupational license	27	0.7
Occupational certificate	1,557	40.4
Other certificate	601	15.6
NCRC	275	7.1
Job readiness training	1,326	34.4

SOURCE: New Growth Group (2013)

A third-party evaluation found that these programs have increased monthly earnings in the Cincinnati area by \$614,807 and have cumulatively contributed \$7.3 million per year to the area just in the form of higher participant earnings. The evaluation matched participants in PCW's more intensive programs with similar participants who received only job-readiness trainings to measure PCW's impact on employment and earnings. All programs increased monthly earnings one year after exit, though the effect of associate's degrees is statistically insignificant due to fewer completers. PCW's programs help participants reach employment more quickly, but for most training levels, the job-readiness-only participants eventually reach similar employment rates four quarters after exit (New Growth Group 2013). The exception is occupational certificate recipients—the largest group of PCW participants—whose employment rate is 30 percentage points higher than that of comparable job-readiness-only participants. Associate's degree recipients have similar gains, though they are not statistically significant due to the

small sample size. This finding suggests that training that prepares people for specific in-demand occupations dramatically increases their probability of being employed even a year after completing training. However, the employment benefits of less-specific training are not as long-lived.

Figure 4.1 Monthly Earnings after Program Exit



SOURCE: New Growth Group (2013)

Behind these numbers are thousands of participants like Kevin, a 20-something African American who has long dreamed of becoming a nurse. He is now well along his way thanks to the career pathway that HCC developed. He began his career at TriHealth as an environmental services floor technician. While working there, he is using prepaid tuition credits to take registered nurse associate's degree courses at Cincinnati State Technical and Community College on a part-time basis. Kevin started his clinicals in the fall of 2013 in the surgery department at TriHealth and maintains an almost perfect grade point average. Upon graduation, he will apply for nursing positions at TriHealth. Once he becomes an RN, his income will increase by more than 50 percent.

LESSONS FROM PCW

1. Create and sustain an employer-led, multi-stakeholder advisory committee. Collaboration among committed representatives from employers, educational institutions, and community-based organizations has been critical to HCC's success.

2. Finance and place a high priority on employee education and training. For example, employer-prepaid tuition removed barriers for employee engagement.
3. Invest in data collection and analysis. A shared database was necessary for PCW to demonstrate impact and thereby make the case for ongoing support. Early engagement, thoughtful training, and funding tied to data entry helped to get all partnering organizations to comply with the system.
4. Take small steps through the creation of educational pathways. On-the-job training and the chance to earn certificates and credentials build employees' confidence so they are ready to engage in more vigorous instruction.
5. Monitor and evaluate program participation, effectiveness, and impact. Employer return-on-investment studies and regular, consistent communication with educational partners help to identify opportunities for, and challenges to, program growth.

By coming together, PCW's employers, educational institutions, and other service providers were able to identify and address gaps in services and impediments to individuals' progress. They were able to add slots for clinical training, for example, and had employers pay for tuition directly. This cooperation and resulting early action have resulted in highly effective career pathway programs in health care, manufacturing, construction, and information technology. A shared data system allowed PCW and its partners to rigorously evaluate its work and prove that it has had substantial impacts, both on individual participants and on Greater Cincinnati.

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¹ See competitiveworkforce.com for more information, including a list of current partners.

² ACT is the same company that administers college entrance exams, among other activities

³ Costs were estimations of administrative costs borne by employers, tuition payments, increases in absences during training, cost of hiring replacements for current positions when participants complete and are promoted (backfilling). Benefits were reduction in turnover during training and lower hiring and training costs of promoted workers when compared to outside hires.

⁴ The figures cited in this paragraph were provided by Janice Urbanik, PCW's executive director, on April 30, 2014.

⁵ No completers from the information technology pathway are included in this table.

⁶ Associate degrees include nursing and health information technology. Occupational licenses are primarily for state-tested fpara assistants who had already completed training but had not yet passed the state license. Occupational certificates include manufacturing programs such as those for Computer Numeric Control operators, welders, bio-science technicians, pharmaceutical technicians, and electro-mechanical technicians; the Manufacturing Skills Certification Systems (MSSC) certificate is also an occupational certificate. Occupational certificates also include construction programs such as carpentry,

electrician, plumbing, HVAC, and pre-apprenticeship certificates (e.g. NCCER [National Center for Construction Education and Research] Certification). Other certificates include non-occupation-specific certificates, such as CPR or OSHA 10.

5

Investing in Frontline Health Care Workers: Cases from Maryland, West Virginia, and North Carolina

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INTRODUCTION

Integrating employers into the development and delivery of education and skills training programs is an effective strategy to reshape the U.S. workforce development system, tie it to currently available jobs, and produce better results for job seekers (Maguire et al. 2010). Private employers are estimated to have spent \$164.2 billion on employee learning in 2012 (ASTD 2013). When including indirect spending on training—coaching and informal training—estimates range from \$500 billion to \$1.1 trillion a year (Carnevale, Strohl, and Gulish 2015). While most private sector employee training is disproportionately targeted at more highly educated workers, better use of frontline workers has become a focus for some companies (Lerman, Signe-Mary, and Riegg 2004).

Since 2009, the Hitachi Foundation designates companies as “pioneer employers” when they take the initiative “to benefit their customers, patients, and/or shareholders by strategically investing in their own lower-wage workers” (Hitachi Foundation 2010). These strategic investments have come through innovations in at least one of three areas—human capital, mix of products and services, and production/service methods. Hitachi found that these innovations created value for the employers while simultaneously benefiting frontline workers through better training, increased motivation levels, more career advancement, and potentially higher standard of living (Levine, Popovich, and Strong 2013). The success of these innovations hinged on four critical factors: consistent leadership and vision, winning buy-in from key players, establishing a culture of learning, and coaching approaches to supervision (Levine et al. 2013).

The health care industry is one sector that stands to gain from employer innovation. By 2022, the health care and social assistance industry sector is projected to be the largest employer across all industries in the United States (Henderson 2013). The U.S. Bureau of Labor Statistics estimates that roughly five million jobs will be created in this sector between 2012 and 2022 (Henderson 2013). Occupations that assist medical providers with their clients will have the largest share of new jobs. The number of new jobs is significant, ranging from 527,000 registered nurses (2012 median annual wage of \$65,470; required entry education of an associate’s degree) to 163,000 medical assistants (2012 median annual wage of \$29,370; typical entry education of a postsecondary nondegree award) (Richards and Terkanian 2013). The high number of new openings raises the questions of how these occupations will be filled and will there be enough qualified candidates.

Frontline workers, those providing basic services and care in hospitals, have the lowest median salaries among health care occupations (U.S. Bureau of Labor Statistics 2014). Given the high demand for

registered nurses, the internal training and promotion of frontline workers may offer one possibility for filling these new jobs.

This case study looks at a set of health care sector “Pioneer Employers” located within the district boundaries of the Federal Reserve Bank of Richmond. Pioneer Employers are organizations that Hitachi identifies for their ability to solve not only business challenges but also social problems through a mix of innovative workforce development strategies and product/service models (Levine, Popovich, and Strong 2013). Across the five Pioneer Employers, we found commonalities around two workforce development strategies: team-based work structure and skill development opportunities. By implementing these strategies, the Pioneer Employers reported operational efficiency increases, better patient outcomes, staff turnover declines, better job satisfaction, and advancement along newly established career ladders. While direct investment in frontline workers has benefited both the workers and their organizations, upward economic mobility in the health care sector for these workers remains a challenge.

CASE SELECTION PROCESS AND RATIONALE

The cases highlighted in this study include five health care sector employers located in Maryland (Augsburg Lutheran Home, Chesapeake Connections, and the Family Health Center at Franklin Square), West Virginia (Cabin Creek Health Systems), and North Carolina (University of North Carolina (UNC) Health Care System). Interviews were conducted with key leaders from each organization. Table 5.1 provides details about each of the cases, which will henceforth be referred to as Pioneer Employers.

Table 5.1 Case Characteristics

	Augsburg Lutheran Home	Cabin Creek Health Systems	Chesapeake Connections	Family Health Center at Franklin Square	UNC Health Care System
Organization Type	Accredited continuing care retirement community	Federally qualified health center	Community-based program	Outpatient medical clinic	Public hospital with an integrated health care system
Location	Baltimore County, MD	Kanawha County, WV (4 offices)	City of Baltimore, MD	City of Baltimore, MD	Chapel Hill, NC (9 distinct entities)
Year Started	1892	1972	1993	1970	1952
Staff Size	Over 250 employees	127 employees (33 medical assistants)	At least 46 full-time direct-care workers	At least 50 employees (15–18 certified medical assistants)	8,190 paid full-time employees
Frontline Worker Workforce Development Strategies	<ul style="list-style-type: none"> • Increasing staff empowerment with clinical training modules • Consistently assigning staff to clients to improve quality of care • Forming care resource teams (CRTs) 	<ul style="list-style-type: none"> • Training to become mobile patient care facilitators • Using pairing structure of MA with provider to remove isolation of MAs • Planning trainings around location access and schedule • Empowering MAs to make decisions • Implementing formula for pay increases that incorporates training completion 	<ul style="list-style-type: none"> • Using a slogan for success • Implementing voice equalization (staff empowerment) • Providing educational advancement (flexible schedules, training cost coverage, salary increase upon certification completion) • Using kudos and rituals • Offering experiential interviews • Incorporating career advancement (adding two new positions to career ladder) 	<ul style="list-style-type: none"> • Creating medical safety training programs for MAs • Forming “do-it” groups • Assembling monthly performance improvement meetings • Empowering staff to think independently • Promoting continuing education as well as further education opportunities 	<ul style="list-style-type: none"> • Creating career ladder for frontline workers (clinical support staff development model) • Increasing autonomy and responsibility for nursing assistants (NAs) • Offering educational programs • Offering greater patient interaction

SOURCES: Paraprofessional Healthcare Institute 2010; Blash, Dower, and Chapman 2010; Dailey 2011; Blash, Dower, and Chapman 2011; and Hitachi Foundation undated

PROBLEM IDENTIFICATION

This study's Pioneer Employers were focused on investing in frontline workers to improve two key organizational competencies: operational efficiency and client care. Operational inefficiencies were evident through high staff turnover rates, an underutilization of workers' capabilities, and inconsistent training approaches and outcomes. Client care approaches were not capitalizing on the multitude of touch points that the frontline staff had with clients (such as taking vitals, drawing blood, bathing, and administering medicine), where medical errors could be recognized, corrected, and used as a learning opportunity to prevent future occurrences through process changes. Although frontline workers' wage increases or career ladders were not the catalysts for improving organizational competencies, they became tools to help achieve operational efficiency and client care.

WORKFORCE DEVELOPMENT STRATEGIES

Team-Based Work Structure

The Pioneer Employers saw an empowered and better-trained frontline workforce as fundamental to solving the problems of operational inefficiency and suboptimal client care. In principle, when medical assistants can function at their highest level, more senior staff such as nurses and providers can as well. A common strategy to achieving these goals of training and empowerment was to modify work processes to better integrate frontline workers into broader health care teams, both physically and operationally. (See table 5.1 for case details.) In a team-based setting with specific role assignments, members rely on each other to make sure all assigned tasks are accomplished. This greater level of accountability empowers frontline workers and provides clear recognition of the value they add to the process.

Under the team-based work structure, frontline workers handled an increased number and variety of tasks. However, the Pioneer Employers recognized that their frontline workers received minimal cross-training on new tasks, such as entering data into an electronic health records system or conducting in-home visits. This lack of cross-training was compounded by how physically isolated frontline workers were from other client care-based staff. For example, medical assistants would be clustered together in a workspace away from nurses and other providers. This arrangement limited opportunities for medical assistants to pass along the important and medically useful observations they had gathered from their interactions with patients. The new team-based structure focused on creating shared work structures, and often work spaces, with frontline workers and senior staff to better create opportunities for informal training and to consult with each other on patients.

An organization's transition to more team-based work structures varied from employer to employer (see table 5.2 for case specifics). For UNC Health Care System, the decision was made at an institutional level with strong support from senior management to pair nursing assistants with registered nurses to promote consistent and focused client care. With Augsburg Lutheran Home, its election to become part of LifeSpan Network's Wellspring Program brought the formation of multi-person care resource teams (CRTs) who focus on a single client care opportunity—for example, preventing falls. At Cabin Creek, medical assistants share the same office space as their assigned provider.

Skills Development Opportunities

To develop more skilled frontline workers, the Pioneer Employers used a mix of formal and informal training opportunities. The formal training included clinical training modules (Augsburg), mobile patient care facilitator training (Cabin Creek), and a medical safety training program (Franklin Square). The informal opportunities, which largely took place outside of a traditional classroom setting, were designed to overcome a core obstacle in obtaining training—the timing and location of the classes. Some employers used a “lunch-and-learn” model; frontline workers could learn about a new medicine or disease-related issue during normal working hours. Another tactic was to include 15-minute collaborative

meetings, or “team huddles,” to learn and share in a wider group. Efforts were made during these group settings to ensure that medical or nursing assistants felt comfortable sharing their perspectives. Employers also developed suggested e-learning opportunities because of cost effectiveness and flexibility in scheduling.

To encourage frontline workers to take advantage of these educational opportunities, the Pioneer Employers designed salary increases and career ladders around them. UNC set up the Clinical Support Staff Development Model for the career advancement of frontline workers (Hitachi Foundation undated). Entry-level nursing assistants (NAIs) have the opportunity to train to become either a nursing assistant II (NAII) or a clinical support technician (CST) I or II. Other hospital paraprofessional staff such as health unit coordinators (HUC), stock clerks, and telemetry technicians could train to become CSTs. The first implementation phase was the development of CST positions on the care team. In the second phase, the existing NAII staffing role was redefined for the hospital’s highest capacity utilization. Training for both positions is conducted entirely in-house. Completion of the training garners frontline workers a promotion and wage increase.

Chesapeake Connections added two new positions to its existing team position career ladder. Team assistants could be promoted to senior team assistants and case managers could be promoted to team leaders. Each of these promotions would have an accompanying salary increase. Chesapeake did not establish a formal training program for these advancements but rather relies on management’s continuous professional development of staff (Dailey 2011). Mosaic Community Services, Chesapeake’s parent organization, offers a \$0.50 per hour raise to staff members who complete the two-year psychosocial rehabilitation training certification program at the Community College of Baltimore (Dailey 2011).

Cabin Creek set up a formula for pay increases based on seniority, certification, and training module completion. A staff member who participates in the Senior Medical Home model receives an additional \$0.25 per hour (Blash et al. 2010). The completion of motivational interview training leads to \$0.15 more per hour (Blash et al. 2010). Medical assistants who become electronic health record “super users” earn \$0.30 more per hour because they now have the expertise to train new staff on the electronic health record system (Blash et al. 2010). Cabin Creek also provides opportunities for medical assistants to become team leaders, care coordinators and site managers.

Many of the employers reorganized their leadership and staff structures to support these new training practices. Franklin Square hired a new nurse educator charged with enhancing interdepartmental communication and collaboration. The result was a standardized training program for certified medical assistants. After a senior leadership change, Cabin Creek began to explore the role of medical assistants in helping to manage chronic disease. The Claude Worthington Benedum Foundation provided funding to Cabin Creek to implement the new training models.

Table 5.2 Frontline Worker Workforce Development Strategy Elements by Case

	Augsburg Lutheran Home	Cabin Creek Health Systems	Chesapeake Connections	Family Health Center at Franklin Square	UNC Health Care System
Trigger	Becoming a member of LifeSpan Network's Wellspring Program	Various organizational changes between 2004 and 2006 including new leadership, electronic health records system, and chronic disease initiatives	Hiring in 2003 of Denise Chatham as director and subsequent merger with Mosaic Community Services	New nurse educator hired in 2006 with the charge of enhancing inter-departmental communication and collaboration	Switch to a team-based staffing model (registered nurses with higher-skilled nursing assistants) (Partners in Practice)
Strategy Initiated	2003	2009	2010	2008	2008
Partners	Wellspring Alliance (LifeSpan Network)	<ul style="list-style-type: none"> • Bridgemont Community and Technical College • West Virginia Center on Aging • New River Health Association • West Virginia University School of Medicine 	<ul style="list-style-type: none"> • Community College of Baltimore • Shepard Pratt Health System • Mosaic Community Services 	<ul style="list-style-type: none"> • Community College of Baltimore County • Medstar Health • Essex Community College 	<ul style="list-style-type: none"> • North Carolina Board of Nursing • Durham Technical Community College
Outcomes	<ul style="list-style-type: none"> • Family and resident satisfaction levels (no. of falls, burden on health care system, use of restraints, unplanned weight loss) • Staff morale and confidence 	<ul style="list-style-type: none"> • Patient volume • Cost per patient encounter • Staff turnover • Job satisfaction 	<ul style="list-style-type: none"> • Service outcomes (hospitalizations, psychiatric hospital days, independent living, volunteer participation, work or school, group or skill-building class attendance, length of sobriety, level of substance abuse, member satisfaction, homelessness rate, housing retention rate) • Staff retention 	<ul style="list-style-type: none"> • Medication errors (administration, dispensing, ordering) • Agreement by certified medical assistants (CMAs) with medication safety program statements 	<ul style="list-style-type: none"> • Retention • Increased efficiency • Better care delivery • Patient feedback • Cost-effective care • Worker job satisfaction • Advancement • Responsibility • Higher wages

	Augsburg Lutheran Home	Cabin Creek Health Systems	Chesapeake Connections	Family Health Center at Franklin Square	UNC Health Care System
Funding	<ul style="list-style-type: none"> • Monthly membership fee • Per-bed cost for online tracking tool 	<ul style="list-style-type: none"> • Area health education center (AHEC) • Claude Worthington Benedum Foundation • Grant funding 	Capitated funding	<ul style="list-style-type: none"> • Self-financed • Nursing support grant from Maryland Health Services Cost Review Commission 	Self-financed
Obstacles	<ul style="list-style-type: none"> • Considerable time to implement • Acknowledged time delay in results • Staff resistance 	<ul style="list-style-type: none"> • Buy-in from all staff levels • Grant-funded financing • Time management for training and at-home visits • Patient boundary issues • Safety 	Stress from merger about job retention and retention of unique program identity	<ul style="list-style-type: none"> • Lack of recognition by the organization on the importance of the CMA role (low pay, absence of promotional opportunities) • Coverage during training sessions • Physician buy-in • Constant change of pairings • Clear promotion ladder 	<ul style="list-style-type: none"> • Need to increase the supply of nursing assistant IIs • Need to bring training in house

SOURCES: Paraprofessional Healthcare Institute 2010; Blash et al. 2010; Dailey 2011; Blash et al. 2011; and Hitachi Foundation undated

FUNDING

All the Pioneer Employers recognized the challenge of budgeting for frontline worker training. Over the span of one fiscal year, UNC spent \$200,000 on the training of NAIIs (Hitachi Foundation undated). Employers who were part of a larger structure of clinics or part of a network (such as UNC, Franklin Square, and Augsburg) had the most stable funding. For these employers, the training costs were more likely to be sustained through broader operational budgets that included general education funds. On the other hand, Chesapeake Connections, which serves a very high-need population, has a stable funding contract with the State of Maryland to cover client costs, so any additional funds for training are supplemented by its umbrella organization, Mosaic. Cabin Creek leveraged its designation as an area health education center to access additional federal funding for training.

OUTCOMES FROM WORKFORCE DEVELOPMENT STRATEGIES

Given their status as Pioneer Employers, we expected to see positive outcomes for the frontline workers resulting from workforce development strategies. These outcomes would include wage increases, promotions, lower turnover, and greater job satisfaction. According to the available data and anecdotal information from the cases, however, there were varied outcomes.

Wages and Career Ladders

For UNC's frontline workers, progress along the clinical support staff development model led to wage increases for frontline workers of between 8 and 10 percent, depending on work experience (Hitachi Foundation undated). As of an evaluation completed in June 2013, 72 students have completed the NAI program, which has a 100 percent completion and graduation rate (UNC Hospitals Division of Nursing 2013). Since the staffing changes were first implemented in 2008, more than 200 staff members now operate in NAI, CST, unit monitor, or mobility technician roles (Hitachi Foundation undated).

At Franklin Square, completion of medication safety training or the Simlab competency training does not lead to a salary increase because the training has become a required job competency. While Franklin Square has not yet created a formal career ladder for medical assistants, several new roles were initiated for medical assistants with higher levels of compensation, including certified medical assistant team leader and cross-trained float positions. Mosaic expected six employees to complete the psychological rehabilitation training certification program in 2011 and receive a pay increase (Dailey 2011). The changes implemented by Cabin Creek have meant that medical assistants now earn on average \$13 to \$14 per hour compared to their prior level of \$8 per hour (Blash et al. 2010). This wage level does not take into account any increases due to seniority, certifications, or training module completions. By having geriatric nursing assistants (GNAs) lead care resource teams (CRTs), Augsburg uses the opportunity to develop leaders among the GNAs (Paraprofessional Healthcare Institute 2010).

Staff Retention

Chesapeake Connections admits that their organization often serves as a stepping stone for employees on the path towards higher-paying jobs elsewhere (Dailey 2011). Yet, through their career promotional ladder and educational benefits, they have been able to keep their retention rates at a "relatively good" level (Dailey 2011). Through 2011, the average tenure for team assistants was 6.5 years, and most case managers stay an average of 2.7 years (Dailey 2011). Cabin Creek's medical assistant retention rates have also improved from "constant" to "low" turnover (Blash, Dower, and Chapman 2010). In 2009, UNC's turnover rate for CSTs was 6.6 percent over four cumulative quarters versus 23.3 percent for NAs and 12.8 percent for HUCs (Hitachi Foundation undated).

Job Satisfaction

Before implementing the Clinical Support Staff Development Model on a wide scale, UNC conducted a pilot of the CST role in two nursing units followed six months later by an evaluation survey. The survey responses showed satisfaction with the role and recommended its continuance (Hitachi Foundation undated). Outside of the model, UNC measures job satisfaction through an annual survey. CMAs at Franklin Square reported higher levels of empowerment and satisfaction along with greater development of leadership and teaching skills as a result of the different training initiatives (Blash, Dower, and Chapman 2011). Based on self-reporting, Cabin Creek's medical assistants also have greater job satisfaction than before the program was instituted (Blash, Dower, and Chapman 2010). The biggest effect at Augsburg has been a sense of empowerment generated among its frontline workers. GNAs feel more comfortable offering suggestions to the nursing staff about resident care and are confident that their suggestions will be given consideration (PHI 2010).

CHALLENGES FOR IMPLEMENTATION AND SUSTAINABILITY

While the frontline training implemented by the Pioneer Employers was not primarily focused on improving the standard of living for frontline workers, the training may influence subsequent career choices, such as the decision to pursue additional education, often leading to better opportunities. Interviewees acknowledged that even with assistance programs, very few frontline workers went back to school to earn a degree. They cited tuition costs, available free time, child care, and transportation

challenges as barriers. Franklin Square noted in the interview that only four medical assistants in the last three years have graduated with a nursing degree or a bachelor's degree in another subject.

UNC and Franklin Square offer the most tuition assistance and flexibility for staff to further their education. Career development/continuing education programs open to UNC employees include academic assistance reimbursement (maximum of 20 semester credit hours per fiscal year), waiver of student fees, and tuition waiver at state universities (two courses per academic year) (UNC Health Care HR Services Department 2014). At Franklin Square, CMAs are eligible for a minimum of \$3,000 per year in tuition reimbursement, lab fees, books, and other educational expenses based on the length of their employment (Blash, Dower, and Chapman 2011). CMAs interested in pursuing a nursing career may also take advantage of a nursing program offered jointly by Franklin Square Hospital Center and the Community College of Baltimore County. Upon completion of the program, CMAs are eligible to be rehired at Franklin Square as nurses (Blash, Dower, and Chapman 2011). Chesapeake employees through Mosaic's programs are eligible for tuition reimbursement of up to \$300 per semester for work-related courses (Dailey 2011). Continuing education and medical education courses are available to licensed and certified employees through Mosaic's relationship with the Shepard Pratt Health System in Baltimore.

CONCLUSION

Given recent projections for the coming decade, health care organizations need to prepare for a significant increase in demand for services. It will mean a substantial expansion in employment in the health care industry. The majority of these new jobs are not in high-paying medical provider positions, but in low-paying positions such as orderlies and medical and nursing assistants. Due to their significant contact with patients, these positions have a direct impact on organizational efficiency and quality of care. Implementation of workforce development strategies aimed at frontline workers has produced reports of improved worker performance and satisfaction and lower staff turnover. There has also been advancement along newly established frontline worker career ladders. Health care organizations are seeing benefits to their operations, but in these organizations, workers rarely complete educational credentials that would give them access to higher-paying jobs.

Interviewees stated that the strategies of team-based operational groups and informal training opportunities could be applied to other industry sectors, such as food services, manufacturing, and retail. These are sectors where frontline workers play a role in customer satisfaction but are not currently integrated into broader operational teams. This raises the question of whether there would be even greater barriers to upward mobility for frontline workers in non-health-care sectors. Given the forecasted future demand for registered nurses, opportunities will exist for higher-wage positions in health care, but effectively getting frontline workers the credentials needed for these positions remains an open question.

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6

Transforming Lives for People with Criminal Records through Demand Skill Training and Job Placement

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More than 1 in 10 Americans are currently behind bars, the highest incarceration rate of any nation in the world. The U.S. prison population is also among the lowest in terms of socioeconomic status. U.S. inmates are typically unemployed before imprisonment, are frequently without educational qualifications, and have poor literacy and numeracy skills.

Collateral Costs: Incarceration's Effect on Economic Mobility finds that incarceration exacerbates these problems by its enduring negative impact upon the ability of ex-offenders to find, retain, and advance in employment, which in turn stunts the economic mobility of those with felony records (Pew Charitable Trust 2010). Serving time reduces hourly wages for men by approximately 11 percent, annual employment by 9 weeks, and annual earnings by 40 percent. Hughes and Wilson (2002); Culhane, Metraux, and Hadley (2002); and Travis (2005), among others, have found that these collateral impacts weigh heavily on communities into which ex-offenders or “returning citizens” find themselves struggling with even greater burdens of mental illness, homelessness, educational deficits, limited employment opportunities, and other “invisible sanctions.” Researchers often find that these individuals are relegated to a permanent second-class status, particularly in the workforce (Mauer and Chesney-Lind 2002, Alexander 2010).

BACKGROUND

Safer Foundation (Safer), a Chicago-based nonprofit organization, was founded in 1972 as an advocate for individuals with criminal records in their efforts to obtain employment following release from prison or jail. Its mission is to reduce recidivism by supporting, through a full spectrum of services, the efforts of people with criminal records to become employed, law-abiding members of the community. Safer has developed a range of programs and services designed to address these needs. Serving approximately 10,000 individuals annually, Safer is one of the nation's largest nonprofit providers of services designed exclusively for those with criminal records. The underlying premise of Safer's approach to reducing recidivism is that “work works.” If people with criminal records are to successfully reenter mainstream society, they must be able to get a job and earn a living wage.

COLLABORATION FOR IN-DEMAND INDUSTRY EMPLOYMENT

Despite high unemployment rates, the majority of national and local manufacturers report difficulty in finding skilled workers. A recent survey of manufacturing firms found that 67 percent of respondents felt there was a moderate to severe shortage of available qualified workers, and that 5 percent of current jobs at respondent manufacturers are unfilled due to a lack of qualified candidates (Deloitte Consulting LLP

and the Manufacturing Institute 2011). When it comes to machining and similar jobs, 45 percent of firms reported a serious shortage, 38 percent a moderate shortage, and 12 percent some shortage. Sixty-nine percent of companies expected this shortage to worsen in the next three to five years.

The Council on Competitiveness and other organizations have turned attention towards solving skills gaps to promote national economic growth. The organization proposes that meeting this challenge will create jobs, reduce unemployment, and stimulate the U.S. economy through the production of goods and services (Council on Competitiveness 2011). In 2012, the National Association of Manufacturers (NAM) issued its general education policy promoting a system of industry-recognized skills credentials as necessary to reform education and training for 21st-century manufacturing, including nationally portable credentials that validate the attainment of critical competencies required by industry. In a more recent study, Osterman and Weaver (2014) find that the impact of skills shortages in manufacturing are real but that the skills that manufacturers seek are within reach of a majority of Americans through training at community colleges. However, for citizens returning from incarceration, low wages and persistent unemployment remain formidable challenges along their path to successful reentry. Manufacturing jobs are ideal opportunities for many returning from incarceration. Likewise, the reentering population, with training, could help meet the needs of firms with skilled labor shortages.

Safer Foundation works through multi-stakeholder collaborations to create reentry programs that aim to solve two serious problems in Chicago: first, the need for employment for returning citizens and, second, the need for local manufacturers to address a shortage of skilled workers such as computer numerical control (CNC) machining workers, audiovisual equipment technicians, and welders, among others. In the last couple of years, Safer has successfully implemented a CNC training program and a customized audiovisual technology training program. CNC machine operators program, set up, load, operate, and monitor the progress of automated machinery. This training program combines state-of-the-art online instruction with extensive hands-on laboratory experience. Trainees earn nationally recognized fully portable credentials from the National Institute for Metal Working Skills (NIMS). Job placement operates through several extensive networks of manufacturing companies. Safer's audiovisual technical training program provides Microsoft certification and hands-on training in audiovisual equipment repair and maintenance leading to job placement in the service centers of a large retail chain.

The objectives of these programs are for graduates to experience long-term retention in careers with family-sustaining compensation (Safer 2012). These programs will lead to employment outcomes for more than 300 persons with criminal records.

PARTICIPANTS, SETTING, TIME, AND PLACE

This study focuses on high-skills training programs for residents of Safer's adult transition centers (ATCs) operated under contract with the Illinois Department of Corrections. ATCs offer a secured residential transitional living environment where incarcerated individuals who meet certain offense and good behavior criteria may serve out the last three to 24 months of their sentences. Opened in 1983, Crossroads ATC has a bed capacity of 380, while North Lawndale ATC opened in 2000 with a bed capacity of 208. The ATCs together serve approximately 1,300 clients per year, with an average stay of 15 months. The CNC training is comprised of 60 hours of instruction delivered at Crossroads on virtual software and 180 hours of hands-on instruction at City of Chicago's Daley College/Arturo Velasquez Institute. The first cohort of 17 persons was launched in March 2013; they completed training in October 2013. The program has run subsequent cohorts since. The audiovisual technical training is comprised of 16 weeks of instruction delivered onsite at a community-based classroom setting (eight weeks) and the technical service center (eight weeks) of the employer partner. Classroom training includes job-readiness training, computer skills, computer repair and maintenance, and audiovisual equipment repair and maintenance. The service center training includes tools, theories, safety, techniques, and troubleshooting of audiovisual equipment. It also provides paid on-the-job training in the repair and maintenance of technologies.

ORIGINS OF THE PROGRAM

These programs have their origins in discussions extending back to 2010 to build a strategy to address the pressing skills gaps in manufacturing along with reducing the recidivism rates of people with criminal records through meaningful employment.¹ The resulting collaborations were implemented beginning in 2012 and include the following partners: the Safer Foundation, Manufacturing Renaissance, NIMS, City Colleges of Chicago, Manufacturing Works, the Chicago Community Trust, and employer and training partners.

RESULTS AND DISCUSSION

The collaborating partners for this training program have well-earned expertise in workforce and community economic development, employment and re-entry services for people with criminal records, and manufacturing resurgence. Collectively, they assert these fundamental propositions:²

1. Skills trump criminal records—sufficient market demand will overcome reluctance to hire.
2. A holistic approach is necessary to address the variety of challenges people face in reentry.
3. Students must be motivated and driven for success.
4. The instructor must be able to teach across broad academic and social backgrounds and learning styles.
5. It is necessary to hold the belief that people can make better decisions that mean a better life for the individual and his or her family.

Evidence from the Case

The results for the program have been quite strong. For both training programs, the results have met or exceeded funder and organizational objectives (see table 6.1). One funder invested in the CNC and audiovisual program initiatives because they addressed value for clients (technical skills training and increased career earning potential), value to employers (skilled employees and increased productivity), and value to society (reduction in net unemployment, taxes, and public benefit savings) (J. Lewis, personal interview, April 21, 2014).

Table 6.1

Program	Goals and Objectives	Outcomes and Results
CNC Training	<p><i>Outcome 1:</i> Provide 30 individuals with criminal records with training and employment. At least 80 percent of the participants will complete the training program.</p> <p><i>Outcome 2: 999</i> At least 70 percent of participants (17) who complete the training will secure employment and 70 percent of participants (12) who secure employment will retain employment for 30 days.</p> <p><i>Outcome 3:</i> At least 70 percent of participants (8) who reach the 30-day retention benchmark will achieve 90-day job retention and 60 percent (7) will achieve 180-day job retention</p>	<p><i>Outcome 1:</i> Thirty-six persons have been enrolled with an expectation of achieving at least two NIMS credentials. Thirty-two persons have completed training</p> <p><i>Outcome 2:</i> Nineteen persons have secured employment. Nineteen individuals have achieved 30-day job retention.</p> <p><i>Outcome 3:</i> Fifteen persons have achieved 90-days job retention. Eleven individuals have achieved 180-day job retention.</p> <p>Average costs per client: \$8572.00 Average entry salary of \$13.45/hour plus benefits.</p>
Audio Visual Technical Training (pilot)	<p><i>Outcome 1:</i> Provide 25 veterans who have criminal records with training and employment. At least 80 percent of the participants will complete the training program.</p> <p><i>Outcome 2:</i> At least 70 percent of participants (14) who complete the training will secure employment and 70 percent of participants (10) who secure employment will retain employment for 30 days.</p>	<p><i>Outcome 1:</i> Twenty-five persons have been enrolled with an expectation of achieving technology certifications. Twenty persons completed training.</p> <p><i>Outcome 2:</i> Seventeen persons were placed in employment and achieved 30-day job retention in full-time employment with benefits. Sixteen persons remain employed. Average cost per client: approximately \$6,000. (Note: for the new program, projected client earnings are \$22,000–\$28,000 with benefits, and the requested average cost per client will be \$3,750.</p>

Program	Goals and Objectives	Outcomes and Results
Department of Labor— Training to Work FY 2013 (promising outlook)	<p>For the FY 13 Department of Labor Training to Work program, to date, 40 clients have completed or are currently enrolled in training programs and there have been 20 job placements. Presently, one veteran participates in the program. Other outcomes include family reunification for one client, restructuring of child support payments for one client, placement of one client into residential treatment/housing postrelease, enrollment in or completion of GED preparation by three clients, who are awaiting testing, and enrollment of one client in a second vocational training certification program.</p> <p>Jane Addams Resource Corporation (JARC), the training partner, is a workforce development nonprofit that specializes in manufacturing. The agency uses the sector model to place hard-to-employ people in an industry with labor market research demonstrating growth. JARC is able to achieve an overall 90 percent success rate in training, placing, and retaining individuals with criminal backgrounds in training-related industries. JARC sees a window of opportunity for people with criminal backgrounds when they seek out training because employment is a significant predictor in reducing recidivism. Although the Illinois recidivism rate is 50 percent, the recidivism rate for JARC graduates is 10 percent.</p>	

SOURCES: Final Narrative Report to Chicago Community Trust on the CNC Program (Grant Number C2012-0039, June 20, 2014); Safer Workforce Development Grant Proposal for Audio Visual Technical Training (December 31, 2013); and internal progress memorandum for the Department of Labor Training to Work grant program (email correspondences—M. Brown, Safer Foundation, July 14, 2014, and J. Newsome, JARC, July 15, 2014).

These programs share critical design elements: (1) dedicated classroom training components—for example, virtual CNC, online training; (2) real-time hands-on equipment and machine training; (3) comprehensive case management (a client-centered collaborative process of assessment, evaluation, service coordination, and advocacy to meet an individual’s reentry needs and facilitate self-determination); and (4) extensive industry-focused employment supports (that is, mentoring by industry mentors, placement services leveraging existing manufacturing industry relationships, employment retention driven by the partners’ deep expertise in facilitating and strengthening relationships between employees and employers). In addition, participants had to meet reading and math proficiency levels, pass a series of screening interviews, and complete job-readiness training. These screening requirements helped to ensure that participants were prepared for the technical training.

Stakeholder Perspectives

This case reflects the commitment of Safer and partners to improving communities by using manufacturing as a vehicle to create community wealth and leveraging in-demand skills training to overcome the impacts of mass incarceration. The perspectives of stakeholders indicate that the program design works. Remove any one element and the program may not work. The participants worked very hard, gained skills and certifications, and molded themselves into a team across dimensions of age, race, and culture to care for one another and work toward everyone’s completion. Clients like that the program offers a chance to do better than live check to check. The employer partners are very satisfied with the students they have hired. The good results make it look simpler than it really is—it takes really strong and complementary partners to succeed.³

CONCLUSIONS, ASSERTIONS, AND IMPLICATIONS FOR FUTURE ACTIONS

The results of these programs are built upon key success factors. These factors are committed partners with a history of working together, highly skilled staff for all aspects of the program, well-designed technical training, comprehensive case management and client life supports, and employer involvement. Diane Williams, president emeritus, Safer Foundation, reflects, “We know that sustainable job pathways aligned with real market demand can create the types of opportunities that allow returning citizens to make a meaningful contribution to their families and communities. These programs affirm that having the right partners, with the right goals, and getting the details defined early on is a formula for success. It is also beneficial that manufacturing is one resurging industry that is receptive to hiring our clients” (Williams, personal interview, April 28, 2014).

Among the long-term unemployed are millions of people with criminal records. The U.S. Bureau of Justice Statistics reports that 637,400 people were released from prisons around the nation in 2012 (Carson & Golinelli 2013). They return to our communities with the stigma of a criminal record as a barrier to employment. One silver lining is the demand for semi-skilled and skilled workers. Even people with criminal records find themselves in high demand, if they possess the requisite skills and industry-recognized credentials. Programs like this make America more competitive in the global economy by bringing men and women into the workforce, enabling employers to grow their businesses, breaking the cycle of poverty, and strengthening communities. It is rare when a program benefits so many diverse stakeholders—business and industry, individuals needing a second chance, their families, and, indirectly, many others.

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¹The program was conceptualized in early 2010 in discussions among Safer Foundation President B. Diane Williams and David Pflieger (Thornton Pflieger Inc), James Wall (National Institute for Metal Working Skills–NIMS), and Dan Swinney (Center for Labor and Community Research, presently Manufacturing Renaissance). In late 2011, Jim Lewis, senior program officer, the Chicago Community Trust, invited Safer Foundation, Jane Addams Resource Center, Manufacturing Renaissance, and North Lawndale Employment Network to a conversation to explore funding programs that could lead to careers in technical arts and metal-working occupations and thus address the Trust’s interest in both workforce development and offender reentry.

²These critical program assumptions were derived from several conversations with key architects of these strategies: D. Pflieger (TPI), personal interview, April 15, 2014; R. Prendergast (Daley College), personal interview, April 14, 2014; J. Lewis (Chicago Community Trust), personal interview, April 21, 2014; J. Wall (NIMS), telephone interview, April 23, 2014; D. Swinney (Manufacturer’s Renaissance), personal interview, April 25, 2014; D. Williams (Safer Foundation), personal interview, April 28, 2014.

³The stakeholder perspectives reflect conversations with the full breadth of stakeholders involved in these initiatives. R. Prendergast (Daley College), April 14, 2014, personal interview; D. Pflieger, (TPI), personal interview, April 15, 2014; J. Lewis (Chicago Community Trust), personal interview, April 21, 2014; J. Wall (NIMS), telephone interview, April 23, 2014; S. Ross-Taylor (Safer CNC program staff), personal interview, April 24, 2014; V. Scott, (Safer CNC program staff), personal interview, April 24, 2014; B. Holmes (CNC program graduate), personal interview, April 24, 2014; D. Swinney (Manufacturer’s Renaissance, personal interview, April 25, 2014; D. Williams (Safer Foundation), personal interview, April 28, 2014; B. Redd (NIMS), personal correspondence, April 28, 2014); J. Butler (Safer Foundation), telephone interview, April 30, 2014.

7

Case Study: Miami Dade College’s Hospitality Institute— Training and Job Placing for the Underprivileged

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Miami is a metropolis with more than 2.6 million inhabitants according to the U.S. Census Bureau (2014). Because of its geographic location, weather, beauty, and vibrant cosmopolitan atmosphere, the city attracts immigrants from across the United States and the world. Wealthy individuals are attracted by the allure of ocean-front living, sophisticated financial services, gourmet restaurants, year-round cultural events, and the absence of state income tax. Designated as one of the significant post–World War II foreign immigrant gateways by the Brookings Institution, Miami has a population that is nearly 60 percent foreign born.

Poor individuals also arrive in Miami in search of new horizons. Refugees from foreign nations under political and economic turmoil come in search of freedom, stability, and opportunity. Homeless individuals from different parts of the country also come to the city, attracted by its warm temperatures and anecdotes about the effective continuum of services offered by multiple organizations dedicated to eradicating homelessness. The homeless and the refugees, populations that are not mutually exclusive, join other low-income groups already present in Miami, such as the long-term unemployed and the residents of inner-city neighborhoods. To an extent, Miami has become a tale of two cities: one community composed of immigrants and natives with tremendous resources and the other composed of poor natives, refugees, and homeless individuals, all with employment difficulties.

Florida hosts the largest refugee population in the nation. The state received more than 29,000 refugees in 2013, of whom 20,203 settled in Miami. The Florida Department of Children and Families (2013) tracked the country of origin for refugees in Miami: 19,900 from Cuba, 178 from Haiti, 65 from Venezuela, 17 from Colombia, 9 from Iraq, and 34 from other nations. The refugee demographics mirror the population composition of the Miami metropolitan area, which includes more than 850,000 Cubans, 200,000 Haitians, 115,000 Colombians, and 47,000 Venezuelans (Miami-Dade County 2011). The challenge for the workforce development system is the provision of meaningful employment opportunities to the newly arrived refugees, who often lack English language fluency, job and life skills, documentation, social networks, and permanent places to live.

The last homeless census, conducted in Miami in January 2014, shows that there were 4,156 homeless in the city; 3,316 were sheltered and 840 were unsheltered. This represents a 9 percent increase in homelessness from January 2013, when 3,802 homeless individuals were counted (Miami-Dade County 2014). The median income in Miami is one of the lowest in the nation. Moderate-income households in Miami have the lowest house affordability index because housing consumes 40 percent and

transportation 32 percent of their income (Hickey et al. 2012). This low level of housing affordability, coupled with the economic crisis that started in 2008, contributed to a large number of mortgage foreclosures and evictions. Many Miamians have experienced or were on the verge of homelessness. The homeless population confronts many barriers to employment, including a history of imprisonment, mental health issues, lack of critical documentation, poor work experience, educational and skills deficits, and limited social and employment networks (National Coalition for the Homeless 2009). As in the case of the refugees, the community of Miami needs to engage in collective action to address the homelessness situation, including the development of targeted training programs and an increase in access to employment opportunities that can lend themselves to self-sustainability.

MIAMI DADE COLLEGE

Miami Dade College (MDC) is the largest public institution of higher education in the nation, currently serving more than 165,000 students annually. For 54 years, MDC has acted as an economic engine for Miami by providing postsecondary education and workforce development programs to more than 2 million individuals who have enrolled in courses. Known as “democracy’s college,” MDC grants the largest number of associate’s degrees in the United States and produces the largest number of African American and Hispanic graduates in the nation. The institution offers more than 300 academic and workforce development pathways that lead to associate and baccalaureate degrees and shorter-term certificates. These programs are accessible and affordable, and meet the needs of diverse students, including refugees, the homeless, and other low-income individuals. MDC embraces its responsibility to serve as an economic, cultural, and civic beacon in the community and catalyzed the Hospitality Institute (HI) as a response to the need for quick training to meet the needs of newly arriving immigrants and residents experiencing homelessness.

THE HOSPITALITY INSTITUTE

The hospitality industry in Miami has grown enormously during the last few years. In 2013 alone, the city received 4.2 million overnight visitors, who spent \$22.8 billion locally (Greater Miami Convention & Visitors Bureau 2014a). Statistics for the first quarter of 2014 indicate an annual increase in Port of Miami passengers of 13.5 percent, an increase in the average daily hotel rate of 13.6 percent, and an increase in leisure and hospitality jobs of 4.2 percent, all of which contributed to an accumulation of 117,300 jobs in this industry (Greater Miami Convention & Visitors Bureau 2014b). Because of this continuous growth, hospitality was selected as one of the seven targeted industries by the local economic development agency, the Beacon Council, and the Greater Miami Chamber of Commerce, under the One Community One Goal initiative (Beacon Council 2014). New hotels, restaurants, and tourist attractions have experienced staff shortages due to the increase in demand for services. Miami Dade College responded to this shortage with the opening of the Miami International Hospitality and Culinary Center to offer comprehensive training in these fields. The Hospitality Institute is a unit within the center that initiated operations in 2007 to serve the homeless, the refugees, and other low-income populations. Many individuals from these populations are perceived as unemployable and feel trapped, hopeless, and unable to see beyond their existing situation. The Hospitality Institute provides a bridge to a new beginning. Entry-level jobs at hotels, restaurants, and tourist attractions do not require sophisticated skills and constitute an opportunity for those who need a transition into the labor force.

The initial investment and the recurrent operational funding for the Hospitality Institute came from the City of Miami’s Southeast Overtown Parkwest Community Redevelopment Authority (CRA). The CRA’s mission of revitalizing its areas of service by expanding training and employment opportunities, promoting economic development, and improving quality of life made it an integral partner for this project. The missions of MDC and the CRA are very congruent.

The Hospitality Institute is physically located at the Greater Bethel A.M.E. Church in Overtown, an inner-city neighborhood where many unemployed individuals from the underprivileged targeted

populations live. On a quarterly basis, the HI offers its primary four-day job-readiness workshops to develop skills in various lodging and restaurant operations, customer service, computer usage, financial literacy, and life skills. The training also facilitates employability success by incorporating units in resume writing, appropriate dress code, and interview skills. At the end of this basic program, the participants take an exam, and upon a successful pass rate, obtain the Safe Staff Food Safety Certification, mandated by the State of Florida for all food handlers. The program is offered in English, but since many of the instructors are bilingual, support in Spanish is given to those with English language limitations. In addition to instruction, the program provides employment opportunities through referrals.

Quarterly job fairs are conducted in partnership with industry organizations such as the Greater Miami Convention & Visitors Bureau, Greater Miami and Beaches Hotel Association, and the Florida Restaurant and Lodging Association. Numerous employers are attracted to these fairs. The jobs offer wages between minimum wage and \$12 per hour and include positions such as front desk agent, cashier, host/hostess, waiter/waitress, bus person, housekeeping, lobby door assistant, and laundry attendant. While the wages are low relative to other jobs in Miami, the clientele represent people who have been out of the labor force and are some of the hardest to employ.

Since its inception, the Hospitality Institute has trained more than 2,000 clients and has facilitated the employment of more than 700 of them. We consider the achieved job placement rate of 38 percent for the quarterly workshop participants as a success, given the employability barriers affecting the homeless, refugees, and other underprivileged populations. As a point of comparison, the overall employment rate for MDC graduates in hospitality programs is 81.25 percent. To support those confronting difficult employment barriers, the HI provides referral services: those with limited language skills are referred to the English-as-a-second-language program offered at MDC for refugees at no cost, clients with health issues are referred to medical clinics serving the poor, and graduates with conviction records are referred to agencies that help with the expungement process. Hospitality Institute administrators also advocate before employers the possibility of granting opportunities to individuals who made some mistakes in the past but are currently rehabilitated.

The success of the Hospitality Institute has attracted the support of additional donors who have provided the necessary funding for sustainability and expansion. Significant financial contributions have been received from employers, foundations, and government organizations, including Hilton Worldwide, Walmart, Carnival Cruise Foundation, Braman Foundation, and CareerSource South Florida, the local workforce investment board. The local organizations serving the homeless, the refugees, and other low-income groups feel very comfortable referring clients they pre-screen to the program. Many professionals from the hospitality industry have volunteered a significant number of hours to serve as instructors, coaches, and mentors. With these additional resources, the Hospitality Institute is now providing supplementary learning opportunities to its alumni, including a four-week intensive training on hotel “front-of-the-house” and “back-of-the-house” positions leading to nationally recognized industry certifications that allow employment with salaries of \$12 per hour.

Starting in mid-2013, the Hospitality Institute added an additional workforce development opportunity: a 12-week basic culinary arts program. Chef instructors have taught five cohorts with a total of 85 participants, a 95 percent completion rate, and a robust 83 percent job placement rate. These completion and employment rates compare to the ones achieved by MDC college credit students in hospitality and culinary arts programs. This is contributing to satisfy the high demand in Miami for entry-level cook positions. Jobs obtained by the graduates include banquet, buffet, hospital, line, pastry, pizza, prep, and production cooks; baristas; baker and sous chef assistants; and food purchasing assistants. Beginning salaries range from \$9 to \$14 per hour.

The Hospitality Institute has also caught the attention of the federal government. The Economic Development Administration of the U.S. Department of Commerce has recently awarded a grant to remodel the historic Ebenezer Methodist Church, also in Overtown, into a multi-purpose community

center that will permit the Hospitality Institute to operate a state-of-the-art banquet facility, a catering kitchen, and an incubator for local food entrepreneurs.

IMPLICATIONS

Miami Dade College's experience with the Hospitality Institute has important policy and practical implications. Community colleges, as open-access institutions and engines of social mobility, need to identify those segments of the population who are underprivileged and underserved. These groups include the homeless, refugees, long-term unemployed, youth coming out of foster care, inner-city residents, and others. It is also important that community colleges provide workforce education and training to these populations in areas of high job demand in partnership with the employers. MDC's Hospitality Institute addresses the needs of an important local industry, but the college is also responding to the needs of the other industries targeted by the One Community One Goal effort, including aviation, creative design (with such fields as marketing, art, architecture, and engineering), financial services, information technology, life science, and trade and logistics. The Hospitality Institute's model is being considered to deliver training in other fields that require moderate skills, such as retailing, software applications, and home care assistance.

Community colleges can also act as catalysts to coordinate the efforts of local, state, and federal governments in the development of effective workforce development programs for underserved populations. The Hospitality Institute has implemented a best practice in this area by facilitating a symbiotic relationship between the local community redevelopment agency, the state and local workforce development board, and the federal Economic Development Administration. Moreover, the partnership with the public entities has been expanded to include business and industry, churches, community service organizations, and philanthropic foundations. The key for success is coordinated collective action to satisfy the employment demand by the local industry while preparing low-income individuals for the available jobs.

MDC, in partnership with Hilton Hotels of Central Florida and other entities, is facilitating the development of a similar institute in Orlando. The Hospitality Institute is certainly a replicable model transferable to other industries and locations.

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