



## Brief Report

# Preparing Underserved Adolescent and Young Women for Workforce Entry: Antecedent Training Experiences that Enhance Allied Health Certification Completion for Employment

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### Abstract

Minority low-income post-secondary youth, especially women, can lack strategic and tactical skills that enhance their ability to complete prerequisites for meaningful employment. Secondary school completion and graduation, while often seen as a required platform, does not always provide access to subtle but needed information to successfully identify, select and complete certification requirements which are the prerequisites for job acquisition in the health profession. Strategic placement of prework force training can address these soft skills with underserved population who have limited life experiences. Project Ascend, an initiative to enhance pre-employment certification readiness, attempted to answer the following questions: First, what topics provide the tactical and strategic skills certification readiness and success for at risk youth populations. Second, can a program focused on training opportunities also address behavioral and educational deficits that may be barriers. Finally, is there an advantage in embedding an allied health certification preparation program in a patient's medical home. **Methods:** Data analysis used two methodologies via a medical clinic portal to evaluate program content and subsequent effectiveness as measured by the initiation and completion of allied health certifications. First, for qualitative assessment, using content analysis documented feedback of participants on the appropriateness of the training components and their relevance for job selection and potential employment success. Second, quantitative measures calculated the successful completion of the certification, an average of 4 – 6 months for completion, and the types and percentages of allied health professions selected by participants (Telemetry 3.13%, EKG Tech 19.79%, Medical Office Professional 20.83%, Certified Nurse's Aide 28.13%, and Phlebotomist 28.13%). The prevalence and scope of risk factors that affected certification completion were also documented. **Results:** Of the 106 participants who participated in training series, 69 or 63.88% completed their certificates. A sample of the completion group were asked to evaluate the relevance of the material to their future employment objectives and whether their experiences and modules were useful to reach their certification goals. Respondent themes focused on persistence in course completion and the value of the case manager and therapist to deal with both academic and personal challenges. **Conclusions:** This assessment identified 8 key educational modules based on prerequisite workplace requirements and client feedback, that would positively impact the successful completion of allied health certifications as a basis for employment. In addition, while successful, participants also benefited with continued affiliation with the program. Follow up data from program graduates also suggest that linkages to young women's medical home facilitated continued professional social support from program therapists and navigators that could reinforced learned skills that assisted in the certification process.

**Keywords:** Social determinants; Opportunity youth; Post-secondary employment; Risk reduction; Medical employment portals

## Introduction

Wellbeing and job acquisition have multiple interrelationships and are strongly associated with nonmedical factors affecting global health for the general population and especially youth [1]. Refugee populations such as those in Brazil [2] when disconnected from work, experienced negative impact factors such as housing, health care and education. Similarly, other authors [3] have also found parallel findings with cognitively marginalized groups. For example, for Down syndrome populations, employment is a vital component for quality of life. In that regard, the workplace not only provides relative economic security but other positive components to the individual including independence, job advance and personal self-worth [4]. Such benefits are especially important for underserved women. In addition to direct impact, the indirect benefits provide added values and significant benefits. These indirect values may take a variety of forms. Many of such benefits fall under the category of Social Determinants of Health [5]. This body of knowledge suggests that such social factors or determinants vary by setting and specific groups but as seen above, generate a broad base of health indicators for better or worse [6]. In addition, the application of such factors can be significant in the reduction of health disparities. Moreover, such components while not specifically medical, can reduce mortality using non-medical platforms, [7,8]. This is especially significant in that only 15% of factors influencing longevity were driven by medical interventions [9,10]. Social Determinants of Health have components in the workplace and can also impact wellness in several non-medical ways [11]. For example, some job settings have incorporated wellness initiative programs with monetary incentives such as gift cards and the reduction of insurance premiums if certain milestones are completed. Access to employer-based health insurance is also important indirect benefit.

In addition, several authors [12] suggest that health is also influenced in part by ancillary employment factors such as workplace safety, job security and upward job mobility. This theory may help explain that young adults who are employed may be healthier than those who are not. Some [13] go so far as to suggest that employment and its associated infrastructure can have a more powerful impact on wellness via health resources and the reduction of chronic stress. Such pre-employment initiatives also have the unique aspect of exposing underserved populations especially women to aspects of the workplace sometimes considered soft but nevertheless critical. These pre-experiences often include modules that address work culture and basic professional skills that are not always learned from secondary school experiences. Other authors [14] also report employment interventions can especially benefit

specific vulnerable groups, including low socioeconomic status women and could be effective in reducing physical and mental health disparities in these populations.

Implications from the intersection of Social Determinants of Health, wellness and employment have a special relevance to at-risk inner-city youth. Job acquisition and a clear career path for this cohort can provide a living wage as well as a modification of behavioral and medical problems, including sexual risk behaviors that occur during young adulthood that shape subsequent health and economic outcomes [15]. Given the above aspects, a unique application of this intersection can be found by using a patient's medical home as a portal to workforce development. An added value to this approach is that preliminary participation and continuation in this medical school portal provide a seamless platform from initial education to academic reinforcement for a population that often lack access to ongoing education. Training modules such as the ones offered in this initiative, can build on the relationship and trust that a medical clinic can provide. This paper, therefore, evaluates strategies to enhance employment certificate acquisition via the development of a pre-employment program affiliated with a medical school clinic serving inner city young adults. Based on the premise that skills can support job credentialing and lead to a meaningful job and overall wellness, we attempt to evaluate the following statements. First, what topics provide the tactical and strategic skills that improve health care employment credentialing. Second, can a program focused training opportunities also address behavioral and educational deficits that may be certification completion barriers. Finally, what are the advantages of embedding allied health job training to a patient's medical home.

## Materials and Methods

### Ascend program description.

Project Ascend, a three-month program under the auspices of a medical school located in the southwestern part of the United States, targeted post-high school youth (aged 18 to 24 years) interested in health care employment. Justification for the selection of this population was grounded in state data that is estimated that 111,000 youth and young adults (ages 16-24) remain disconnected from both school and the labor market [16]. These young people disproportionately come from communities of color and live in low-income households. The ultimate program objective was to assist participants in the successful completion of a certification in one of 5 allied health professions which would lead to the successful entry into stable employment. Two case managers along with a behavioral therapist provided access to personal medical care, coaching and educational resources to youth on health, wellness, family planning, financial literacy, and relationship management. The objectives of the 8 training sessions described below were to prepare participants for successful certification

completion. The training modules and events were developed by program staff and University of Houston law students and were offered regularly in collaboration with the affiliated medical school and its Human Resources Department. These modules addressed a variety of skills that were necessary for job matriculation but were not necessarily obvious for pre-employment. A local foundation provided a need-based stipend to assist with the cost of tuition, books, transportation, and other required items. Most clients were women who utilized a medical school clinic affiliated with the job program as their medical home and benefited from free primary health care, including birth control and social work services.

### **Orientation Workshop**

The first training module was an orientation workshop that introduces clients to the foundational structure of the Ascend program. It emphasizes the expectations and responsibilities required to complete the program successfully, including attendance, monthly advising sessions, and the overall timeline of participation. Clients are asked to review three presentations: the “Overview of Ascend,” which details how the program works; “9 to 5,” which challenges participants to think about the difference between a job and a long-term career; and “Choosing a Career,” which presents an overview of healthcare certification options offered through Ascend. These include Certified Nurse Aide (CNA), Phlebotomy Technician, Electrocardiography (EKG) Technician, Telemetry Technician, Medical Business Office Professional and Community Health Worker. This workshop sets the tone for the rest of the program by helping clients identify a healthcare career path and understand what it takes to succeed in it.

### **Resume Workshop**

In the Resume Workshop, clients receive clear, practical guidance on how to create a professional one-page resume. The accompanying presentation breaks down the four essential sections: heading, education, experience, and skills & interests. Clients learn how to present their achievements in reverse chronological order, use action-oriented language, and highlight both paid and unpaid work experience including relevant non-medical roles. The workshop stresses simplicity in formatting and the importance of tailoring each resume to reflect the employer’s values and expectations. By the end of this workshop, clients are expected to submit a polished, one-page resume in either Word or PDF format, ready to upload to job search platforms.

### **Cover Letter Workshop**

The Cover Letter Workshop equips clients with the skills to write a personalized and compelling letter that aligns with their intended healthcare career. Clients are guided through an example written by a

former Phlebotomy Technician student and are encouraged to model their own letter after it focusing on clarity, structure, and tone. The workshop stresses the importance of communicating one’s career goals, relevant experience, and personal motivation for entering the healthcare field. Clients are required to write their own letter as if they are applying for a job in the field associated with the certification they plan to pursue (e.g., telemetry, CNA, etc.). The product is a targeted, professional cover letter that complements their resume.

### **Financial Literacy Workshop**

This workshop focuses on empowering clients with basic but essential personal finance skills. Through an engaging presentation, clients learn how to open a checking or savings account, create and maintain a budget, and distinguish between debit and credit cards. The dangers of credit card debt are explored in depth, along with strategies for saving money, setting up direct deposit, and using auto-pay to avoid late fees. The workshop also explains how to file taxes and encourages clients to take advantage of tax refunds. Practical money-saving tips such as meal planning, using coupons, and avoiding unnecessary subscriptions round out the lesson. This workshop is especially important for clients transitioning into the workforce and managing income for the first time.

### **Job Search Workshop**

The Job Search Workshop prepares clients to navigate the modern employment landscape. It introduces them to widely used job search engines like Indeed, United Way’s Job Bank, and Hospital Careers. Clients learn how to search for specific positions by keyword and location, and how to set up job alerts to stay informed about new opportunities. The importance of networking is also emphasized, encouraging clients to leverage personal and professional relationships in their job hunt. A critical task of this workshop is for clients to create an Indeed profile and upload their resume, ensuring they have a digital presence that aligns with their career goals.

### **Professionalism & Communication Workshop**

This workshop helps clients understand what it means to present themselves professionally in healthcare environments. It covers attire expectations for both clinical (scrubs) and administrative roles, and it explores the importance of punctuality, appropriate language, and a clean workspace. A significant portion of the workshop is dedicated to professional communication, particularly through phone and email. Clients complete correspondence exercises that simulate real-world interactions with patients and coworkers, including how to respond to complaints, confirm appointments, and follow up on requests. This workshop teaches the soft skills needed to build trust with patients and colleagues while maintaining professionalism at all times.

## Study Skills Workshop

The Study Skills Workshop encourages clients to explore personalized methods for studying and retaining information effectively. Clients learn about different learning styles visual, auditory, and verbal and are encouraged to identify which one works best for them. The workshop introduces study techniques such as flashcards, outlines, flowcharts, practice exams, and the use of online platforms like Quizlet and Khan Academy. Emphasis is placed on creating a study schedule, breaking information into manageable chunks, and knowing when to take breaks. Clients complete a short survey to reflect on their learning preferences and begin forming habits that will help them succeed in certification courses.

## Ascend Study Session

The final workshop, the Ascend Study Session, is an intensive reflection assignment based on the YouTube video “How to Study for Exams Evidence-based Revision Tips.” After watching the video in full, clients must write five detailed responses each at least a full paragraph explaining how specific strategies from the video can improve their study habits. Whether or not a client agrees with the strategies presented, they are required to engage with each one and provide thoughtful, example-based analysis. This critical thinking exercise encourages clients to consider new techniques and integrate them into their personal study routines. Completion of this workshop is mandatory before class enrollment and reinforces that support is available from Ascend staff whenever additional study help is needed.

## Subjects

The Institutional Review Board of the affiliated medical school reviewed and approved the evaluation protocol. In the study group, 108 youth 18-24 years of age enrolled in the Ascend for health profession job training via the clinic portal. Of this group, 37% were African American and 54.14% Hispanic and 7.48% other with a mean age of 21. Of the participants the majority were women. Youth were defined as high-risk or underserved based on their neighborhood high unemployment rates, documented risk behaviors and health disparities. Project exclusionary criteria included the inability to read or speak English and documented severe mental health issues.

## Procedures

Two case managers using standardized intake forms obtained various demographic and behavioral information as part of the follow-up process. Based on this information, like intake data, follow-up assessments were compared to original scores and was generated from several specific data sets: Personal information including age, education, and employment history. Data was collected on household information, which included members

living with the participant, housing (apartment, home, rent or own) transportation, food, childcare and financial responsibilities. Relationship status, behavioral and parenting concerns, and legal issues or any adverse life experiences were also assessed. Health care needs both physical and mental care for themselves and family members was also queried.

## Data analysis

The data analysis process used two methodologies to evaluate factors related to allied health certification. First, for qualitative assessment, content analysis methodology [17] was used as an exploratory tool to identify various influencers that predict certificate completion among participants. Thematic analysis as defined by Boyatzis is a process-oriented methodology that organizes qualitative data and, in this assessment, the Social Determinants of Health that either facilitate or act as barriers to the program’s certification objective. Using this technique for qualitative information obtained through follow up forms and interviews, a member of the project team familiar with the community, who was not involved in client intake or discussion, independently summarized the themes that emerged after certification completion. Second, quantitative measures calculated the successful completion of the certification, the length of time if available for the process, and the types and percentages of allied health professions selected by participants. The prevalence and scope of risk factors that affected certification completion were also documented.

## Results

After four to six months of program completion, participants were assessed on certificate completion. Of the 108 participants who participated in the training series, 69 or 63.88% completed their certificates. Quantitative measures calculated the successful completion of the certification by allied health category. A wide range of professions were successfully chosen and included Telemetry (3.13%), EKG Tech (19.79%), Medical Office Professional (20.83%), Certified Nurse’s Aide (28.13%), and Phlebotomist (28.13%). A sample of the completion group was also asked to evaluate the relevance of the material to their future employment objectives and whether these modules were useful to reach their certification. Conversely, a sample of non-certification completers was contacted and queried as to the factors that provided subtle or roadblocks. For the completion group the vast majority cited the continual access to therapy and staff to problem solve assisted in maintaining their focus on continuing with the program despite disruptions. These participants also commented on the importance of support especially when they were dealing with high pressure situations related to job procurement and employment. For non-completers, major life events such as evictions and family drug involvement were disruptors in the certification process.



## Discussion

This assessment was motivated by current evidenced -based data alluded to above that suggest that at least 14% of the high school graduating population or 111,000 students in the study region are represented in this opportunity youth population. Moreover, while 78% of this cohort was high school or GED credentialed, very few had resources to prepare them for certifications required for employment in allied health professions. As a portal to career development, Project Ascend developed, implemented, and assessed a series of 8 online and in person training modules described above to enhance completion of certification, the prerequisite for allied health job access and hiring. Academically, these findings are significant as they confirm the unique intersection of social determinants, employment access and wellness and support creative approaches to empower underserved youth as they prepare for job acquisition,

As we reviewed our 3 questions, our results supported the belief that pre-employment education provides the tactical and strategic skills that improve health care employment credentialing especially for underserved women. Project Ascend focused on multiple topics in the 8 pre- certification modules presented information on tactical and strategic skills that enhance health care certification. Interestingly, our assessment also found that the need for some of the training module content was initially identified during participant enrollment. In other words, many of the participants were aware they needed additional help to complete certification requirements. As seen in program results, participation in the project successfully positioned 63.88% of participants to be certified in their chosen allied health profession. The variance in certification occupation was wide. This may encourage speculation as to whether initial preparation based on high school graduation played a role in the allied health choice. Additional speculation may suggest that the pay differential among the five certificates may have some persuasion on the final choice.

Our second assessment was to determine whether pre-certification activities had the additional value of addressing economic, personal, and logistical deficits among the participants that may be barriers to certificate completion. Even though the program had a variety of subsidies, financial concerns involving food and housing costs were still the primary worry during the certification process. For some eviction was a chronic issue and unfortunately impacted completion. Lack of transportation and personal relationships often required the guidance of the program navigator and behavioral staff. The Ascend therapist actively counseled individual participants to establish a personalized plan focusing on techniques to manage these issues and behaviors especially those associated with family of origin experiences. These results also suggest that some negative social determinants of health could impact the attainment of health care certification.

Finally, we found there were positive advantages to embedding allied health job certification training in a patient's medical home. From a behavioral health perspective, participants often lacked continued access to a mental health professional who could provide trusted and accurate information when contingency decisions were necessary. Our program therapist actively maintained a relationship with our program participants and was instrumental in addressing social support items during the certification processes and completion. We also found that access to primary care for future employment was also necessary for this underserved and usually uninsured population. This unique portal can provide needed vaccines, work related examinations and information to a variety of risk reduction questions. For our cohort of young women, the receipt of effective contraception especially no cost Long-Acting Reversible Contraception provides a strong risk reduction strategy to enhance the potential that the completed certification will lead to meaningful employment without the fear of an unintended pregnancy. Associated sexually transmitted infections which unfortunately are increasing in prevalence in this population were also addressed and treated in their medical home discretely and in a timely manner. Expedited partner treatment for the young women was also made available through their medical home.

However, several limitations in our assessment exist which limit generalizability and should be mentioned. We acknowledge that our sample of certificate seeking participants was small and non-randomized. In addition, although clients were at 150% of the federal poverty level or below, because of small numbers we were not able to make any comparisons by race. In addition, most of the social determinants of health discussed were not measured to assess health impacts but their cumulative presence in the participants' lives and subsequent impact on the certification process. Moreover, this assessment did not have an intervention or control group. From a pragmatic point of view, one can make the case that assisting with clinical certifications is of value in the attainment of employment. We also recognize, given our sample was exclusively female, that certification programs perhaps should develop different strategies to encourage males to enroll in these ancillary but well-paying professions. Such insights provide useful guideposts on how to initially position at risk- youth for future in productive jobs. This work also justifies future research on how to maintain the participation of minority youth in programs that will start them in their transition to allied health professions and their associated upward career mobility. By tailoring specific skill acquisition to targeted job training we were able to successfully position our participants to obtain employment.

Finally, our initial efforts can provide encouragement to scale-up initiatives in allied health certifications to underserved and often first-generation cohorts. We also hope that our findings provide a

pragmatic link between allied health certifications and widespread implementation of social determinants-targeted interventions that will move the discipline forward.

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