Musculoskeletal Healthcare for Latino Migrant Farmworkers: Interprofessional Collaboration to Provide Service and Educate Future Healthcare Providers

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Musculoskeletal Healthcare for Latino Migrant Farmworkers: Interprofessional Collaboration to Provide Service and Educate Future Health Care Providers

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Abstract

The inability to access health care services is a significant issue in the United States (US). The US Census Bureau reports that as of 2009 over 50 million individuals (16.7% of the population) lacked health insurance. The number of people who became uninsured has also increased over time. One segment of the US population that is particularly vulnerable to health care inequities is Latinos.

Failure to access timely primary medical services may increase the risk of disease transmission, morbidity, and mortality. In addition, failing to address health care needs at the primary provider level may contribute to an overutilization of potentially unnecessary emergency room services. To address health care disparities and inequalities, community partners must collaborate to provide the needed services.

This report will describe the collaboration between community health nurses and physical therapists when providing services to address the musculoskeletal health of the workers. In addition, this report will describe the service and experiential opportunities for physical therapy students including the opportunity to provide care within an interprofessional setting, practice techniques and provide service in a unique environment, and to develop aspects of professionalism.

Received: 05/25/2011     Accepted: 08/01/2011     Published: 09/23/2011

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Introduction

The inability to access health care services is a significant issue in the United States (US). The US Census Bureau reports that as of 2009 over 50 million individuals (16.7% of the population) lacked health insurance (Denavas-Walt, Proctor, & Smith, 2010). This was a 2.5 million increase in uninsured individuals from the previous year (Denavas-Walt, Proctor, & Smith, 2010). One segment of the US population that is particularly vulnerable to health care inequities is Latinos (Shah & Carassquillo, 2006). The Latino population (described by the US Census Bureau as “persons of Hispanic or Latino origin” or “Hispanic origin”) is the largest ethnic minority in the US accounting for nearly 16% of the US population (Denavas-Walt, Proctor, & Smith, 2010; Shah & Carassquillo, 2006). When compared with other races and/or ethnic groups in the US, Latinos are the most likely to be uninsured with 32% of all Latinos lacking health insurance (Denavas-Walt, Proctor, & Smith, 2010; Farquhar et al., 2008; Hoerster, Beddawi, Peddecore, & Ayala, 2010; Mueller, Patil, & Boilesen, 1998; National Center for Fawmworker Health, 2011; Shah & Carassquillo, 2006). A subset of the Latino population that is particularly vulnerable to health care disparities is undocumented immigrants (Hoerster et al., 2010; Shah & Carassquillo, 2006). While it is difficult to ascertain exact numbers of individuals who would be classified as “undocumented,” the US Census reports 46% of all non-citizen immigrants lack health insurance (Denavas-Walt, Proctor, & Smith, 2010).

Individuals who lack health insurance are less likely to seek medical services from primary providers and/or will be more likely to present to an emergency room for their medical care (Carr, 2006; Flores & Deal, 2003; Mariger et al., 2009; McCauley et al., 2005; McCauley, 2005; McCauley et al., 2005; Filsinger, 2004). When compared with other races and/or ethnic groups, Latinos are less likely to seek medical services from primary providers and/or will be more likely to present to an emergency room for their medical care (Carr, 2006; Flores & Deal, 2003; Mariger et al., 2009; McCauley et al., 2005; McCauley, 2005; McCauley et al., 2005; Filsinger, 2004). When compared with other races and/or ethnic groups, Latinos are less likely to seek medical services from primary providers and/or will be more likely to present to an emergency room for their medical care (Carr, 2006; Flores & Deal, 2003; Mariger et al., 2009; McCauley et al., 2005; McCauley, 2005; McCauley et al., 2005; Filsinger, 2004). When compared with other races and/or ethnic groups, Latinos are less likely to seek medical services from primary providers and/or will be more likely to present to an emergency room for their medical care (Carr, 2006; Flores & Deal, 2003; Mariger et al., 2009; McCauley et al., 2005; McCauley, 2005; McCauley et al., 2005; Filsinger, 2004).

Purpose

The purpose of this report is to describe a unique, interprofessional health care program for an at-risk population (Latino migrant farmworkers) that lacks both health insurance and access to health care providers. Community health nurses in northwest Oregon collaborate with university health care providers and other health care groups to perform health screens, provide treatments, and when necessary refer migrant workers to other medical providers. This report will describe the collaboration between the community health nurses and physical therapists when providing health care services to address the musculoskeletal health of the workers. In addition, this report will describe the service and experiential opportunities for physical therapy students included in the opportunity to provide care within an interprofessional setting, practice techniques and provide treatment in a unique environment, and develop aspects of professionalism (Knauss et al., 2003; Mayne & Glascott, 2002; Sternas, O’Hare, Lehman, & Milligan, 1999).

Access to Health Care in Oregon for Latino Farmworkers

Latinos account for 11% of Oregon’s population with precasts expecting upwards of 40% growth through 2020 (Oregon Commission on Hispanic Affairs, 2010; US Census Bureau, 2011). Educational attainment is low with a vast majority of Latinos (25 years and older) lacking a high school diploma (46.3%) or attaining a high school diploma as their highest level of education (24%) (Oregon Commission on Hispanic Affairs, 2010; Denavas-Walt, Proctor, & Smith, 2010). Over one-third (37%) of Latinos in Oregon are foreign born and are not US citizens (Oregon Commission on Hispanic Affairs, 2010). Factors such as these may impact employment opportunities for these segments of the Latino population.

One industry that does not require post-high-school training for many of its positions is agriculture and farming. Agriculture and farming is a major industry in the state of Oregon, with Latinos representing the majority of all individuals involved in this occupation (National Center for Farmworker Health, n.d.a; Bureau of Labor Statistics, 2011). Oregon farms rely on the estimated 100,000 migrant and seasonal workers; however a majority (approximately 77%) of these workers are employed in only seasonal positions (Filsinger, 2004).

Migrant and seasonal farmworkers workers risk exposure to pesticides, musculoskeletal injury, and death in an industry that is considered to be one of the most hazardous occupations in the United States (Kato et al., 2006; Mariger et al., 2009; McCauley et al., 2005; McCauley, 2005; Filsinger, 2004; Zuskin, Mustajabogevich, Schachter, Kern, & Pavicich, 1997). The physical demands associated with this line of work require long hours of performing repetitive tasks, often at fast speeds (Meyers et al., 2001; Meyers et al., 2005) reported 29 musculoskeletal disorders (MSD) in a population of 194 vineyard workers classified as “undocumented.” Over 400 work days were due to the MSDs in this population (Meyers et al., 2005). A majority of all MSDs occurred in the back (69%) with the remaining MSDs experienced equally amongst the neck/shoulder, hand/arm, and the lower extremities (Meyers et al., 2005; Brumitt et al., 2011) reported similar findings in a population of Latino migrant/seasonal vineyard workers. Forty-five percent of all males and 75% of all females described experiencing musculoskeletal symptoms (MSS) in one or more regions of their body (Brumitt et al., 2011). The workers reported the back (thoracic and lumbar spine) as the primary region where they experienced MSS (Brumitt et al., 2011). Of the 115 males that reported MSS, 82 (71.3% of all males with MSS complaints or 32% of the entire male sample population) were experiencing MSS in the back (Brumitt et al., 2011). Twenty-four of 32 female workers (75.8% of all females with MSS complaints or 43.7% of the entire female sample population) were experiencing MSS in the back (Brumitt et al., 2011).
Vineyard workers are encouraged to participate with clinics scheduled during regular working hours. At the start of each clinic, workers complete the ¡Salud! health intake form and the ¡Salud! medical ID card paperwork. The ¡Salud! medical ID card increases one’s ability to access local medical care with services provided at a reduced rate. Once the paperwork is completed, workers present to each specialty (e.g. public health nursing, physical therapy, dental health, etc.) for assessment. At the end of each clinic, members of the ¡Salud! program conduct an interactive educational session on a spectrum of topics (e.g. personal health, mental health, nutrition, and stretching techniques).

Musculoskeletal Health Care: Prevention, Assessment, Treatment, and Education

Physical therapists and graduate students in the physical therapy program perform musculoskeletal examinations and functional fitness screening assessments, provide treatment (e.g. stretching, relaxation, and manual therapy) if needed, review/educate workers on proper body mechanics, and prescribe therapeutic exercise when indicated (Brumitt et al., 2011).

The delivery of orthopedic physical therapy services at the onsite clinics differs from delivery of care within a traditional clinical setting. First, the delivery of care is performed at the vineyard and at some locations the care is provided outside. Second, the ability to provide treatments or prescribe exercises is limited to the equipment available (e.g. treatment table, elastic bands, aspects of the workers’ environments). Third, the worker who accesses physical therapy services is also unique when compared to the traditional physical therapy patient. In this case, the worker is not an established patient (one who has seen a provider and received medical care with services provided at a reduced rate) but rather to present brief case examples encountered by the physical therapy team.

The interaction between the physical therapy team and the community nursing staff at these interprofessional clinics help to facilitate referral of a worker to an appropriate health care provider when necessary. There have been cases in which a worker has reported symptoms to the physical therapy team that had not been reported to the nursing team. The immediate referral back to the nursing team has allowed the worker to receive immediate assessment by the nursing staff and/or receive a referral to a physician. The physical therapy team has also identified workers, based on reported symptoms and examination findings that would benefit from assessment by an orthopedic physician. The community health nurses facilitate the referral to the appropriate physician, helping the worker negotiate the health care system. In addition to individuals who have been referred to primary providers, there have been individuals who were referred to physical therapy for additional treatments to address chronic conditions.

During the 2009 and 2010 clinics, the physical therapy team has provided musculoskeletal examinations, fitness assessments, manual therapy, therapeutic exercise, and education to nearly 600 migrant workers. In addition, community-based research has been conducted to improve how health care is delivered to this population (Brumitt et al., 2011; Reynolds, 2009).

Educational Opportunities for Future Health Care Providers

Educating physical therapy students involves a combination of didactic coursework and clinical instruction (American Physical Therapy Association, 2004). There is a growing recognition by physical therapy educators of the necessity of additional academic and experiential learning opportunities to develop professionalism and foster interprofessional understanding and collaboration (Kelly & Miller, 2008; Reynolds, 2005). The majority of a student’s interactions with patients and opportunities for interprofessional collaboration occur during clinical internships (Reynolds, 2009; Reynolds, 2005). Clinical internships provide the opportunity for academic and professional growth; however, there are limitations as to the total number of clinical competency opportunities (Reynolds, 2005; Reynolds, 2005). The delivery of orthopedic physical therapy services at the vineyard clinics differs from delivery of care within a traditional clinical setting. First, the delivery of care is performed at the vineyard and at some locations the care is provided outside. Second, the ability to provide treatments or prescribe exercises is limited to the equipment available (e.g. treatment table, elastic bands, aspects of the workers’ environments). Third, the worker who accesses physical therapy services is also unique when compared to the traditional physical therapy patient. In this case, the worker is not an established patient (one who has seen a provider and received medical care with services provided at a reduced rate) but rather to present brief case examples encountered by the physical therapy team.

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<table>
<thead>
<tr>
<th>Sample Client</th>
<th>Sample Findings</th>
<th>Treatments Performed and/or Referral Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, 24 (y) with left knee pain</td>
<td>Symmetrical hip and knee active range of motion, asymmetrical hip strength (R&gt;L), pain with palpation to left anterior knee</td>
<td>Prescription of therapeutic exercise for the hip and knee</td>
</tr>
<tr>
<td>Female, 26 (y) with back pain</td>
<td>Decrease core muscular endurance, decrease thoracic and lumbar joint mobility</td>
<td>Thoracic and lumbar mobilizations and manipulations, prescription of exercises to increase core muscular endurance, body mechanics (lifting) education</td>
</tr>
<tr>
<td>Male, 44 (y) with right shoulder pain</td>
<td>Postural deficits, decreased shoulder strength (rotator cuff), positive impingement tests</td>
<td>Prescription of therapeutic exercises to address rotator cuff weakness, stretching exercises to improve postural deficits, communicating with ¡Salud! regarding follow up care with orthopedic surgeon</td>
</tr>
<tr>
<td>Male, 65 (y) with bilateral knee pain</td>
<td>Pain with functional lower extremity tests, creptius (bilateral knees)</td>
<td>Referral to orthopedic surgeon</td>
</tr>
</tbody>
</table>
Interprofessional Skill Development for Physical Therapy Students Participating in ¡Salud!

Table 2

<table>
<thead>
<tr>
<th>Collaborating Professional</th>
<th>Topic</th>
<th>Student Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Nurse</td>
<td>Identification of symptoms and/or signs during worker’s musculoskeletal assessment not previously reported to community nurse</td>
<td>Reporting findings to community nurse; discuss differential diagnosis possibilities; report potential benefits associated with physical therapy treatment</td>
</tr>
<tr>
<td>Health Educators</td>
<td>Health topics (nutrition, sexual behavior, mental health, stretching, etc) are presented in an interactive session at the end of each clinic</td>
<td>Students are exposed to health concerns of this population; physical therapy students participate by leading instruction on stretching performance</td>
</tr>
<tr>
<td>University Health Care Teams (Optometry, Dental Health)</td>
<td>Various topics</td>
<td>Discussion with graduate school peers regarding services they provide; observation of their practice</td>
</tr>
</tbody>
</table>

Discussion

This case report details the benefits associated with interprofessional collaboration between organizations to deliver health care services to an underserved and/or uninsured population. Migrant workers, students, and health care providers benefit from interprofessional collaboration.

To the best of our knowledge, the ¡Salud! program is unique in its scope and delivery of service. This model, supported by monies raised by the vineyards and volunteered service from university faculty and students, helps to provide care for those who would be otherwise unable to afford basic services. The delivery of care via the mobile clinics brings the health care professionals to the worker, eliminating the challenges associated with negotiating the US medical system.

Despite the awareness that the Latino migrant farmworker is at risk for injury and generally lacks access to appropriate medical care, there is much to be learned about improving the delivery of care. Preliminary evidence suggests workers are at risk for MSS or MSD (Brommitt et al., 2011; Meyers et al., 2001). Future research should prospectively assess benefits associated with pre-season injury prevention interventions, identify risk factors associated with injury, and assess MSS and MSD in workers after the harvest.

Currently, aside from the interprofessional course, physical therapy student participation in community service (e.g., ¡Salud!) is on a voluntary basis. As such, assessment of student learning has been limited to qualitative reports. Students have reported improved confidence performing musculoskeletal examinations and joint manipulation techniques. In addition, students have gained awareness of inequities in health care access. Hopefully, awareness of health care inequities will impact future clinicians to provide pro-bono services to underserved populations. A few former students of the program have volunteered time following graduation.

A goal of the physical therapy program is to evolve this model to include a much larger portion of the community at risk for musculoskeletal injuries. Thus, the program has the potential to be more meaningful to the students while still meeting the needs of the community.

Table 3

Physical Therapy Related Experiential Benefits for Students who Participated in ¡Salud! Clinics

<table>
<thead>
<tr>
<th>Normative Model Domain (APTA, 2004)</th>
<th>Experiential Learning Opportunity Building on Classroom Instruction</th>
<th>Student Skill Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Practice Expectation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altruism &amp; Professional Duty</td>
<td>Providing pro-bono service to underserved or uninsured populations</td>
<td>Volunteering time outside of required coursework</td>
</tr>
<tr>
<td>Communication</td>
<td>Practice communicating with patients</td>
<td>Spanish (medical) language communication Communicating with patient via interpreter</td>
</tr>
<tr>
<td>Culture Competence</td>
<td>Appreciate socioeconomic factors associated with populations access to health care</td>
<td>Observe and discuss with workers job requirements</td>
</tr>
<tr>
<td>Patient/Client Management Expectations</td>
<td>Practice musculoskeletal examination skills under the supervision of academic faculty</td>
<td>Develop clinical reasoning; practice components of musculoskeletal examination</td>
</tr>
<tr>
<td>Examination</td>
<td>Review examination findings to identify potential diagnosis(-es) and to rule out non-musculoskeletal origins of pain</td>
<td>Develop clinical reasoning; refer client to another medical/health care provider</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Provide immediate treatment, prescribe therapeutic exercise, provide education</td>
<td>Immediate treatment Joint mobilization/ manipulation Soft tissue mobilization Therapeutic exercise prescription Education Use of hot/cold Body mechanics Group instruction: Stretching</td>
</tr>
</tbody>
</table>

Practice Management Expectations

| Prevention/Health Promotion        | Identify poor body mechanics (e.g. lifting)                          | Group education: proper body mechanics at work |

Table 2:

Interprofessional Skill Development for Physical Therapy Students Participating in ¡Salud!

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community service into a formal service learning experience. Structuring the service learning experience will include measurable learning objectives and require student reflection (e.g. HPSISS Service-learning – Student Survey, reflective writing on cultural competence) (Reynolds, 2009; Shinnamon, Gelmon, & Holland, 1999; Wong & Blissert, 2007).

Conclusion

The collaboration between community health nurses and a university physical therapy team has benefited migrant workers, student physical therapists, and has facilitated research. Migrant workers are now receiving musculoskeletal services that may either reduce risk of injury (education, body mechanics, flexibility programs) or improve symptoms associated with a MSS or MSD (manual therapy, therapeutic exercise prescription).

Students benefit from additional opportunities to practice while supervised by university faculty. Collaborations between physical therapists and community health nurses have facilitated research in a population that has been underserved. Additional investigations are necessary to improve the delivery of care for this population and the experiential transformation associated with student volunteering.

References


