The Development of Migrant-Specific Performance Measures

If you are associated with a Migrant/Community Health Center (M/CHC) funded by the Health Resources and Services Administration (HRSA), you may be developing some familiarity with the performance measures introduced in 2008 by the Bureau of Primary Health Care (BPHC). Grantees are now expected to report on a set of clinical and financial measures in an effort to collect data that will allow for the evaluation of individual and collective performance trends over time. The required measures are listed in Table 1.

BPHC encourages grantees that receive funding for special populations (migrant, homeless, public housing) to include supplemental measures in their health care plans that allow them to monitor the health status or outcomes of services for those populations. Likewise, many health centers that serve large migrant populations have expressed an interest in developing supplemental measures that effectively reflect the unique features of both the migrant population itself and the service delivery modalities used by Migrant Health Centers. The Migrant Clinicians (MNC) coordinated a work group to respond to this need and has recently completed a year-long effort which resulted in the development of a set of migrant-specific performance measures. The conclusions of that work are presented here.

The work group was made up of staff members of Migrant Health Centers and included representation from Eastern, Midwestern and Western locations; large and small health centers; voucher and non-voucher programs; and combined Migrant/Community Health Centers and “pure” Migrant Health Centers. (See “Migrant Measures Work Group Members, below)

The work group met by telephone and in person to discuss and develop two supplemental evidence-based migrant specific clinical performance measures and one financial measure. Background information was provided regarding the elements of sound performance measures and the current required measures. It was decided to focus on three categories of performance measures:

- **Enabling Services**
- **Environmental/Occupational Health (EOH)**
- **Financial**

The process that was followed in developing the migrant-specific measures was as follows:

**What's already out there?**

Work group members shared measures already being implemented at their health centers. Notices were posted on list servers requesting that MHCs share measures currently in use related to enabling services, EOH issues, and migrant-specific financial measures. In addition, a wide variety of measures in use by other (non-migrant health) programs related to enabling services and EOH were gathered from sources such as the Association of Asian Pacific Community Health Organizations, Maternal Child Health Bureau, the Health Disparities Collaboratives and Healthy People 2010.

**What’s the evidence?**

In order to create the most robust measures, the work group reviewed the elements that make up evidence-based measures in these categories and considered the following:

- Quality measures related to specific outcomes
- Process measures related to specific activities
- Cost measures related to specific services

**Table 1: BPHC required performance measures**

<table>
<thead>
<tr>
<th>Category</th>
<th>Measures</th>
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<tbody>
<tr>
<td>Clinical Measures</td>
<td>Quality of Care Indicators: Trimester of entry into prenatal care, Childhood (2 year old) immunization rate, Pap tests for adult (21-64 year old) women</td>
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<td></td>
<td>Health Outcomes and Disparities: Infant birth weight (normal vs. low), Hypertension (controlled vs. uncontrolled), Diabetes (adequate control vs. inadequate control)</td>
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<tr>
<td></td>
<td>Financial Measures: Total cost per patient, Medical cost per medical encounter, Change in net assets to expense ratio, Working capital to monthly expense ratio, Long term debt to equity ratio</td>
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See [http://bphc.hrsa.gov/about/performancemeasures.htm](http://bphc.hrsa.gov/about/performancemeasures.htm) for additional information about the required measures.

**Migrant Measures Work Group Members**

- Joan Altenbernd, Migrant Health Services, Inc., Moorhead, MN
- Lorena Ayala-Lawless, United Health Centers, Parlier CA
- Susan Bauer, Community Health Partnerships of Illinois, Chicago IL
- Hilda Ochoa Bogue, National Center for Farmworker Health, Buda TX
- Elizabeth Freeman, NC Farmworker Health Program, Raleigh, NC
- Mitch Garcia, Valley-Wide Health Systems, Alamosa CO
- Barbara Ginley, ME Migrant Health Program, Augusta ME
- Mary Ellen O’Driscoll, CT River Valley Farmworker Health Program, Boston MA
- Nancy Pealing, Borrego Community Health Foundation, Borrego CA
- Claudia Stephens, MT Migrant and Seasonal Farmworker Council, Inc., Billings MT
- Bob Witt, Proteus Health Centers, Des Moines IA
- Mary Ann Zelazny, Finger Lakes Migrant Health Program, Pen Yan NY

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The Development of Migrant-Specific Performance Measures

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an effort was made to use outcomes that are supported by data and research. Studies related to enabling services were reviewed through resources available from Migrant Health Promotion (http://migranthealth.org/our_programs/programs_results/) and Health Outreach Partners (http://www.outreach-partners.org/peerresources.html). A review of literature of the effectiveness of EOH interventions also guided the selection of relevant measures.

What do our experts say?

Work group members, many of whom represented voucher programs, brought extensive expertise and experience to the project in the area of enabling services.

Two specialists in the area of Environmental and Occupational Health led the discussion of potential EOH measures: Amy Liebman, MA, MPA, Director of Environmental and Occupational Health with Migrant Clinicians Network, and Matthew Keller, MD, MPH, a professor and Occupational and Environmental Medicine physician at the University of Washington School of Public Health and Yakima Valley Farm Worker Health Center.

Cynthia Prorock, a financial consultant for the Bureau of Primary Health Care with extensive expertise in fiscal issues related to 330 grantees led the discussion around the development of potential financial measures.

What is most relevant to migrant farmworkers and Migrant Health Centers?

After discussion of possible measures in each category, proposed measures were narrowed down to a menu consisting of three potential enabling services measures, three potential EOH measures and four potential financial measures. The menu was presented in an online survey format and work group members were asked to select the measures they thought would be most relevant and appropriate for MHCs for each category. Selected measures are as follows:

- **Preferred Enabling Services Measure:**
  Percent of migrant patients ≥18 years of age with blood pressure ≥140/90 who are successfully referred for care.
  This measure would monitor the effectiveness of enabling services by documenting the identification of patients outside of the clinic setting with uncontrolled hypertension who are entered into care.
  “Successfully referred” = referred and clinic visit documented.
  Calculation: Farmworker patients seen outside of the clinic setting with documented BP of ≥140/90 who are 1) referred for care and 2) are seen by a provider/Total farmworker patients seen outside of the clinic setting with documented BP of ≥140/90.

- **Additional Enabling Services Measures:**
  - Percent of migrant women who have documented screening for sexual and intimate partner violence during the measurement year
  - Percent of migrant patients ≥12 years who have documented tobacco use status during the measurement year

- **Preferred Environmental and Occupational Health Measure:**
  Percent of registered farmworker patients who receive pesticide prevention education.
  This measure would document how many farmworker patients receive education regarding the prevention of pesticide exposure, such as the use of personal protective equipment (PPE), proper storage and handling of pesticides, prevention of take-home exposure to family members, etc.
  Calculation: Farmworker patients with documented pesticide prevention education/Total registered farmworker patients.

- **Additional Environmental and Occupational Health Measures:**
  - Percent of registered farmworker patients screened for Environmental/Occupational Health (EOH) risk
  - Percent of registered farmworker patients who receive eye protection education

Will they work?

Candace Kugel, MCN Director of Performance Improvement, and Amy Liebman, Director of Environmental & Occupational Health, conducted a two-day site visit in September to the North Carolina Farmworker Health Program (NCFHP) to perform a pilot implementation of the selected measures. Working with the organization’s leadership, the group walked through the mechanics of implementing each of the three preferred measures. NCFHP planned to submit a BPR application and planned to incorporate the measures into their business and health care plans. The process helped to identify and clarify processes and tools needed for implementation of the measures.

Future steps

The migrant-specific performance measures discussed in this article are not meant to replace the BPHC required core measures, and will not be required for MHCs. They are intended only as suggested supplemental measures for MHCs. Dissemination of information related to the development and use of these migrant-specific performance measures is underway. The outcomes of the work group have been presented to the National Advisory Council on Migrant Health and to BPHC leadership. A national webinar and conference presentations are being planned. For specific questions, please contact Candace Kugel at ckugel@migrantclinician.org.
North Carolina is home to an increasing number of Latino immigrants and families from Guatemala, particularly, are settling in rural eastern North Carolina where employment in poultry and pork processing is available (North Carolina Office of State Budget and Management, 2003; United States Census Bureau, 2000). Many health care providers in North Carolina are relatively unfamiliar with the health beliefs and practices of Guatemalans. To provide quality and safe health care, clinicians would benefit from a better understanding of the health needs of this population.

Guatemala is most famous for the indigenous Mayan Indian culture, the largest ethnic group (60%) in the country. A 30 year civil war left many rural villages with limited access to health and social services. In 2006, Guatemala had an infant mortality rate of 31/1000 live births, a rate higher than neighboring Mexico (29/1000), Belize (14/1000), Honduras (23/1000), and El Salvador (22/1000) (World Health Organization [WHO], 2008). In addition, Guatemala has an under-five mortality rate (U5MR) of 41/1000 live births and a maternal mortality rate of 290/100,000 compared to Mexico’s U5MR of 28/1000 and maternal mortality rate of 83/100,000 (WHO, 2008). These health indicators shed light on the critical health disparities facing Guatemalans.

Since 2008, East Carolina University (ECU) College of Nursing has partnered with La Union Centro Linguistico, a respected Guatemalan cultural training center, to lead an international community health nursing course. The goal of the course was to: a) establish a partnership between ECU College of Nursing and an indigenous Mayan community to ensure on-going community health outreach projects and 2) sensitize future nurses to the cultural ways and needs of one of the many Latino populations living in the U.S. During the international cultural immersion experience, students live with Guatemalan families in rural villages and travel by the local camioneta (old school bus) daily into Antigua for Spanish language lessons. Specific community service learning projects were identified and implemented by La Union, ECU students, and village leaders. Initial projects targeted oral health, nutrition, and sanitation. The information was delivered to children and adults through popular education format of interactive games, songs, and role-play (Werner & Bower, 1978). A total of 26 nursing and pre-medical students participated in the course between 2008 and 2009. The course benefits students by allowing...
them to learn a second language, acquire
an understanding of the Mayan culture and
health care delivery systems, and develop
partnerships with village leaders through
community service learning projects.
Guatemalans benefit through the communi-
ty service learning projects that are
designed to mitigate adverse community
health outcomes. This paper reports on one
community service learning project that was
designed to provide a foundation for sus-
tainable infrastructure development.

Methods
In 2009, La Union-ECU partnership con-
ducted a community health assessment that
sought to elicit the opinions of Guatemalan
residents in five rural villages. A Spanish-
English community health assessment tool
(available at www.migrantcliniciansnetwork.org)
used with Latinos in rural eastern North
Carolina was adopted for use in Guatemala.
Over the course of one week in early December,
participants from La Union and ECU College of Nursing
traveled to five rural villages to request the participation of community members in the survey. Staff members at La Union were familiar with these villages and assisted in establishing rapport and building trust. A consent form was read in Spanish to partici-
ants and verbal consent was given. The research study was approved by the
University Medical Center Institutional
Review Board (UMCIRB).

Survey questions were read in Spanish to partici-
ants and responses were record-
ed as either “a problem/concern” or “not a problem/concern.” Participants were asked their opinion of a list of 21 commu-

nity health concerns, 11 adult health con-
cerns, and 19 environmental and social
concerns. Participants were also asked to identify any additional health concerns not
on the survey. A total of 19 Guatemalan
men (n=3) and women (n=16) from
varying socioeconomic backgrounds participated in the survey.

Findings
The three categories assessed were commu-
nity health (all ages), adult health, and envi-
ronmental and social concerns.

Community Health
The top three community health needs iden-
tified were pneumonia and influenza, dia-
betes, and teen-age pregnancy. Eighty-nine
percent (n=17) of participants reported that
pneumonia and influenza were major prob-
lems in their community. Both diabetes and
teen-age pregnancy were identified as com-

munity health concerns by seventy-four per-
cent (n=14) of participants.

Adult Health
The top three adult health concerns were
lack of regular health care, difficulty han-
dling stress, and alcohol abuse. Seventy-
ine percent (n=15) of participants believed
that adults had a problem receiving regular
health exams. Seventy-four percent (n=14)
of participants responded that adults in their
community had difficulty handling stress. Alcohol abuse was identified as a problem among adults in these communities by sixty-
eight percent (n=13) of participants.

Environmental and Social
Concerns
The top three environmental or social con-
cerns were emergency preparedness, afford-
able housing, and job opportunities. Both
emergency preparedness and affordable
housing were reported as a problem by eighty-nine percent (n=17) of participants. Seventy-nine percent (n=15) of participants reported a problem with job opportunities.

Discussion
Concerns identified through this community
health assessment are linked to the human
social infrastructure of these rural commu-
nities. Interventions that might address these concerns fall into the categories of: a) primary and secondary prevention and b) primary health care.

Primary and Secondary
Prevention
In the summer of 2009, the H1N1 epidemic
had brought a heightened awareness of
influenza even to rural Guatemalan villages.
At the time, vaccines were still being devel-
oped and, like the US, Guatemala was rely-
ing on primary prevention strategies in the
form of written brochures and posters with
pictures of correct hand-washing and cough-
ing procedures. Not surprising, the most
popular community service learning project
implemented by ECU students was demon-
stration of hand-washing and “elbow”
coughing. Local leaders invited the health
professional students into numerous local
schools to use songs and games with chil-
dren to convey the importance of hand-
washing to prevent the spread of germs.

Diabetes mellitus constitutes the greatest
burden of mortality for Latinos in the United
States (Vega, Rodriguez, & Cruksin, 2009).
Developing countries typically focus their
limited resources on the prevention of infec-
tious diseases, yet chronic diseases, such as
diabetes, may be creeping into rural com-
munities with little public health attention.
Food insecurity that was thought to result in
an undernourished population may actually result in over-consumption of less expensive,
high carbohydrate foods, such as rice and
bread. Limited information was available in
rural communities on the prevention and
early detection of diabetes. Glucose screen-
ing was not a routine practice in the Centro
de Salud, the health Center, serving these
rural communities.

In the U.S. the highest pregnancy rates for
adolescents aged 15-19 are among Latina
adolescents, a fact of major public health
concern (Centers for Disease Control and
Prevention [CDC], 2009). Teen-age pregnan-
cy, which is influenced by community-level
cultural and gender norms, was also seen as
a community health concern in Guatemala.
Many adverse health and social outcomes
result in early, unintended pregnancies,
including the high infant and maternal mor-
tality rates found in Guatemala.

Guatemala is a country that has experi-
cenced mass destruction from natural disas-
ters, such as volcanic eruptions and earth-
quakes. An earthquake occurred in neigh-
boring Honduras during the summer of
2009, which may have influenced responses
on this survey. Still, emergency preparedness
is a real community health threat to
Guatemalans. Housing materials are scarce
and costly and the remoteness of villages
and limited community resources all affect
disaster preparedness.

La Union-ECU partnership, along with
local leaders, could plan and implement pri-
mary and secondary prevention strategies to
address these community and environmental
concerns. Strategies could include vaccina-
tion campaigns, diabetes screening pro-
grams, and community-wide education
forums. The ECU Center for National
Hazards Research could assist local leaders
with training on natural disasters and emer-
gency preparedness. Faculty and students in
the Schools of Business, Engineering, and
Education could assist local leaders with the
development of small business enterprises,
housing projects, job training and education-
als classes for community members. Faculty
and students in social work and health
behavior and education could partner with
local leaders to organize and train communi-
ty health workers on primary prevention of
early, unintended pregnancy and substance
use.

Primary Health Care
While some villages have a Centro de Salud,
not all villages have access to these health
centers. Furthermore, many people wait
hours to be seen and only use the Centro de
Salud when someone is sick or in an emer-
gency. Preventive practices, such as routine
physical examinations are not yet a part of
the health care delivery system in rural

4 MCN Streamline
In addition, transportation and ability to pay might be barriers to seeking health care. The Academic Health Center at ECU includes the School of Dentistry, Brody School of Medicine (which houses the Department of Public Health), College of Nursing, and College of Allied Health Science. Faculty and students in these schools and colleges are in a position to partner with Guatemalan health officials to supplement and expand primary health care programs and services through rural outreach clinics in Guatemala.

**Conclusion**

An international partnership that involves Guatemalan leaders and U.S. academic partners can begin to address some of the human and social infrastructure concerns of rural Guatemala. A long-term commitment toward sustainable infrastructure development from all partners is an essential component to this solution. *La Unión Centro Lingüístico* is a vital part of the international partnership that can support efforts of cross-cultural language acquisition and cultural sensitivity in developing trusting relationships with rural Guatemalan communities. Effectively addressing the issues identified through this community health assessment will require the collaboration of various disciplines at ECU to provide culturally tailored interventions. Based on this health assessment, one initiative in progress is a partnership between ECU public health students, *La Unión*, and Guatemalan leaders to develop a disaster preparedness plan beginning in the summer of 2010.

International cultural immersion programs with a rigorous academic community service learning component should include language training and cultural sensitivity with the goal of sustainable infrastructure development. Ultimately, by preparing health professionals through international cultural immersion programs, the course seeks to ensure safe and quality health care for one of the many Latino populations living in North Carolina. Community-academic partnerships, like the one between *La Unión* and ECU, can contribute to the economy of the country and improve health care delivery and health status outcomes of the most vulnerable populations.

**References**


A Model for Training Clinicians for Community Health Centers

Barbara Hollinger, FNP

According to the National Association of Community Health Centers (NACHC) “ACCESS for All America Plan” to reduce the ranks of America’s medically disenfranchised, community health centers must be preserved, strengthened and expanded to reach a total of 30 million patients by the year 2015.(1) According to the NACHC report community “health centers currently need 1,843 primary care providers, inclusive of physicians, nurse practitioners, physician assistants and certified nurse midwives”. The report also concludes that to “reach 30 million patients by 2015, health centers need at least an additional 15,585 primary care providers, just over one third of whom are non-physician primary care providers”.1

The Family Nurse Practitioner Program at University of California, San Francisco (UCSF), is preparing ideal candidates to meet this need and is a modal for other Schools of Nursing in this endeavor. Of UCSF FNP students graduating with the Master of Science degree between 2006-2008 68% are practicing in California with underserved populations. That figure does not include the many graduates working with underserved rural populations in other states such as Alaska, Arizona, New Mexico, Louisiana and New Hampshire. Seventy percent of these new clinicians are fluent in a second language related to population services with most of them speaking Spanish. The current two classes have 71 and 74% fluency in a qualifying language. Diversity recruitment and support are major goals of the UCSF School of Nursing as reflected in the Teaching Mission Statement to “Prepare students from culturally diverse backgrounds to assume leadership roles in nursing clinical practice, administration, teaching and research”. Of the sixty-six 2006-2008 graduates 39% were under represented minority students.

These successes begin with student recruitment. Among our many qualified applicants preference is given to those who state their desire to work with underserved populations and who have demonstrated this through work or volunteer experience. Extra credit is given to applicants who speak languages needed to work with underrepresented populations. Many of the native speakers are members of these underrepresented groups.

Since Spanish is such an important language in caring for the California population UCSF offers many opportunities to enhance Spanish language skills. Originally purchased with grant money, Pimsleur Spanish language CDs or tapes are available for rental with 3 proficiency levels of 30 lessons each. Class credit is available for 3 Spanish language classes that include cultural content. An innovative course specific to prenatal care requires the student to view a video of faculty interviewing a pregnant patient on a series of pregnancy related topics. The students then record themselves doing the same interview with a fellow student. The instructor gives students feedback on their recorded interview.

Students have required course work specific to working with underserved populations. Care of High Risk Populations I and II introduces concepts of health care disparities, epidemiology of health conditions and focuses on managing conditions common in high risk populations. Primary Care of High-Risk & Vulnerable Elders uses case studies of ethnically diverse clients with complex medical issues developed by medical anthropologists and geriatricians.

An elective 20 hour course taken by many NP and occupational health students is Primary Farmworker Health Care. Topics include cultural content, common health complaints of migrant and seasonal farmworkers, women and children’s issues, pesticide exposures, immigration and welfare concerns and mental health. The final assignment is to either interview a farmworker or farmworker family member or to visit a farmworker clinic.

The other crucial component of student preparation is the clinical residency. All FNP students complete a minimum of 560 hours of supervised direct patient care that covers OB/GYN, pediatrics and general family medicine. All students complete one or more clinical residencies working with underserved populations. These range from urban county clinics to jails or community health centers. Many sites require students to be fluent in Spanish. Community health centers are ideal placement sites in that they more often reflect a true family practice model with all age groups seen within the context of the family. In more urban settings pediatrics and women’s health or obstetrics are often viewed as a specialty and seen outside of the family practice.

During the academic year clinical rotations at each site are once weekly for 4 to 8 hours over ten weeks. Despite having students travel to clinical sites all over the greater San Francisco Bay Area, UCSF is still mostly an urban program. Recognizing the need to encourage students to consider the needs of rural communities the FNP program has developed a number of rural sites where students do focused clinical rotations of 40-80 hours over 1-2 weeks. To date we have placed students in three California sites in Anderson Valley, Squaw Valley in the foothills above Fresno, Salinas and Roseburg, Oregon. Student comments have strongly endorsed the value of the rural experience. One student expressed how her Salinas experience, “solidified my skills”, “improved time management by ramping up the number of patients expected to see in a busy setting” and overall was “more effective learning”. Another student noted that “staying in the community was invaluable and helped solidify my desire to work in a rural community setting.” Both of these graduates are now employed in settings that provide primary care to farmworker populations and set an example for current students considering rural community health center as an option after graduation.

The UCSF FNP Program would like to expand the number of rural training sites. Such arrangements are beneficial for both the university and the community health centers. For rural community clinics seeking to hire nurse practitioners it provides an opportunity to support the training of a clinician that could become an employee. It allows the health center to determine if this clinician would be a good fit for the needs of that particular health center. Although this article highlights the UCSF FNP Program, nursing schools across the country are looking for clinical training sites for nurse practitioner students and would welcome community health center – university collaboration.

For community health centers interested in collaboration with UCSF School of Nursing a Training Affiliation Agreement must be signed prior to student placement. A clinical “preceptor” to supervise the student on site needs to be identified and housing arranged. For further information feel free to contact Barbara Hollinger at: Barbara.Hollinger@nursing.ucsf.edu

Aches, Pains, and Strains

How to avoid musculoskeletal disorders

Helen Murphy, RN, Director of Outreach and Education, University of Washington Pacific Northwest Agricultural Health and Safety Center

Musculoskeletal disorders are physical conditions affecting muscles, tendons, nerves, and joints that are not due to acute trauma, such as falling from a ladder. Musculoskeletal disorders are the leading cause of disability among workers. Between 1997 and 2005, they cost the agriculture industry $136 million and 862,500 lost workdays.

Types of injuries

Neck: While neck disorders are relatively uncommon, they are the second most costly type of musculoskeletal disorder, averaging $15,813 per claim and require the most time away from work to recuperate (279 days on average).

Back: Back disorders are more common but less costly (averaging $11,626 per case) and require the least time away from work (195 days). However, if the problem involves a pinched nerve, called sciatica, it is very expensive ($69,237 per case) and results in 554 lost workdays on average.

Upper extremity: Most of these claims involve the hand and wrist, followed by the shoulder and elbow.

Carpal tunnel syndrome and tendonitis (tenosynovitis) both result from repetitive motion of the hand and wrist. The average cost of carpal tunnel syndrome is $21,208 per claim, with an average of 250 workdays lost. While tendonitis is less expensive, time lost is comparable.

Shoulder problems, specifically the very debilitating rotator cuff syndrome, are the most expensive in terms of costs and time off work. Average time lost is almost a year (323 days), and the cost averages $29,877 per claim. Excessive force, repeated elevation, or forward flexion of the arm are the activities most likely to cause this syndrome.

Epicondylitis is the least common and least costly ($11,382) of the upper extremity work-related problems, but the recovery time is long, averaging 263 days. It is a slow-healing inflammation of the forearm tendon, which attaches to the elbow. Forceful and repetitive gripping and overuse of the forearm during tasks such as pruning can lead to this problem.

Causes of musculoskeletal disorders

Physical stress on the body's muscles, tendons, nerves, and joints are the root causes of work-related musculoskeletal disorders. It is not merely how much force, but how long the body part is under stress or how often that matters. While much has been automated in agriculture, manual labor is still required in order to produce a quality product. This may involve chronic exposure to physical stresses that lead to musculoskeletal disorders, such as:

• Working for prolonged periods in a stooped position
• Carrying heavy loads in awkward positions
• Working with hands, arms, or elbows above shoulder level
• Kneeling or squatting
• Repetitive forceful gripping
• Subjecting the whole body to continuous vibration

Preventing these injuries takes study and imagination. The study aspect comes through the science of ergonomics, which assesses a worker's physical capabilities in relationship to the tasks, tools, and environment of the specific job. An ergonomic demonstration project conducted in 2000 in the tree fruit industry documented which tasks are risky and should prompt either employee ergonomics awareness training (caution zones) or workplace changes (hazard zones). The project identified instances of awkward hand and arm positions, awkward neck and back postures, highly repetitive motion, and heavy and frequent lifting in a number of common tasks.

Solutions

Dealing with these ergonomic risks is where the creativity comes in. It often requires redesigning the tools or a rethinking how the work is conducted. This will help reach the ultimate goal of improving workers' posture, reducing the physical force required for the task, and limiting exposure to repetitive motions. Here are some tips:

• Avoid lifting with the neck and shoulders. Avoid lifting with the fingers while standing.
• Keep the load close to your body as possible throughout the entire lift.
• Get a good grip and balance the load.
• Never twist while lifting. Turn feet so that they point in same direction as your lift while you turn.
• Avoid carrying a heavy load more than ten feet with no mechanical assistance.

37 to 39 inches for light work and 33 to 35 inches for heavy work.

• The diameter of tool handles should allow the worker to grip all around the handle with the thumb and fingers overlapping by 3/8 inch.

• To limit the stooping, provide workers with long handled tools.

Pruning tools should handle that are long enough so as to not press into the palm. A spring to keep them in an open position reduces the fatigue associated with prying them back open after each cut. They also need to be covered with rubber or plastic.

• Provide handles for all loads that workers need to lift, and limit the weight of boxes to no more than 50 pounds.

• Give workers the following advice about lifting:
  – Position loads between hands to shoulder level. Avoid lifting the load higher than the shoulder.
  – Keep the load as close to your body as possible throughout the entire lift.
  – Get a good grip and balance the load.
  – Never twist while lifting. Turn feet so that they point in same direction as your lift while you turn.
  – Avoid carrying a heavy load more than ten feet without getting help or mechanical assistance.

• If you cannot fit the load between your bent knees, lift with a bent back and hips, keeping your knees relaxed. Being close to the load is more important than bending your knees.
Livestrong: A Cancer Survivorship Training For Promotores
March 3-4, 2010
East Carolina University
Greenville, NC
252.847.5471 or tdixon@pcmh.com

National Action Summit for Latino Worker Health and Safety / Cumbre de Acción Nacional para la Salud y Seguridad del Trabajador
April 14-15, 2010
Houston, TX
www.osha.gov

2010 National Farmworker Health Conference
May 5-7, 2010
San Diego, CA
www.nachc.com

Cancer, Culture & Literacy Conference
May 20-22, 2010
Clearwater Beach, FL
http://www.moffitt.org/ccl

National Summit of Clinicians for Healthcare Justice
September 23-25, 2010
Washington, DC
www.allclincians.org