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State of Evaluation: Community Health Workers

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Abstract Disparity groups, especially racial and ethnic minority groups, are at greater risk for poor health yet experience numerous obstacles in accessing health care. Community health workers (CHWs) are indigenous, trusted, and respected members of the underserved community. They can serve as a bridge between peers and health professionals.

Use of CHWs has fluctuated since the federal government first endorsed their use for expanded health access to the underserved in the 1960s. National demands to eliminate health disparities and recent socioeconomic pressures have focused attention on use of CHWs to improve community health. Still, underutilization exists due to, in part, a lack of understanding of the CHW concept and a dearth of evaluation literature on CHWs.

This article describes the CHW concept, provides a summary of CHW evaluation literature, and suggests quality care indicators to strengthen evaluation. The review of evaluation research relating to CHWs provides a preliminary state of the science for nurses to begin building an evidence-based practice. Quality of care indicators pertinent to CHW are summarized from the existing evaluation literature. The three best practice domains (therapeutic alliance, risk reduction and health care utilization) are proposed along with suggestions for using quality indicators to improve evaluation. A reduction in health disparities can occur with enhanced CHW utilization.

Key words: community health workers, health disparity, state of the science.

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Eliminating health disparities is a national priority. This goal was first set forth for the United States in Healthy People 2000 and was recently affirmed in Healthy People 2010 (Office of Disease Prevention, 2000). Disadvantaged populations, especially racial and ethnic minority groups, are at greater risk for poor health yet experience numerous obstacles in accessing health care. Indigenous workers, who are trusted and respected by the community, can serve as a bridge between peers and health professionals. Barriers resulting from health beliefs, health values, and strength of the therapeutic alliance can be minimized with culturally competent care supported by using community health workers (CHWs).

Use of CHWs has fluctuated in the United States over the past 40 years. CHWs are considered integral members of the health care workforce who expand access especially to the underserved (PEW, 1994). Yet, CHWs have remained overlooked since the federal government first endorsed their use for expanded health access to the underserved in the 1960s (Hill, Bone, & Butz, 1996). The national demand to eliminate health disparities and recent socioeconomic pressures has focused attention on use of CHWs to improve community health. Still, underutilization occurs. A lack of understanding of the CHW concept and a dearth of evaluation literature on CHWs are two important factors contributing to underutilization.

This article describes the CHW concept, provides a summary of CHW evaluation literature, and suggests quality care indicators to strengthen evaluation. The first section describes CHW duties, common program components for several underserved populations. In the second section, CHW evaluation literature is reviewed and summarized. Process and outcome evaluations are analyzed. This summary of process and outcome CHW evaluation provides a preliminary state of the science. Thus, a foundation for effective evaluation of

nurse-supervised CHW programs and evidence-based practice is begun. The last section of the article focuses on quality-of-care indicators. Quality indicators are grouped into three best practice domains: therapeutic alliance, risk reduction and health care utilization. Suggestions are made for use of quality indicators to improve evaluation.

DESCRIPTION: COMMUNITY HEALTH WORKER

CHWs are trusted community members who establish vital links between health providers and the community. They possess indigenous qualities of the subculture such as verbal and nonverbal language skills; racial/ethnic qualities of the subculture; social/environmental familiarity; and an understanding of the community's health beliefs, health behaviors, and barriers to health services (Giblin, 1989). CHWs are known by various names, such as indigenous health workers, outreach workers, lay health workers, and health advisers. The "insider" orientation of CHWs provides a cost-effective way to deliver culturally appropriate health care (Richter, Bengen, Alsup, Bruun, Kilcoyne & Challenor, 1974; Levine, Becker, & Bone, 1992; Levine, Becker, Bone, Hill, Tuggle & Zeger, 1994).

Programs employ CHWs to advance three interrelated goals. The first goal is the therapeutic alliance. Stronger relations between health care professionals and laypersons in the community are the primary reason for using a CHW. The next goal is to improve appropriate health care utilization. Appropriate utilization can cut costs, with early access, prompt diagnosis and treatment, greater use of primary care providers, and fewer urgent care visits. The final goal is reduced health risks of patients. Risks are reduced by educating about prevention, early diagnosis, and treatment. The three goals depend on one another for maximal effectiveness. A strong therapeutic alliance helps reduce health risks with improved access and appropriate health care utilization. Improved access and utilization means early prevention can occur and risks will be reduced. Stronger therapeutic alliances, improved health care utilization, and risk reduction are the goals that direct the development of CHW duties and program components.

The first common program component is outreach to the underserved community with culturally sensitive care. Outreach activities are designed to expand contact with underserved groups. Outreach includes activities such as networking with community peers, health screening, and case findings. Referrals are made as needed. Support is provided to schedule appointments with phoning or postcard reminders. Staffing mobile units with CHWs is a typical outreach activity.

Culturally sensitive care is a second CHW program component. CHWs provide services that link peers with health care providers. Liaison duties are critical to strengthening the therapeutic alliance, reducing risks, and improving utilization. Training and counseling in matters of culture and language translation are other CHW duties. Cultural information is provided by CHWs to all alliance partners: patients, family, and provider.

Health education and counseling occurs across all program components. Formal sessions or informed conversations can be useful in educating for health. Health education and counseling may be done in the home setting. Home visits can be an important program component for reducing barriers to access. Mass media campaigns involving radio, television, and newspaper can be equally important CHW health education duties.

Some CHW programs include a component on health promotion and lifestyle change. Thus, CHWs act as health promotion role models, mentors, and health advocates in reducing health risks for their peers. This duty may be performed directly, or indirectly, when transporting peers to health services or visiting peers in their home. A sampling of CHW duties and corresponding program components are depicted in Table 1.

Use of CHWs is not new. When first federally endorsed in the 1960s, targeted populations for CHWs include migrant workers, African Americans, poor people, and Indians. Legislation such as the 1962 Migrant Health Act, the Civil Rights Movement, the 1964 Economic Opportunity Act, and the 1969 Indian Health Services Act prompted the population selection for CHW programs (PEW, 1994). Since then, numerous CHW programs have been used with diverse underserved and disparity populations (Centers for Disease Control and Prevention (CDC), 1994). Some targeted populations have included racial/ethnic minorities, the homeless, migrant farmers, remote rural residents, and high-risk pregnant women.

Although described as trusted community members who establish vital links between health providers and the community, CHWs remain overlooked health care workforce members. Utilization of CHWs can improve as familiarity with the CHW concept expands and when the current state of evaluation evidence is better understood.

EXISTING EVALUATION LITERATURE

A review of literature was conducted to identify CHW evaluation literature. Key words such as community health worker, outreach worker, and lay health worker were used to search nursing, social science, and psychology databases. Reference lists on CHW articles were also reviewed and pertinent articles selected. Articles were narrowed for content describing evaluation of CHW programs.

TABLE 1. *Program Component Descriptions with Community Health Workers Duties*

Program Component	Description	Community Health Workers Duty (Examples)
Outreach	Reaching persons and groups beyond and exceeding those customarily contacted.	Case finding/Locate cases Conduct health screening Schedule appointments Follow-up phoning Send reminder cards Refer as needed Staff mobile units Network in the community with peers
Culturally sensitive care	Use knowledge of language, culture practices, beliefs etc. to structure appropriate plan of care and strengthen therapeutic alliance.	Translate – language Link peers and professionals – liaison activities Develop/select culture specific health materials for peers Establish – Begin new services/programs Train health professionals on culture
Health education/counseling	Impart knowledge and develop critical reasoning to enable health decision-making and to advise, recommend, suggest.	Educate/counsel: groups or one-on-one Mass media campaigns – articles/newsletters/brochures/video/radio etc. Develop and distribute resource guide
Health Advocacy	Promote and encourage positive health behaviors among peers.	Role model Mentor Crisis intervention Lobby
Home visit	Meet peers in their home, thus reducing barriers to access.	Sojourn Evaluate home environment Social support (and other duties – see above)
Health promotion/lifestyle change	Employ behavior change strategies in group or individual meeting.	Leader Coach
Perinatal care	Support perinatal health of mother and child during prenatal, delivery, and postpartum period.	Outreach/early prenatal care Nutrition Parenting and child care
Transportation/homemaking	Provide health related transportation Home chores.	Drive/arrange for travel Cleaning/food preparation

Content describing evaluation of program structure, care processes, and client outcomes was considered appropriate for article selection. Information on structure evaluation of CHW programs was difficult to obtain because programs have lacked standard structures. Thus, the evaluation summary described below is limited to process and outcome evaluation. Structure evaluation is not included.

There is a dearth of CHW process and outcome evaluation evidence in the literature. The current state of the science is in the beginning stage of development. Care processes and client outcome evaluations are reported in the existing evaluation literature, but most reports are not research studies, and use of rigorous controls was not documented. Thus, the PEW commission (1994) recommends more-systematic program evaluation with the contributions of CHWs in health care system reform documented. Recognizing these limits, 10 articles describing CHW process or outcome evaluations of about 18 CHW programs are summarized below.

Two articles were identified that reported evaluation findings from several different programs and sites (Giblin, 1989; Zuvekas, Nolan, Tumaylle, & Griffin, 1999). Giblin (1989) was the most extensive evaluation summary article found. Outcomes across several programs were compared. Approximately 16 studies with programs dating from 1960 to 1987 were reviewed and outcomes examined. Recent programs were not considered. Findings presented by Giblin (1989) from studies before 1988 are not repeated in this article.

Evaluation evidence from 18 programs, including programs discussed by Zuvekas et al. (1999), is summarized in Table 2. Program information in Table 2 is arranged alphabetically by author, with each program assigned a number from 1 to 18. Nine of the program reports included process and outcome findings

TABLE 2. *Outcome/Process Evaluation with Community Health Worker (CHW) Program Components and Duties for Underserved Populations*

n	Source	Location (L): Urban or Rural Population (P) Site (S)	Program Components	CHW Duties	Outcome Evaluation	Process Evaluation
1	Butz et al., 1994	L: Urban P: 140 African-American inner-city children with asthma S: Baltimore and Washington, DC	1. Outreach 2. Education/counsel	–Case locators – Obtain health, social, and environmental information re: child's asthma –Referral – Facilitate access to primary care health professionals –Educators – Teach basic asthma education to the families	**Medication Compliance** –Low inhaled steroid use –High beta 2 agonist use **Health Utilization** –Frequent ER visits –Decreased primary care visits **Knowledge Change** –Increased awareness of allergen and irritant exposure	**Numbers Educated** Provided education to 140 asthma patients and their families.
2	Corkery et al., 1997	L: Urban P: Hispanic diabetics aged > 20 S: Nurse-managed diabetes clinic, East Harlem, NY	1. Outreach 2. Health education/counsel 3. Cultural sensitive care 4. Health advocate	–Liaison between patients, their families, and HC providers. –Appointment reminders and rescheduling –Spanish interpreters –Social support –Data collector (research)	**Biochemical -HbA1C** Statistically significant improvement ($11.7 \pm 3.7\%$ to $9.9 \pm 2.2\%$) ($p = 0.004$) in HgA1C levels. **Outcome Maintenance** Improvements were sustained at later follow-up when mean HgA1C levels were $9.5 \pm 3\%$ ($p < 0.001$) **Knowledge** Significant improvements in knowledge scores **Lifestyle** Self-reported diabetes self-care behaviors	**Number Completing** –80% with CHW –47% without CHW –CHW significantly affected program completion ($p = 0.01$)
3	Hill et al., 1999	L: Urban P: African-American men < 50 y.o. S: Hospital outpatient general clinical research center; Baltimore, and in homes	1. Outreach 2. Home visits	–Social support/home sojourn –Data collector –Tracking and follow-up of enrollees of blood pressure clinical trial of nurse-CHW teams with hypertension	**Number Appointments Kept** 528 **Biochemical – Blood Pressure (BP)** Mean BP changed from 153/98 to 152/94 mmHg in the SI group and 151/98 to 147/92 in the UC group ($p =$ NS).	**Numbers Enrolled** 204 of 207 eligible clients enrolled in follow up blood pressure monitoring program. **Number Enrollees Maintained** At 12 months, 91% of 204 enrollees in BP clinical trial were accounted for **Number visited** At 12 months, 84.8% were seen
4	Linnan et al., 1990	L: Urban P: Community residents S: Pawtucket Heart Health Program	1. Behavioral change programs –smoking cessation –weight loss –exercise 2. Outreach	R: – Screening assistant of: blood pressure, height/weight, blood cholesterol, carban dioxide in expired air –Group leaders for behavioral change programs –Referral	Outcome N/A	**Number of Service Hours** 75,000 hours of volunteer service toward changing behavior had been logged as of 1990 **Numbers Served** Programs reaching more than 40,000

TABLE 2. *Continued*

n	Source	Location (L): Urban or Rural Population (P) Site (S)	Program Components	CHW Duties	Outcome Evaluation	Process Evaluation
5	Meister et al., 1992	L: Rural P: Hispanic women S: 3 Migrant farmers Yuma County, AZ	1. Outreach 2. Education – 12 week classes 3. Perinatal care	–Case finder –Advocate –Formal group educator of pregnant women	Outcome N/A	**Number Enrolled** **Number Educated** 147 women reached in 2 cycles of classes.
6	Richter et al., 1974	L: Urban P: Harlem area residents with stroke, hypertension, and related illnesses S: Harlem Regional Stroke Program and Neuro Dept, Harlem, NY.	1. Outreach 2. Education/counsel 3. Health advocacy	–Case identifier –Screening at community and health center sites –Follow-up of patients –Role model/mentor –Catalyst to stimulate community resident interest in preventive health maintenance and follow up	**Appointments Kept** Increase patient appointments kept from 56% to 73% **Biochemical: BP** 30–35% of African-American individuals between 21 and 55 had elevated blood pressure reading	**Number Screened** 8/1971 to 8/1972: 6,000 screened at community sites
7	Rodney et al., 1998	L: Urban P: Indigent elders, some of Appalachian heritage S: Center for Healthy Communities, Dayton, OH	1. Outreach 2. Education/counsel 3. Health advocacy 4. Home visits	–Link with providers –Staff units at varied sites –Educate/counsel on community resources –Support accessing resources	**Client Satisfaction** Survey of 117 clients responded, with 71% very and 23% somewhat	**Numbers Served** Programs reaching ,000 with varied needs: immunization, dental and vision care access, parenting classes, primary care provider (PCP) links
8	Stewart and Hood, 1970	L: Urban P: Residents in need of immunization S: Tulsa City-County Health Dept, Tulsa, OK	1. Outreach 2. Education/counsel	–Educator – Community education and encouragement for utilization of available immunization services –Social support	**Immunization Rates** Preintervention year immunizations: 3–14/1,000 were lower than post intervention year immunizations: 20–175/1000	
9	Swider and McElmurry, 1990	L: Urban P: Women: African- American and Hispanic S: Primary Health Care In Urban Communities Project Chicago	1. Outreach 2. Health education 3. Health advocate 4. Culturally sensitive care	R: –Assist Pubic Health nurse –Referral –Educator of primary health care –Organizer for collective action –Translator.	Outcome N/A	**Number Persons Served** In 14 months, more than 9,000 people with health education, referral, screening, and community organizing activities
10	Zuvekas, 1999	L: Urban P: Homeless S: Alameda County Health Care for the Homeless	1. Outreach program 2. Educate/counse, HIV/AIDS, Substance use 3. Culturally sensitive care 4. Health advocates 5. Case management	–Link with providers to educate on public assistance –Visit shelters for homeless –Staff mobile units for homeless –Educate/counsel	**Biochemical: tuberculosis (TB) skin/x-ray** Positive skin tests were referred for chest x-rays. Positive chest x-rays referred for follow up. One active TB found **Medication** 24 persons started on INH preventive therapy. **Appointments Kept** 78% of TB tests read	**Number Screened** **Number Persons Served** From 10/1994 to 7/1996 administered 2,846 TB skin tests in homeless services

11	Zuvekas, 1999	L: Rural P1: Hispanic pregnant women P2: Hispanics S: USA Border Brownsville Community Health Care	P1. Perinatal care 2. Home visits 3. Outreach 4. Educated/counsel P2. 1. Educate 2. Outreach	–Community referral source for pregnant women –Health Educator – topics: diabetes, tuberculosis, cancer, HIV/AIDS – Referral of clients to available community services	Outcome N/A	**Number of Visits** Up to 1,000 home visits/month **Number Education Offerings** U.S. side: 18–20 community health education sessions/month Mexico side: 20–25 sessions/month
12	Zuvekas, 1999	L: Urban P: Hispanic parents of sexually active youth S: Logan Heights Family Health Center, San Diego, CA	1. Outreach 2. Education 3. Culturally sensitive care (Plain Talk) 4. Health advocacy	1. Case finding through parent organization and education 2. Communication skill and education on teen sexuality 3. Role modeling: teen communicators regarding sensitive matters		**New Program Started** CHW lobbied to add a teen clinic day and Saturday clinic hours
13	Zuvekas, 1999	L: Urban P: Male teens S: Logan Heights Family Health Center, San Diego, CA	1. Educate/counsel 2. Health Advocacy	–Counsel/educate- teen males re: sexual choices and responsibilities re reproductive health issues (one on one or groups) –Peer counseling –Social support -Sponsor social and sports events	Outcome N/A	**Number Referrals** Distributed 659 referral cards to clinics for teens and family planning between 1993–1997 **New Program Started** CHW lobbied to add a teen clinic day and Saturday clinic hours
14	Zuvekas, 1999	L: Rural P: Migrant farmers S: Northwest Michigan	1. Prenatal care 2. Health promotion and education 3. Outreach 4. Train migrant farmers as health resource persons.	–Case finding –Resource guide –Health advocate –Health educator –Translator	Outcome N/A	**Number Referrals Made** In 1996, 687 health referrals **Number Education Offerings** 44 group education sessions **Number Completed** Education attended by 883 **Number Encounters** 1,032 health educate encounters
15	Zuvekas, 1999	L: Rural P: Rural residents especially elders, teens, children S: Regional Medical Center–Lubec, ME	1. Child care 2. Homemaking 3. Elder day care 4. Health education 5. Case management 6. Health promotion	R: –Health educator –Case finder –Resource guide –Case manager	**Appointments Kept** Of the 128 fitness enrollees, 98 average attending	**TV Shows** 9/1995 to 9/1996: 11 call-in public-access TV shows **News Articles** 159 from 10/1996 to 2/1998 **Number Enrolled** 128 fitness enrollees 7 adult day care **Videos Produced** 15 health videos produced

TABLE 2. *Continued*

n	Source	Location (L): Urban or Rural Population (P) Site (S)	Program Components	CHW Duties	Outcome Evaluation	Process Evaluation
16	Zuvekas, 1999	L: Urban P: Hispanic and African-American S: Syracuse Community Health Center	1. Health education 2. Outreach 3. Culturally sensitive community services	–Educate: How to use the managed care system and primary care importance –Make appointments and referrals for clients –Phone reminders of appts –Translate Spanish	**Reduced ER Visits** 15.5% decline in the number of users of the health center's urgent care facility in 1996	**Number Phoned** 1,137 phoned in 5 months **Number Appointments Set** 494 appointments scheduled **Phoned and Appointments** 2,669 ER visitors phoned, with 882 appts scheduled **Number Reminder Cards** 342 reminder cards sent.
17	Zuvekas, 1999	L: Urban P: High-risk Hispanic and African American pregnant women and infants S: Syracuse Community Health Center	1. Perinatal care 2. Health advocacy 3. Outreach 4. Education/counsel 5. Case management	–Crisis intervention –Medical services referrals –Case finding/screening –Monitoring and follow-up –Counseling and exit planning –Resource guide: health and employment –Health educator –Case manager	**Appointments Kept** 3% increase in follow-up prenatal appts kept; 98% newborn follow-up rate up 3%; 3% increase postpartum appts kept **Improved PCP use** 49.5% increase in users of PCP **Morbidity: Low Birth Weight (LBW)** 1.1% decreased incidence of LBW babies. **Appointments Kept – Long-Term** As of 10/1996, 88% of postpartum pts returned within 6–8 weeks for postpartum care	
18	Zuvekas, 1999	L: Rural P: African American high-risk pregnant women, infants, and children S: West Alabama Health Services (Eutaw)	1. Perinatal care 2. Home visits 3. Health education 4 Culturally sensitive care 5. Outreach	–Social support to mothers and infants in the perinatal period –Home evaluators –Educator -teach parenting and childcare skills –Communication facilitator –Reminder phone calls and referrals	**Appointment Kept** 1,230 kept appts **Immunization Rates** In 1996, 11% better immunization completed on home visited child **Appointments Kept** 63% received prenatal care in 1st trimester; 30% 2nd, 7% 3rd **Morbidity: LBW and Very LBW** 89% prenatal cared births >2,500 g; 10% LBW 2% very LBW	**Number Phoned** 1/1997 to 3/1997, ,1600 appt reminder phone calls **Number Casefinding Charts Reviewed** 675 chart review for child immunizations

TABLE 3. *CommunityHealth Worker (CHW) Duties with Best Practice Domain and Process Indicators*

CHW Duties	Best Practice Domain and Process Indicators
Health Care Utilization: Improving Access and Appropriate Use of Services • Case Finding: Home visits, community outreach screening, follow-up, phoning ER users, chart review for immunization completion on children • Phone/Card Reminders: Appointments, missed appt, rescheduled appt, schedule • Resource/Referral: Directory information provided to the community with Education/Counseling, referrals, link with PCP • Lobby for transportation improvement to health care facilities. • Establishing new services such as adult day care, child care services, homemaking services	Healthcare Utilization • Number Visits/Encounters • Number Phoned • Number Appointments Set • Number Reminder Cards • Number Casefinding Chart Review • Number Enrolled • Number Enrolled Maintained • Number of Persons Served • Number Service Hours Logged • Number Assessed/Screened • Number Referrals Made • Number New Programs Started
Risk Reduction • Health education one to one and group on all health topics and lifestyle for prevention • Write press releases; develop audio and video for media dissemination such as radio or local access TV	Risk Reduction • Number Education Offerings • Numbers Enrolled in Education • Numbers Completing Program • Number Articles, TV, and Radio Spots
Therapeutic Alliance • Culturally sensitive training of health care providers • Liaison between provider and patient	Therapeutic Alliance • Number Education Offerings • Number Providers Educated • Number Persons Served • Number Service Hours Logged

(program numbers 1, 2, 3, 6, 8, 10, 15, 16, and 18). Most of the evaluation descriptions included care processes (program numbers 1–6, 8–16, and 18). Two reports included only client outcome descriptions (program numbers 9 and 17).

PROCESS AND OUTCOME EVALUATION

Process descriptions consisted of the number of interventions that were executed. Completed education sessions were the most common process reported. Five programs (program numbers 1, 2, 5, 11, and 13) evaluated themselves by citing the number educated. Number of persons screened was the next common process evaluated, with four programs reporting (program numbers 6, 8, 9, and 10). Four programs reported number of persons served or service hours (program numbers 4, 9, 10, and 14). Two programs reported number of new programs started (program numbers 12 and 13). Two programs reported the numbers of reminder cards sent (program numbers 16 and 18). Other interventions included home visits (program number 11), charts checked for immunization (program number 18), and patients phoned and appointments scheduled (program number 16). One CHW program reported on the number of videos produced, news articles published, and television or radio spots (program number 15). CHW quality categories and specific process indicators are depicted in Table 2.

Outcomes consisted of changes occurring after the process or interventions were executed. Utilization of services was most frequently reported, including reduced emergency department visits (program numbers 1 and 16), improved appointment keeping (program numbers 3, 6, 10, and 15), perinatal appointments (program numbers 17 and 18), and improved primary care provider (PCP) visits (program number 16). Reduction in the births of low birthweight or very low birthweight babies was cited in two reports (program numbers 17 and 18). Two programs reported biochemical changes such as HbA1C (program number 2) and blood pressure values (program numbers 3 and 6). Changes in knowledge (program numbers 1 and 2), medication compliance (program number 9), immunization rates (program numbers 7 and 18), and lifestyles such as diabetes self-care (program number 2) were also reported. CHW quality categories and specific outcome indicators are depicted in Table 2.

BEST PRACTICE DOMAINS AND QUALITY INDICATORS

Evidence-based practice is emphasized in today's health care environment. Greater accountability of the health

TABLE 4. *GlobalOutcomes with Best Practice Domain and Outcome Indicators*

Global Outcomes	Best Practice Domain and Outcome Indicators
• Cost Reduction: reduced use of costly services through prevention and increased efficiency of services with cultural sensitivity • Quality Care: reduced morbidity and mortality rates and changes in other quality indicators	Healthcare Utilization –Reduced ER visits –Improved keeping of peri-natal appointments –Improved primary care provider visits Risk Reduction • Morbidity –Reduction in the births of low and very low birth weight babies • Biochemical –HbA1C –Blood pressure values –TB skin/x-ray • Changes in knowledge • Medication compliance • Immunization rates • Lifestyle change –Fitness participation –Diabetes self care Therapeutic Alliance • Satisfaction with community health worker care

care system and providers is demanded. Therefore, the effectiveness of nurse-supervised CHW care in the community needs to be demonstrated. With little evidence existing to support the influence of CHWs on health care, suggestions are provided below to improve data collection for best practices.

Quality indicators are used to assess best practices. In the case of nurse-supervised CHWs in community-based settings, best practices relate to provision of culturally competent care. As trusted, indigenous members, CHWs facilitate the patient-provider relationship by bridging differences between peers and health care providers. The therapeutic alliance can suffer from unfamiliar or discordant health values/practices when culturally sensitive care is not addressed in the plan of care. The patient-provider relationship can be a barrier to care and compliance (Thorne & Campbell, 1997; Thorne, Ribisil, Stewart, & Luke, 1999). An extensive body of research evidence also strongly supports the importance of health beliefs in predicting health behaviors (Nemcek, 1990; Janz & Becker, 1984). Strength of therapeutic alliance that is supported by health beliefs and provider-patient trust can improve health care utilization and risk reduction.

Appropriate health care utilization is a second major issue addressed with culturally competent CHW practice. Better health care utilization involves improving access to care and appropriate use of services. Teaching peers about available services, enrolling in screening, using PCPs instead of urgent care services, and the like are vital components of CHW practice. The last major issue improved with CHW culturally competent prevention and health promotion care is risk reduction

These three major issues, strength of therapeutic alliance, appropriate health care utilization, and risk reduction, are interrelated. With appropriate health care utilization, health risk reduction can occur. Health is enhanced as prevention of conditions is addressed before disease occurrence or early in the natural history of the disease. Costs will be reduced when the need for expensive tertiary care and tertiary services is reduced. Likewise, the therapeutic alliance affects health care utilization. A strong therapeutic alliance between patient and provider helps improve access, such as appointment keeping and adherence to prevention or the plan of illness care.

Therefore, the issues of health care utilization, health risk reduction, and strength of therapeutic alliance are suggested as the primary concerns or domains for examining best practices of CHWs providing culturally competent care. Specific quality indicators of best practices are suggested for each of the three domains in Tables 3 and 4. Process (Table 3) and outcome indicators (Table 4) are suggested based on prior analysis of existing evaluation literature. Process indicators in Table 3 are grouped by the three best practice domains and then related to CHW duties. The only outcome indicator for therapeutic alliance cited in the analysis of existing evaluation literature was client satisfaction with CHW care. Other indicators found in Table 4 serve as prelim-

inary parameters. Cost reduction and care quality are two global outcomes in Table 4 that demand indicator refinement and development specific to the CHW best practice domains.

CONCLUSION

The rationale is strong for using CHWs to improve delivery of community-based preventive care to America's diverse populations. CHWs may help remedy problems related to health care utilization, health risk reduction, and strength of therapeutic alliance. Research supports the patient-provider as a possible barrier to care and compliance. Strength of therapeutic alliance that is supported by health beliefs and provider-patient trust can improve health care utilization and risk reduction. These barriers may be reduced with CHWs who are culturally sensitive and possess strong community rapport. This is the essential work. The CHW's purpose is to empower community members to identify their own needs, develop a plan that is right for them, and implement the solutions. Thus, delivery of community-based preventive care to America's diverse populations is improved.

The federal government continues to endorse use of nurse-supervised CHWs, especially for expanded health access to the underserved. Although interest in CHW programs continues to grow, CHWs are often-overlooked members of the health care workforce. A dearth of evaluation literature on CHW contributes to underutilization. Improved use of nurse-supervised CHWs can occur as health care professionals better understand the goals for using CHWs, the quality indicators, and CHW duties. Then means of effective evaluation can be more accessible and evidenced-based practice a greater possibility.

This article provides a summary of the current state of CHW process and outcome evaluation evidence. Suggestions are provided for further evaluation of the best practice domains: appropriate health care utilization, risk reduction, and strength of therapeutic relationship. Lessons learned from prior programs may be helpful to new managers or researchers seeking to improve culturally competent care provided by nurse supervised CHWs.

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