Effective Utilization and Evaluation of Indigenous Health Care Workers

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Synopsis ....

The use of indigenous health care workers (IHCWs), who were key elements in community health care programs in the United States in the 1960s, has gone in and out of fashion in subsequent years. The author and his colleagues recently established a service program at Wayne State University's Institute of Maternal and Child Health that employs IHCWs. Characterizations of IHCWs in previous health care programs were reviewed in the process of developing criteria and guidelines for the recruitment, selection, training, employing, and evaluating these workers in the Institute's program.

The unique applicability of indigenousness to the delivery of health care services is addressed in terms of the rationale for the use of IHCWs as well as criteria for their success, benefits and problems encountered in the use of these workers, and deficiencies in evaluations of IHCWs. A model of program evaluation, action research, is proposed that assesses the processes and outcomes of providing health services by indigenous paraprofessionals.

THE USE OF INDIGENOUS health care workers (IHCWs) has gone in and out of favor over the past 30 years. While IHCWs often are associated with health systems in rural developing countries, they were also key elements in domestic programs in the 1960s providing health education, child care, parenting education, and patient advocacy.

Employing indigenous paraprofessional health advocates was a case management strategy adopted in a service program that was recently established by my colleagues and me at the Institute of Maternal and Child Health of Wayne State University. The program identifies pregnant women who are not receiving prenatal care and infants who are at risk of poor health outcomes, recruits these women and children into established public and private health care agencies, and facilitates their use of health and social services. Twelve full-time and 10 part-time advocates, organized into three teams supervised by a master's degree nurse or social worker, provide services to reduce barriers to the use of social services through home visits, counseling, health promotion, and referrals.

It was in developing criteria and guidelines for recruitment, selection, training, employing, and evaluating IHCWs that this review of health care programs' use of IHCWs occurred.

Indigenousness

Indigenous health care workers have been referred to as community health aides, health care expediters, neighborhood workers, indigenous environmental health workers, neighborhood-based public health workers, health guides and health hostesses, health assistants, lay workers, neighborhood representatives, auxiliary health workers, family health counselors, community workers in human services, resource mothers, and "indigenous non-professionals drawn from lower socioeconomic groups" (1).

Indigenous qualities include, in most general terms, the possession of the social, environmental, and ethnic qualities of a subculture (2,3) and, in more specific terms, a sharing with a client of a verbal and nonverbal language (4-9), an understanding of a community's health beliefs and barriers to health care services (10,11), and an enhanced empathy with (4,7, 12-14), and responsibility toward (14) a community and its health service needs. Indigenous qualities are thought to enhance an IHCW's role as a liaison between professional and lay health languages, attitudes, and behaviors (15-17), and the possession of an active and credible role in the life of a client (18).

The embodiment of these qualities most often results in an IHCW who is female, poor, black or Hispanic, or of a culturally isolated ethnic group, who attended high school, and who may be receiving General Assistance or Aid to Dependent Children. Her client shares similar characteristics and requires assistance to redress problems of inadequate housing, social isolation, under-utilization of health care services, and poor compliance with medical or health regimens.

Indigenousness, ascribed as being of the same community and subculture, is assumed to represent a sharing of attitudes, values, and behaviors between the provider and client. This commonality is further assumed to foster a positive relationship between the provider and client. However, the nature of this relationship, which may be characterized by mutual trust and caring, reciprocity, and a respect for the priorities of the client, has not been systematically described. A description of indigenousness and its value for health care workers should include clients' perception of an IHCW as being like themselves (18), assessments of training as it may foster or diminish qualities of being indigenous (18), identification of areas of service such as emotional support and problem identification which are most likely to be enhanced by a provider's indigenousness (18,19), and comparisons of indigenous and nonindigenous health providers' abilities to express sensitivity toward their client's needs and circumstances (10).

In addition to the supposed benefits of indigenousness, the rationale for employing health workers drawn from the community included cost savings, political pragmatism, and supplementing a dearth of health professionals. While some successes were reported, problems in implementing and sustaining these programs included a lack of clarity in paraprofessional roles and training for these roles, difficulties of paraprofessionals working with health professionals and being accepted by their clients, restriction of their responsibilities to menial tasks and no active involvement in determining program goals and objectives, a lack of planned evaluations, and an absence of sustained funding for these positions.

The table summarizes the programs in which health care services were provided by indigenous paraprofessionals and in which this characteristic was presented as being of some importance. The table shows the rationale for employing the IHCWs, criteria and methods of evaluating an IHCW's successes, and the nature of the tasks performed by the IHCWs. A key issue of this last characteristic is the empowerment of IHCWs—did their program tasks require only minimum skills or were they meaningfully related to the qualities of being indigenous? The programs presented in the table are further examined in terms of empowerment, stages of program development, relative benefits and costs of using IHCWs, and evaluation of indigenousness' effect on program outcomes.

Empowerment

Empowerment of IHCWs is the degree to which IHCWs participate in the establishment and review of health program priorities and procedures, and the degree to which they are given responsibility and authority to implement these policies. Two levels of empowerment of IHCWs are proposed:

1. Minimal empowerment limits IHCWs to the performance of routine and narrowly prescribed program tasks. The performance of these tasks requires minimal skills. Appropriate rationales for recruitment of indigenous workers for these routine tasks include manpower shortages, cost containment, and vocational training for new careers. Indigenous qualities of a common language, understanding of a client's health beliefs and the barriers to health service utilization, and enhanced empathy may be irrelevant to the performance of narrowly prescribed program tasks (20) and actually may be undermined by extensive technical training (18).

2. Significant empowerment involves IHCWs' assumption of program tasks including goal setting, prioritization of clients' needs, participation in developing and implementing service protocols, and participation and review of program evaluation. For this level of empowerment, indigenousness is an important criterion to assure that the community for whom a program is provided is represented.

Stages of Program Development

The development and implementation of programs to use IHCWs may be described in four stages: recruitment and selection, training, supervision and staff development, and evaluation. Benefits and problems associated with the use of IHCWs also are discussed.

1. **Recruitment and selection.** Two principles guide recruitment and selection. First, it is easier to select an individual with the skills and capacities necessary to meet program tasks than it is to train

Program's author (year) and reference number	Tasks focus (empowerment)	Rationale		Evaluation	
		Indigenous	Other	Criterion	Method
Domke and Coffey (1966) 16	Interview, recruit to health services (M)	Language	Personnel	. . .	. . .
Heath (1967) 7	Questionnaire followup, liaison (S)	Language, empathy	. . .	. . .	. . .
Kent and Smith (1967) 25	Liaison, expedite (S)	General	. . .	Use of clinic services	Percent use: served vs. non-served
Conn (1968) 15	Counsel, expedite (S)	Language, beliefs, behavior	Personnel	. . .	Case reports
Callan (1969) 21	Support diagnosis and treatment of cancer (S)	Empathy	Personnel	Professional's performance	. . .
Wingart, et al. (1969) 20	Nutritional counseling (M)	Language	. . .	Professional's performance	Percent received
Cauffman, et al. (1970) 26	URI instruction (M)	. . .	Personnel	Professional's performance	Percent compliance
Frankenburg, et al. (1970) 23	Denver screening (M)	General	Cost	. . .	Number screened
Stewart and Hood (1970) 28	Immunization, recruitment (M)	. . .	. . .	Exp vs. control	Number immunized
Westheimer, et al. (1970) 3	Followup missed postpartum appointments, interview (M)	General	. . .	Treatment groups	Subject demographics, no group comparisons
Rogawski (1971) 13	Mental health aides (M)	General, language	Career	. . .	. . .
Callan and Franklin (1972) 10	Rodent control (M)	Beliefs, barriers	Personnel, career	. . .	. . .
Gonzalez and Woodward (1974) 5	Health promotion (S)	Language	Personnel	. . .	Percent missed appointment
Moore et al. (1974) 27	Postpartum home visits (S)	General	. . .	Treatment group	Percent missed appointment
Thiede (1974) 30	Prenatal-postpartum home visits (M)	. . .	Personnel	Infant mortality	. . .
Wingert, et al. (1975) 19	Interview, recruit, expedite (S)	General, language	Personnel, costs	Professional's performance	Case reports, percent missed appointments
Haj-Yahia (1984) 6	Teaching child development (S)	General, language	Personnel	. . .	. . .
Tragler (1984) 29	Assist child health services (M)	. . .	. . .	. . .	Percent health indices
Heins, et al. (1987) 22	Prenatal-postpartum home visits (S)	. . .	. . .	Exp vs. control	Percent health indices

NOTE: M = minimum empowerment of the IHCW, S = significant empowerment of the IHCW, URI = upper respiratory infection, Exp = experimental.

someone (9). Second, criteria for selection of IHCWs generally emphasize personal characteristics including warmth, ability to learn, evidence of natural leadership, demonstrated ability to accept responsibility, desire to help others, and a knowledge of community resources (21,22). An important caveat in the application of these two principles is that in selecting an individual representative of a disadvantaged population, one also may be selecting a person who shares many of the client's problems and deficits, thus hampering performance of project tasks. Heath (7) reported problems with the poor work habits of aides, including not calling clients when the aide misses an appointment, not following through on assignments, and providing short notice of

> *'Indigenous qualities are thought to enhance an IHCW's role as a liaison between professional and lay health languages, attitudes, and behaviors and the possession of an active and credible role in the life of a client.'*

vacations or resignations. On the other hand, Frankenburg and coworkers (23) cautioned against selecting IHCWs because they possess a middle-class outlook and, presumably, a middle-class work ethic, which may be compatible with meeting program expectations but antagonistic to their identification with, and acceptance by, clients.

2. Training. Training of IHCWs is less the acquiring of specific program skills and more the effort to preserve the indigenous essence of the person. As described by Heath: "The aide is a person with a professionalism based on his grasp of the culture and feelings of a group rather than on specific academic preparation." And, "The aide is most useful when he can reflect the needs, problems, and feelings of his own people. As he acquires more education, he moves into the middle-class and is no longer able to give the same help to persons of the lower socioeconomic levels"(7). In fact, merely working for an agency may distance aides from their communities (2,23). Conversely, the more aides represent their communities to an agency, the more they are likely to come into conflict with the agency. Approaches to preserving indigenous values while inculcating agency priorities include the following: (a) train IHCWs and their supervisors concurrently to facilitate the mutual valuing of skills and perspectives (10); (b) avoid initial rigid didactic training which may undermine the natural skills for which IHCWs were selected (18); (c) emphasize in training the enhancement of interpersonal skills (7,18); and (d) rely primarily upon continuous on-the-job training to reduce anxiety before assuming program responsibilities (17) and provide a format for IHCWs' contributions to evolving program goals and procedures (2).

3. Supervision and staff development Three concerns characterize supervision and staff development of IHCWs.

First, how can programs enhance the ability of IHCWs to represent their community needs? While D'Onofrio (2) noted that the holistic approach of aides to their clients may facilitate the identification of problems beyond the initial program objectives, she also cautioned that aides may not correctly represent their communities because they are too engulfed in its problems to depict its elements. On the other hand, inaccurate representation of community concerns may come from an over-identification with project rather than community priorities (23–25) or from IHCWs assuming deferential attitudes towards professionals (2).

Second, how can acceptance of IHCWs by professional staffs be fostered? As previously noted (10), mutual valuing of each other's skills and perspectives by professionals and IHCWs may be advanced by concurrent training. However, the relationship may deteriorate to the extent that IHCWs express community concerns in the form of criticisms of the project's objectives. In addition, the acceptance by professionals of IHCWs as liaisons between the community and program objectives may be a mixed blessing. That is, the use of aides as a bridge between provider and client may further aggravate this separation by insulating the professional from direct contact with the community.

Third, how does participation as an IHCW affect the paraprofessional as an individual? One issue for the IHCW is a problem of identity; adoption of the program's priorities may result in a social distancing of the IHCW from the community (7). Another issue is that IHCWs often possess many of the same personal and family problems as the clients they serve, which may necessitate program services for IHCWs (2) as well as contribute to aide turnover and burnout.

A final issue is the value that IHCWs place on the skills acquired in the program. Four aspects of supervision and staff development may foster the IHCW's self-image associated with program participation: (a) involve IHCWs in planning (5), (b) provide an ongoing evaluation of IHCWs' technical skills by the professional staff and a review of their social and behavioral skills by their clients (14), (c) continue to provide in-service programs to upgrade the skills and responsibilities of IHCWs, and (d) add both curative activities and tasks with readily measurable accomplishments to the repertoire of IHCWs rather than limit their responsibilities to health promotion (24). Health promotion without the provision of services is most likely to occur in urban programs in which IHCWs are frequently

viewed as brokers of existing services for their clients; it is less likely to occur in rural programs when IHCWs augment scarce services (24).

4. Evaluation. Evaluations may be characterized by what has been accomplished and what has been compared. Accomplishments include changes in clients' health habits or health information as a result of IHCWs' services such as compliance with an upper respiratory infection order list (26); changes in health outcomes such as use of prenatal care (25) and postpartum services (27); number of clients screened, registered, or immunized (23,28,29) and rates of infant mortality (22,25,30) and low birth weight (22,29) assumed to be associated with IHCWs' services; and changes in how IHCWs value themselves (21,23). Notably absent are assessments of the acquisition by IHCWs of specific skills such as changes in their own knowledge of health issues and in attitudes and behaviors toward health services. Documentation of these accomplishments vary from the author's prima facie certainty that they occur, to reporting of frequencies, to statistical tests of significance. Only one study (22) of those cited employed this last standard of reportage.

These accomplishments are measured by comparing IHCWs to health care professionals (20,21,26) and comparing clients receiving IHCWs' services to those not receiving the services (baseline to post-intervention (29)), group comparisons (25,27,30), and index to matched control group comparisons (22,30). In general, the findings of these studies are that clients' health was enhanced by the receipt of IHCWs' services. Nevertheless, disappointingly few studies present convincing evaluations of the value of indigenousness in promoting or providing health services. Little attention has been given to assessing associations among characteristics of IHCWs, program tasks to be performed, client acceptance of services, the nature and extent of IHCWs' activities, and health outcomes. The model of program evaluation I propose is an attempt to redress these deficits in evaluation.

Evaluation of Programs Employing IHCWs

Five points summarize my concerns regarding evaluations of programs using IHCWs.

1. How these qualities of indigenousness initiate, direct, and sustain the enhanced relationship between an IHCW and a client has not been explained.

2. Scant attention has been given to the indigenousness of health care workers in planning training of staff, providing services, and assessing clients' outcomes.

3. Program outcomes have not been explicitly tied to subsequent revisions in the services.

4. Published evaluations are limited to behavioral or attitudinal changes of clients. Evaluations do not take into account the program in the context of a larger health service system or the community where services are provided.

5. Evaluations do not explicitly refer to the ideological basis of services or the policy implications of the program's outcomes.

A model for evaluations that may redress these concerns has been termed action research (31,32) and has been applied to evaluations of a social service program (33) and to primary health care programs for adolescents (34). Lewin defines action research as "comparative research on the conditions and effects of various forms of social action, and research leading to social action" (32). Action research is an evaluation strategy that integrates empirical research into ongoing programs, continuously monitors a program's progress, and assesses program outcomes. Action research asks questions such as How well is a program meeting its goals and objectives? Which aspects of a program are most effective, desirable, and useful? How do program goals and objectives aid clients in the program?

There is nothing magical about action research. It simply requires that evaluation be taken into account during the inception and implementation of a program, that evaluation facilitates the delivery of service on a day-to-day basis, that the evaluations are not seen apart from or antagonistic to program services, that evaluations suggest revision of program services, and that evaluations are adequately supported by funding agencies which perceive documentation of services rendered and efficacy as an integral part of their continued support.

Some general characteristics of the action research paradigm applied to the evaluation of indigenous health care workers follow:

• Evaluation is an ongoing process at all stages of program operations,
• The evaluation of a service program's use of IHCWs is performed in the context of the community it serves and the extant health services in which the program resides.

• Evaluation identifies the elements with more or less value for meeting the goals and objectives of the program.

Descriptions of five additional aspects of this model specific to indigenous health care workers further illustrate this evaluation paradigm.

Community characteristics. Presumably, the value of the indigenousness of a health care worker to a client is related to the client's perception of a distinct community in which he or she and the IHCW co-exist. Kent and Smith (25), who compared the effect of paraprofessional neighborhood representatives on clinic usage in a served versus an unserved neighborhood, are unique in defining the elements of a neighborhood. These elements include (a) the presence of a support network of large extended families within a specified area and an informal network of exogenous and autochthonous caregivers serving a residential area; (b) isolation of a specific area by freeways, rivers, industrial zones, and so forth, and by limiting one's use of facilities such as stores to those close to one's residence; and (c) homogeneity of a group in terms of ethnicity and shared social and economic problems.

Assessment of community characteristics may be obtained from (a) extant subsector descriptions from city and county agencies and census tract data providing information on housing, public school sites, recreational facilities, major institutions, commercial development, number of residents, social and economic conditions, percentages of households with children and single parent families, incidence of health problems, and so forth; (b) interviews with clients to assess social support networks and use of neighborhood health facilities; and (c) detailed profiles of communities in terms of program-specific concerns.

Indigenousness. As described earlier, the benefits of indigenousness are primarily in the eyes of the beholder, the client. While the program's selection criteria may assess health care workers' language, health beliefs, and health behaviors, these characteristics are assumed only to increase the likelihood that the IHCW will successfully establish a "relationship" with a client. This relationship will be facilitative to the extent that the client perceives it as possessing positive affective tone, reciprocity of action between client and IHCW, and a balance of power (35). The client's evaluation of this relationship may be assessed by such questions as "How much interest or concern has the (IHCW) shown you?" "Did she listen to you and understand what you needed?" "Did she help you solve your problems?"

Health services characteristics. IHCWs' successes may be affected by the latitude that they are afforded in providing services to their clients and by their acceptance by health professionals. Acceptance by professionals may be a two-edged sword: those IHCWs who express community concerns as criticisms of the project's objectives may antagonize professionals—but may well represent their clients—while those who identify with professional and program values may distance themselves from their communities. Latitude in providing services to clients may be characterized by the term "empowerment." It has been argued that the valuing of indigenousness in the selection of health care workers should obligate a program to provide IHCWs with tasks involving setting goals and priorities based on client needs and participating in service protocols and evaluation of the program. These health service characteristics may be assessed by the continual monitoring of professionals' views of health care delivery and the roles of IHCWs.

Processes and outcomes in providing services. Evaluation of IHCWs' provision of services is frequently complex, may appear enigmatic, but hopefully is not chimerical. Issues to be addressed in evaluation include the following:

1. Evaluation of a program's processes serves the dual purpose of identifying the relative contributions of specific elements (such as number of client contacts, number of services provided, range of successful referrals, and satisfaction of the client with the IHCW) to service outcomes, and evaluation also provides day-to-day guidance in case management. In our program at Wayne State University's Institute of Maternal and Child Health measures employed to manage clients and document services include periodic interviews to assess clients' needs and activity reports that summarize each contact with a client or action taken on their behalf. Needs include housing, food, clothing, furniture, child care, social support, medical care of infant and mother, personal resources, sanctuary from violence, and so forth.

2. Outcome and process evaluations should be continually reviewed by the program's managers and by the staff of health and human service

agencies associated with the program to guide revisions in service delivery. To date, in our program and associated health and human service agencies, changes responsive to these evaluations have occurred in the scheduling of patients and physician staffing of prenatal clinics; in training and selection of IHCWs to assume greater responsibilities for health promotion, referral, and child development; and in the setting of priorities for serving client needs for housing, food, and clothing before addressing issues of health promotion and child development.

3. A health service program's audience may include State legislators, funding agencies, health agencies, health professionals, and one's own program staff. Each group may have unique needs for information regarding services and outcomes. For example, in our program in which IHCWs provide services to reduce barriers to the use of health and social services for pregnant women and mothers with infants, reports to funding agencies include data on reductions in infant mortality and in the number of low birth weight infants, acquisition by IHCWs previously dependent upon government assistance of marketable work skills, and service outcomes of the number of clients served relative to a total populations' needs. Reports to affiliated health service agencies include number of patients served, increased use and earlier access to prenatal and infant health services, identification of effective screening procedures to identify patients at risk of poor use of health services, and identification of elements in the health delivery systems that are and are not effective. Reports to health professionals include comparisons of health status and health service use of those clients served with a matched control group, assessments of the correspondence of risk status assignments to service needs and infants' outcomes, and determination of the relative contributions of patient characteristics and services to health outcomes.

Continuation criteria. Continuation of a project may be less dependent on how indigenousness makes the service more acceptable to clients and obtains more favorable health outcomes and more on how indigenousness is associated with cost savings, supplementing a scarcity of health providers, and expressing a concern for community involvement. I have argued, however, for the need for effective evaluation of indigenousness as a potentially valuable program element. Evaluation should include answers to the following questions: When is a health care worker judged by clients as being indig-

enous? How does indigenousness affect the relationship between the client and health care worker? How does that relationship affect the client's acceptance of services? How may indigenousness be fostered by the program's elements of recruitment, selection, training, supervision, and staff development? Such an evaluation would likely enhance the program's services as well as provide a basis for recognizing the value of indigenous health care workers to their communities.

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Neonaticides Following "Secret" Pregnancies: Seven Case Reports

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Synopsis ....

Seven neonaticides were reported during a 14-month period in the State of Iowa. This is an alarming number considering that only one such case was reported in the previous year. The majority of cases involved the birth of a live infant to an adolescent who had reportedly kept her pregnancy secret from family and friends. The death of the infants resulted from exposure or drowning. Efforts were made by the mother to hide or dispose of her infant's body.

Basic information about each of the reported cases is presented, as well as the sentences given the adult mothers charged with the crime of child endangerment. The dynamics of these cases are reviewed in the context of earlier studies dealing with the phenomenon of neonaticide.

Infanticide has deep roots in several cultures. It was practiced in some primitive societies and was decreed a capital offense as early as 1643. Its occurrence recently prompts suggestions for activities by professionals to prevent these tragedies. More research and further attention to this problem is warranted.