Policy on Quality and Effectiveness of Rural Health Care

2002

Wonca Working Party on Rural Practice
World Organisation of Family Doctors
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POLICY ON QUALITY AND EFFECTIVENESS OF RURAL HEALTH CARE

Endorsed by
Wonca, November 2003

The Wonca Policy on Quality and Effectiveness of Rural Health Care has been developed by the Wonca Working Party on Rural Practice.

The goal is to provide a framework to encourage the development of direct and indirect targets for and measures of the quality and effectiveness of rural health care.

On behalf of the Wonca Working Party on Rural Practice, we hope this document stimulates your thoughts and assists you in working towards the WHO target of “Health for all people” and the Durban Declaration “Health for all rural people by 2020.”

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Executive Summary

This policy is a contribution to the discussion about the quality and effectiveness of health care throughout the world. Following the World Health Organisation (WHO) goal of health for all people, the Wonca Working Party on Rural Practice maintains that providing effective high quality rural health care is an enormous challenge in developed and developing countries. Rural health, defined broadly, includes physical, mental and social well-being. Rural health can be related also to the degree of connectedness that the individual feels with family, friends, work and community.

Rural residents throughout the world generally have reduced access to health care and less favorable health status and outcome when compared to urban populations. Worldwide measures of the quality and effectiveness of health care have not been well described, developed or applied to the rural context. This Policy outlines a framework for direct and indirect measures of rural health care that can be applied to the target: ‘Health for all Rural People’ throughout the world. The framework measures include rural context, rural health status, rural health care outcomes, rural health care services, rural health care work force, rural health care work force education, rural health care infrastructure and information technology, rural health research, rural health funding, rural health care organization and rural health consumer satisfaction.

A series of health care vignettes from around the world are presented in order to underscore health problems from a worldwide perspective.
1. Introduction

The World Organization of Family Doctors (Wonca 1997) and the World Health Organization (WHO 1998) have both set ambitious targets of health for all rural people in the 21st century. These goals are most difficult to achieve in the rural areas of the world where the majority of the world’s people live. The advancement of rural people’s health requires the promotion of physical, mental and social well-being, following the broad WHO definition of health. The quality of rural people’s health is based on many broad determinants including connectedness, not just the absence of diseases. Connectedness is the relationship of the individual to his or her family, friends, work and community environment. Producing healthy rural people begins with the preparation of the next generation of parents for rewarding relationships that provide the stable basis for bringing up girls and boys to live, play and work productively with each other over their life-spans. Improving rural people’s health requires multidimensional cooperative activity from all parts of our society. It requires attention to the environment, economics, resources, education and health care.

Special needs groups must be given high priority, with a special focus on the health needs of indigenous, minorities and socially isolated rural people towards achieving the same level of health status enjoyed by the rest of the population. Providing effective high quality rural health care is an enormous challenge in developed and developing countries. Compared to their urban counterparts, rural people in most countries have reduced access to health care and overall poorer health status and outcomes. Measures of the quality and effectiveness of health care have not been well described, developed or applied to the rural context. This policy paper provides a framework for development and implementation of quality improvement initiatives in rural health. It outlines and discusses both direct and indirect measures of rural health care that can be applied to the Wonca target: “Health for all People”, and the Durban Declaration “Health for all Rural People by 2020” (See Table 1). The quality and effectiveness of rural health care can be measured directly using rural health status and rural health outcomes. Indirect measures indicating available health care services, workforce, organization, infrastructure, research and funding are also important. Several vignettes are used to highlight the rural health context and illustrate the challenge of achieving quality and effectiveness of rural health care in both developed and developing countries throughout the world.

Table 1 Target: “Health for All Rural People by 2020” (Durban Declaration)

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2. Direct and Indirect Measures of Rural Health Care

2.1 Rural Context

Target: Understanding of rural contexts including rural/urban differences and specific rural/rural differences so as to improve design and delivery of rural health services and ultimately rural health outcomes.

Measures: Geography and demography of the rural population including age-sex distribution; sociology and psychology including attitudes and values; education level; per capita income poverty indicators; employment/unemployment rates; occupational status; water, housing, sanitation and electricity.

Comments: Economic and social factors are key determinants of health. Rural areas often have a lower than national average education level, lower than national average per capita income, higher than national average unemployment and relatively low-income occupations. Also, rural people are often at high risk for accidental injury and trauma, related to pursuits such as fishing, farming, mining, forestry as well as motor vehicle accidents and environmental disaster. There are some wonderful examples of healthy villages and rural areas that have a variety of exceptionally positive outcome measures. These areas need to be studied to understand and replicate their reasons for success.

Definitions of rural vary greatly from country to country and thus can make comparisons difficult. In Canada for example, the rural population is now defined as residents living outside census metropolitan and census agglomerate areas. Essentially this definition covers rural areas, including small communities of up to 10,000 people not contiguous to larger urban centers. Similar definitions are used in other countries.

2.2 Rural Health Status

Target: “Health for All Rural People”

Measures: Outcome measures include life expectancy tables and mortality rates including infant mortality, perinatal mortality, maternal mortality, and suicide rates. Disease incidence and prevalence, including infectious diseases such as TB, HIV/AIDS, chronic diseases like diabetes and cardiovascular disease and level of disability should distinguish rural vs. urban populations for comparison. A specific subset of the same measures for indigenous (Aboriginal/Native) peoples is important in many countries.

Comments: Morbidity and mortality data provides the best direct measure of rural illness and can be compared with national and international figures in order to highlight particular health problems for rural populations. Rural/urban and rural/rural analysis requires data collection in a form that allows this to occur. Around the world, indigenous, minority groups and disenfranchised peoples have generally poorer health status than other rural or urban people. This poses a particular challenge for rural health care. (Wonca 1999)

2.3 Rural Health Care Outcomes

Target: Comparable Outcomes for the Same Health Problems

Measures: Examples of outcome measures include morbidity and mortality from diseases such as diabetes, cardiovascular disease and trauma.
Comments: How do treatment outcomes for rural people compare to urban or national outcomes for the same disease conditions? For example, does a rural patient with cardiovascular disease such as myocardial infarction attain the same health outcome as a person presenting with the same problem in an urban area? How do trauma outcomes compare? Do premature babies have the same access to advanced neonatal care? This is an important measure of the effectiveness of specific components of rural health care delivery. Access to and quality of primary, secondary and tertiary components of health care will impact these measures. These measures can be used to target specific conditions in need of better health care to bring rural health treatment up to national and international benchmarks. Rural practice/clinic chart audits can be a useful tool for continuing medical education and quality improvement.

2.4 Rural Health Care Services

Target: Equivalent Access to and Utilization of Available Services

Measures: Health clinic visits; family doctor/generalist visits; antenatal care; medical specialist visits; surgical procedure rates; hospitalization rates; preventive measures; i.e. immunization, Pap smears, mammography, ambulatory care and resource and ambulatory care sensitive condition incidence rates, access to and utilization rates for advanced diagnostics (i.e. CT, MRI scan, genetic testing), use of telehealth and health informatics.

Comments: The utilization of health care services is an important measure of the access that the population has to health care. Equal populations, those with the same age/sex distribution and incidence of disease would be expected to have similar utilization of health care resources, provided that those resources are fairly distributed and accessible. For example, the need for, and use of primary health care/family doctor services would be fairly uniform. The degree to which utilization differs often reflects barriers of unequal access to these services.

Interpretation of differing utilization rates for specific procedures and hospitalization can be quite interesting. For example, the rate of appendectomy should be the same for two similar population groups with similar diets because the incidence will be the same, and surgery is non-elective and non-deferrable. In contrast, the rate of cataract surgery or hip replacement surgery is very dependent on access to advanced health care services. Higher hospitalization rates for ambulatory care sensitive conditions such as complications of diabetes or asthma may reflect lack of primary and secondary preventative services resulting in higher complication rates. Interpretations of such measures become even more complex when the populations’ burden of illness differs significantly.

2.5 Rural Health Workforce

Target: Fair Distribution of Health Work Force to Meet Health Care Needs

Measures: Physician/population ratios; FP/GP/population ratios; some specialist/population ratios; nurse/population ratios; allied health, e.g. physiotherapist/population ratios.

Comments: The distribution of the primary health care workforce, including family physicians/general practitioners and nurses, is an important measure since all populations need primary and preventive health care. Effective functioning of multidisciplinary rural healthcare teams is essential. There is an important role for the family doctor/GP who knows his/her patients, is able to manage most of their health problems and coordinate specialized investigation and specialist care. The extent to which rural people have difficulty accessing specialist care and specialized services is an important barrier to equitable distribution of health care services. It is clear that a uniform distribution of specialists is impractical as many specialist
services treat low prevalence conditions that only produce an efficient workload from large populations (e.g. neurosurgery) and thus need to be centralized for efficiency. Regional specialists do, however, play an important role in many rural areas. Visiting specialist clinics can be an important part of the distribution of the rural health workforce and provide rural health care providers an important connection to consultants for questions and continuing medical education. In addition some regionalization and ruralization can be done for relatively high-tech specialty services. Cataract surgery, for example, has been successfully decentralized in some countries by utilizing regional and mobile clinics. The increase in telecommunication services throughout the world can make referral and consultation a mouse click away. Alternate caregivers and traditional tribal and herbal practitioners have a role in many parts of the world and need to be scientifically studied for quality and effectiveness (Wonca 2002).

2.6 Rural Health Workforce – Education and Training

Target: Education and training of a sufficient number of suitably skilled rural doctors and other rural health workforce members

Measures: Recruitment of rural people into medicine and other health care occupations correlating to the percentage of the population that is rural; rural undergraduate medicine curriculum and experience provided; postgraduate rural family medicine training streams provided; postgraduate advanced training provided for rural family practice, i.e. GP anesthesia, GP obstetrics, GP surgery, etc.; rural nurse and allied health education correlating to the rural population.

Comments: Rural practitioners provide a wider range of services, and carry a higher level of clinical responsibility, practicing in relative professional isolation when compared with their metropolitan counterparts. Practice in rural areas where specialists and specialized services are limited or distant requires specific rural-oriented medical education to produce sufficient numbers of adequately trained physicians and other health care workers. Recruitment of individuals from a rural background and rural-oriented medical education have been found to increase the numbers choosing rural practice as a career and to be effective in educating more physicians and other health workers with the knowledge, skills and interest to pursue rural practice as a career. (Wonca 1995)

2.7 Rural Health Infrastructure and Information Technology

Target: Clinics/facilities/staff and supporting network infrastructure to provide effective rural health care and maintain attractive and sustainable working conditions for the rural health workforce

Measures: Clinic facilities, clinic support staff and structures; regional hospital facilities; communication and transportation network to provide access to specialized services for critically ill and seriously injured patients; and information technology access and support.

Comments: The organization of rural health infrastructure, information technology and support are important contributors to rural health care. Without high quality infrastructure support it is impossible for the rural health workforce to deliver effective rural health care. In addition, lack of infrastructure is a significant barrier to recruitment and retention of a rural health workforce. (Wonca 2000)

Information technology has the potential to add significantly to the rural health workforce. Knowledge, information access and Telehealth can enhance patient services and education where direct consultation is not possible. Telehealth, however, is not a substitute for the provision of direct primary or consultative patient services. (Wonca 1998)
2.8 Rural Health Research

Target: Effective Local and Major Rural Health Research Projects

Measures: Local physician and other health worker involvement with both design of and participation in local and major rural health research projects with appropriate community involvement.

Comments: Rural populations have specific illness, injury and disability patterns. Rural health care delivery systems need research and development. Indigenous peoples often have very specific determinants of health and usual disease patterns. Effective health care is based on sound research into both population needs and the best practice delivery of health care for that context. An important component of this is the fostering of community research by rural physicians and other rural health care workers.

2.9 Rural Health Funding

Target: Equitable funding for health services in all regions.

Measures: Rural health funding based on need. Equity can be assessed by expenditure per person, based on documented comparative needs.

Comments: Rural health funding needs not only to take into account the per capita utilization of health services but also the more extensive infrastructure and support required because of distances involved for rural health care. The effectiveness to which rural health care funding is distributed is a major determinant of the size of the rural health care workforce and supporting infrastructure. This will contribute significantly to both the quantity and quality of rural health care that can be delivered and has a major impact on the health of the rural population.

2.10 Rural Health Care Organization

Target: Effective Development and Management of Health Care Resources to Meet the Needs of the Rural Population

Measures: Must be locally defined, based on local needs as well as national and international models.

Comments: The overall organization of health care directly affects the number and distribution of doctors and other health care workers and access to medical services as well as outcomes. The local and regional organization of health care directly affects the quality and effectiveness of rural health care. Local community participation in owning and managing rural health services is a key to sustainability of rural health services. Strong organizational policies and structures that specifically address rural health care needs are therefore required at local, regional and national levels (Wonca 2000).

2.11 Rural Health Consumer Satisfaction

Target: Sense of good health and quality accessible health care.

Measures: Quantitative and qualitative personal measures of well-being and the access to and quality of health care received.
Comments: Much work remains to be done, based on the dimensions that patients find important. Rural health care consumers need to be involved in all aspects of rural health care, planning and delivery. Measures of their satisfaction (or lack) can be a powerful tool in identifying needed improvements.

3. Future

“Health for All Rural People” requires high quality and effective rural health care. This remains a challenging target which demands a total society approach to employment, education and connectedness within the community. This will require local, regional, national and international leadership. By all measures, in most countries around the world, a great deal of effort and organization is required to bring the quality and effectiveness of rural health care up to comparable urban standards. Measures of the quality and effectiveness of rural health care include the rural context, rural health status, rural health outcomes, rural health care services, rural health care workforce, rural health care workforce education, rural health care infrastructure and information technology, rural health research, rural health funding and rural health care organization. The Wonca Working Party on Rural Practice strongly encourages using targets and measures of quality and effectiveness of rural health care in the development and evaluation of rural health programs.
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Clinical Vignettes

1 Canada

JA, a primarily healthy 75 year-old man presented to the rural hospital emergency department with a massive MI. Despite rapid diagnosis and treatment, he continued to deteriorate and required intubation which was successfully accomplished. Both his family and the attending physician (a trainee in cardiac surgery who was working in the rural emergency department that weekend to spell off the overworked local rural doctors) felt that the patient’s chance of survival was dependent on transfer to the tertiary care center 100 km away. Despite the stormy winter weather, the doctor and nurse set out by land ambulance, only to crash in a white-out. The patient died and all attendants (the doctor, nurse and ambulance crew) suffered severe injuries (closed head injury, femur fractures) and all were off work for several months. The risks of emergency and routine transportation are often not sufficiently considered in decisions to seek advanced centralized care.

2 Nepal

SH, a 48 year old female in Nepal developed right sided chest pain in the breast region. Being a female and with the presence of pain in the breast region, she traveled to consult a renowned gynecologist, who examined her and advised consultation with a cardiologist immediately. The patient humbly visited the cardiologist who, after examining the lady and after a few investigations, suggested an NSAID and reassured her not to worry about the pain. The pain continued and a GP was requested to see her. The GP, after taking a history, immediately diagnosed this as a case of cholelithiasis and did ultrasonography, which confirmed the diagnosis and the patient was treated accordingly and relieved from the pain. She later underwent cholecystectomy. This emphasizes the role of a GP in any setting, but particularly in a developing country like Nepal.

3 South Africa

A mother delivers a premature baby in an urban area. The baby is guaranteed a place in the Neonatal Care Unit and has an excellent chance of getting a ventilator if needed. If the same baby is delivered in a rural hospital, it is unlikely s/he will be accepted in the tertiary institution (unless the mother can afford private medical care). The only way to achieve this is to transfer the mother prior to delivery, but the possibility of premature labor can not always be predicted, and once labor has started, distances and transport infrastructure can make transfer unsafe.

4 South Africa

Severe malaria is common in some rural areas of South Africa. Rural doctors in these places develop expertise in managing malaria that their urban counterparts may not have – but there are no ICU facilities. A patient who is at risk of complications, especially renal failure, should be transferred, but the referral hospital is often reluctant to receive him/her, not being fully aware of the danger. Once acute renal failure has set in, transfer is logistically more difficult and dangerous.

5 Nigeria

MG, a 43 year old G4P3 alive, whose last confinement was 4 years ago, lost her husband 30 months ago. She was being seen by her GP because she claimed that her dead husband was tormenting her in her dreams for starting a new affair. She became pregnant from her boyfriend who insisted on marrying her. She has not attended the antenatal clinic this time around because she is sure that her dead husband has promised to harm her and the expected baby. She believes strongly that only prayers can save her.

Her church traditional birth attendant (TBA) has placed her on a diet and prayer sessions, insisting she deliver in the church, so that her dead husband could not harm her and the expected baby. She is term and has presented in labor with a 48-hour history of intermittent contractions and liquor drainage. Her presentation is face to pubes. The TBA cannot cope and does not want both her and the church to lose face. She has requested for her family physician to come to the church and deliver the baby. The family physician obliged her and delivered her in the church after augmentation.
Taking the needs of our patients into consideration saves lives.

6 Egypt

SM, a 63 year old farmer came from a village, 25 km away from the nearest town and was admitted to hospital with 2 days of very high fever, prostration, headache, severe body pain, abdominal pain with a few loose stools. Gave the history of working barefoot in the wet paddy fields the previous week. On examination he was mildly disoriented. Temp was 104 degrees F, and pulse 120/minute. There was mild neck stiffness. Conjunctival congestion was ++, BP was 110/80 mm Hg. There was diffuse muscle tenderness. Systemic examination revealed no other significant abnormalities. Investigations revealed mild polymorphonuclear leucocytosis, blood urea mildly elevated, urine albumin +, serum bilirubin mildly elevated, SGOT mildly elevated, CPK moderately elevated, chest x-ray – mild, diffuse pulmonary infiltrates. A clinical diagnosis of leptospirosis/septicemia was made.

Eight hours after his admission the patient developed severe hyperpyrexia, tachycardia, oliguria and auricular fibrillation. He was treated with Crystalline Penicillin 2 million units 4-hourly. 48 hours later he developed severe oliguria and went into acute renal failure. Leptospiral antibody was positive. He required five hemodialysis.

He is now fully recovered and has no residual stigmata. Final diagnosis was Leptospiral septicemia with carditis, alveolitis and acute renal failure.

Comments: Combating this requires community awareness of preventive health measures.

7 United States

CS is a 48 year-old female who was awakened with dull chest discomfort. It lasted about an hour. It was associated with nausea and sweating. She was left with some fatigue and a little short of breath. She thought about going to the emergency room but was afraid that the hospital bill would be too high and the wait too long. She had no health insurance. She did not call an ambulance. She smoked a cigarette, took an antacid and decided to lie down and rest before the children came home from school. Before her children returned, she died of an acute myocardial infarction.

CF is a 48 year-old female who awakened with dull chest discomfort. It lasted about an hour. It was associated with nausea and sweating. She was left with some fatigue and a little short of breath. She called 911 and an ambulance transported her to the rural hospital. EKG and blood tests confirmed her myocardial infarction. Advanced cardiac life support protocols were instituted. She was air-lifted to the nearest cardiac center where emergency coronary artery bypass graft was performed. She walked out of the hospital three days later.

Comments: The US has some of the most sophisticated health care available, yet, over 40 million citizens lack health insurance.

8 South Africa

A child with a cloacal anus (opening into the vagina) was sent to the pediatric surgeons in the tertiary care center, 5 hours from the rural hospital. They said they would operate at 6 months, but in the meantime we should dilate the anus twice weekly with a Hegar no. 8 dilator. This child lived a 2-hour walk from our most outlying fixed clinic, which was visited weekly by a doctor, and which did not have Hegar dilators. What to do? After much discussion with the mother, the compromise reached was that she would bring the child to the clinic every 2 weeks, and I would make sure that the doctor visiting on that day (every second clinic visit) would take the Hegar dilators from the operating theatre with him or her on the visit. The child was sent back at the right time to the surgeons and operated on successfully, none the wiser, apparently. Was this quality of care?
Wonca Working Party on Rural Practice

The WONCA working party consists of up to 20 members with at least two representatives from each of the world’s regions: Europe, Asia, Africa, North America, South America, Australasia/Pacific. These members are identified through WONCA member associations in each region with a requirement that each member be a rural practitioner or has a close association with rural practice. The Working Party is committed to achieving gender equity.

The chair of the Working Party is elected by the Working Party members for a three year term commencing in the year of each WONCA World Conference.

Vision

Health for all rural people around the world.

Mission

Improving rural health care around the world

Objectives

1. To facilitate communication between and networking of rural general practitioners around the world both individually and through rural family doctors’ organisations and interest groups
2. To represent rural family doctors within WONCA, to WONCA Council, Standing Committees, Working Parties and Member Organisations.
3. Through WONCA to liaise on rural health issues with the World Health Organisation and other relevant international bodies.
4. To collaborate with organisations of rural doctors
5. To address issues of importance to rural family doctors including developing effective:
   5.1. Rural health care systems with appropriate funding to meet community needs
   5.2. Integration of the family doctor into primary health care approaches for rural health care delivery
   5.3. Community participation including a multisectorial approach to health care and health promotion in rural communities
   5.4. Strategies to improve the status and health of rural women around the world
   5.5. Rural health workforce models.
   5.6. Recruitment, retention and support strategies for rural practitioners.
   5.7. Education and training for rural medical practice
   5.8. Research in rural health and rural practice including building research and development partnerships involving individuals and organisations in different countries

Members of The WONCA Working Party on Rural Practice

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