Canadian Journal of Nursing Research, 1999, Vol. 31, No. 1, 79–94

Happenings

Evidence That Informs Practice and Policy: The Role of Strategic Alliances at the Municipal, Provincial, and Federal Levels

Gina Bohn Browne

History

The McMaster System-Linked Research Unit on Health and Social Service Utilization was launched in 1991 to compare the effects and financial costs of innovative intersectoral, comprehensive services with the usual sectoral, fragmented approaches to serving vulnerable populations. The Unit's investigators were mandated to conduct research relevant to 16 health- and social-service entities, both "partner" and provider, in two regions of Ontario. The partners helped to plan the relevant research agenda. These included visiting nurses, family practices, and regional departments of social service and public health, as well as the District Health and Social Planning councils of the two regions, Hamilton-Wentworth and Halton (Browne, Watt, Roberts, Gafni, & Byrne, 1994, 1997).

Rationale for Strategic Alliances

In the area of community health information, there is an important distinction between the policy/planning environment and the research environment. In the former, the community requires access to information so that it can assess the need for and impact of health programs,

---

Gina Bohn Browne, R.N., Ph.D., is Founder and Director, Ontario System-Linked Research Unit on Health and Social Service Utilization, Professor, School of Nursing, and Associate Member, Clinical Epidemiology and Biostatistics, Faculties of Health Sciences and Social Sciences, McMaster University, Hamilton, Ontario.

but it often lacks the methodological and analytical skills necessary for valid interpretation of health data. In the research environment, on the other hand, those involved in activities around collecting and analyzing community health data are often ill-informed about the informational needs of policy-makers and planners. As a result, a vast amount of the health data they produce is irrelevant, inaccessible, or incomprehensible to planners and policy-makers. Synthesis and dissemination strategies are required to link policy/planning decisions with research evidence (Battista, 1989; Chalmer, 1993; Frank, 1992; Gerbarg & Horwitz, 1988; Goldberg et al., 1994; Goodman, 1989a, 1989b; Haynes, Sackett, Gray, Cook, & Guyatt, 1996; Lomas, 1990, 1997; Roberts, Browne, & Gafni, in press; Sacks, Berrier, Reitman, Ancon-Berk, & Chalmers, 1987; Zucker & Yusef, 1989). The existence of these two organizational cultures, each with its own value system and each lacking knowledge of the other, prevents:

- appropriate diffusion of community health information,
- development of health policy and planning based on knowledge (evidence information) from the target community and other jurisdictions, and
- effective information transfer between policy/planning and research.

It was reasoned that a research unit as a strategic alliance of investigators and a number of community health- and social-service providers, planners, and policy-makers would not only foster the production of relevant information but also facilitate its dissemination and use in decision-making.

Projects as Joint Ventures

The effectiveness and efficiency of proactive joint service ventures were tested among people in co-existing chronic circumstances such as chronic illness, poor adjustment, functional disability, school problems, poverty, joblessness, psychiatric disturbance, poor problem-solving ability, and charged with the care of cognitively impaired relatives. Some 45 projects, costing more than $9 million in peer-review funding over 8 years, have resulted in many co-ordinated, intersectoral interventions. Some of these have been aimed at improving the coping ability of the chronically ill, the functional capacity of elderly people being seen by family physicians, the school adjustment of children, the functional outcomes of disabled and chronically ill people receiving

community rehabilitation services, and, most recently, health and recreational services for mothers and children on welfare.

The innovative linked approach to service delivery co-ordinates services previously administered in a piecemeal way: those that had been delivered autonomously are now often co-ordinated with another service and delivered as part of a joint venture.

Through the strategic alliance, investigators and partners have learned that there can be more amid less; balance without compromised quality; simultaneous delivery without homogenization. Rigour can co-exist with relevance; impartiality can co-exist with advocacy. Agencies can participate in joint ventures without one threatening to take over the other. Research funding from third-party government and private sources can only enhance the enterprise and increase the number of services available to the public. "It can be otherwise."

Synthesis of Findings

We have learned that the majority of people with chronic illnesses lead full and independent lives; only a small proportion are poorly adjusted or become dependent on formal services. Similarly, the majority of people with chronic illness adjust without a change in their emotional status or their social role (Arpin, Fitch, Browne, & Corey, 1990; Cassileth et al., 1984). A small proportion of people with chronic poor health or in chronically poor social circumstances consume a large proportion of the formal services offered (Browne, Arpin, Corey, Fitch, & Gafni, 1990; Browne, Humphrey, Pallister, & Browne, 1982; Judd, Browne, & Craig, 1985).

Studies completed by the Unit have resulted in a number of important observations:

1. Emotional and social function (Arpin et al., 1990; Browne et al., 1982; Browne et al., 1990; Crook, Tunks, Rideout, & Browne, 1986; Judd et al., 1985), as well as attitudinal factors such as the individual's interpretation of being ill (Browne et al., 1988; Byrne et al., 1996; Crook, 1994; Hay, Browne, Roberts, & Jamieson, 1993; Weir, Browne, Tunks, Gafni, & Roberts, 1992), combined with social-support factors such as family function (Arpin et al.; Broadhead et al., 1983), explain 34% (Browne et al., 1982; Browne, Roberts, Weir, et al., 1993; Cassileth et al., 1984) to 57% of the variance in poor adjustment of the chronically ill to their situation.

2. Poor adjustment to chronic illness is, in turn, a leading individual characteristic related to the high use of all types of services (Browne, Roberts, Gafni, et al., 1993; Crook et al.).
3. When left untreated, poor adjustment is related to persistently high use of services (Arpin et al.; Browne, Gafni, Roberts, & Hoxby, 1995).
4. People who are high users of primary- and secondary-care services are high users of other services, and vice versa (Browne, Roberts, Weir, et al.; Roberts et al., 1995).
5. Proactive (health promotion) and treatment interventions in community-based health- and social-service agencies can improve or maintain the independence of the chronically ill in spite of disadvantages such as poverty or synergistic risks such as depression, while reducing expenditures on health services (Browne, Roberts, Gafni, et al., 1993; Browne, Roberts, Gafni, et al., in press).

Despite the diversity of information produced, the qualities of effectiveness and efficiency are evident. Services are more effective and less expensive when their direction is proactive, when their scope is pervasive, when their timing is preventive and predictable, when they are respectful and responsive to changing circumstances, and when they strengthen the factors that determine health.

Dissemination and the Merging of Cultures

Through the strategic alliance at a regional level, Unit information is produced and interpreted by the relevant stakeholders, who digest, mould, and apply the findings to suit their current regional circumstances. This process of dissemination, uptake, and digestion occurs at regional workshops involving the relevant stakeholders in the regional agency.

Increasingly more national and international attention is being given the synthesis evidence from research (e.g., Cochrane Reviews, Systematic Reviews) and its dissemination and use in planning and policy-making (Battista, 1989; Chalmer, 1993; Frank, 1992; Goldberg et al., 1994; Lomas, 1997).

The literature identifies three components necessary to the transfer of evidence from research to decision-making: (1) knowledge base — a body of identifiable and replicable research evidence; (2) institutional or organizational arrangement — actors or groups of actors involved in a policy issue; and (3) motivating values of the actors in bringing the issue to public attention (Fooks, 1989).

All three components are involved in the Unit. In a literature review, Lomas (1993) identifies four approaches to ensuring that research findings flow into decision-making: (1) the social-influences framework (Mittman, Tonesk, & Jacobson, 1992); (2) diffusion of innovations (Coleman, Katz, & Menzel, 1966; Dixon, 1990; Greer, 1988; Limerick & Cunnington, 1993; Rogers, 1983; Stocking, 1985); (3) adult-learning theory (Fox, Mazmanian, & Putnam, 1989; Gree & Eriksen, 1988); and (4) marketing (Gree & Eriksen; Kotler & Roberto, 1989).

1. The behaviour frameworks of decision-making underlying the social-influence perspective hold that the judgement and beliefs of peers play a major role in the evaluation of new information (Mittman et al.). This approach suggests that local norms and social modelling take precedence over acquisition and application of information by an isolated individual.
2. Diffusion research focuses on the way in which medical innovations actually find their way into health practices (Coleman et al.; Greer; Limerick & Cunnington; Rogers; Stocking). The investigators highlight: the importance of closed communities of providers and of product champions and opinion leaders (Dixon); the dynamic nature of diffusion, wherein modification and adaptation to local circumstances are part of a staged process of adoption (Stocking); and the need to isolate characteristics of an innovation and identify its "relative advantage," "compatibility," "complexity," "trialability," and "observability" (Rogers).
3. Adult-learning theory highlights the importance of personal motivation, rather than coercion, in fostering sustained behavioural change (Fox et al.). Education and learning help predispose decision-makers to consider change, or help reinforce change, but they rarely actually foster change (Gree & Eriksen).
4. Marketing approaches use social-marketing techniques to sell health promotion to the public (Kotler & Roberto). The principles of this approach derive from advertising and the literature on persuasive communication. Five attributes of communication are consistently important: the "source," the "channel" or medium of presentation, the content of the "message" itself, the "characteristics of the audience(s)," and the "setting" in which the message is received (Winkler, Lohr, & Brook, 1985).

Dissemination may take various forms: oral presentations and documents tailored to specific audiences; use of media (Domenghetti et al., 1988; Soumerai, Ross-Degnan, & Kahn, 1992); scientific publications;

presentations at scientific meetings; and introduction of research findings into the agency's ongoing quality-improvement activities (Burns et al., 1992; Kritchevsky & Simmons, 1991). In a literature review, Lomas (1993) found that research findings are likely to result in changes in provider behaviour at the local level when attention is paid to "the message and its source," "the communication channels," and "the implementation setting." Other authors have also reviewed this literature (Agency for Health Care Policy and Research, 1992; Davis, Thomson, Oxman, & Haynes, 1992; Lomas et al., 1991; Lomas & Haynes, 1988; Mittman et al., 1992; Reynolds & Chambers, 1992).

The research for "the message and its source" should be synthesized by a credible, influential body and packaged in a "user friendly" way, with the message justifying the need for change in comparison with existing approaches, norms, and concerns — that is, it should represent a form of persuasive communication. In addition, the implied change should be implementable within flexible parameters and within the means of the target group (Lomas, 1993).

Regarding "the communication channels," the existence and significance of the research findings should be communicated to a variety of providers, consumers, and policy-makers both within and outside the community; respected, influential local exemplars should be shown to be considering the findings or actually in the process of applying them (Lomas, 1993).

Finally, to ensure that the disseminated research findings are implemented, an opportunity should be presented to explore their implications in a personal encounter with either an influential colleague or a respected outside authority (Lomas et al., 1991). Application of the findings should not conflict with the economic or administrative incentives of the provider's working environment or with the expectations of consumers or the community (Lomas, 1993; Lomas et al.).

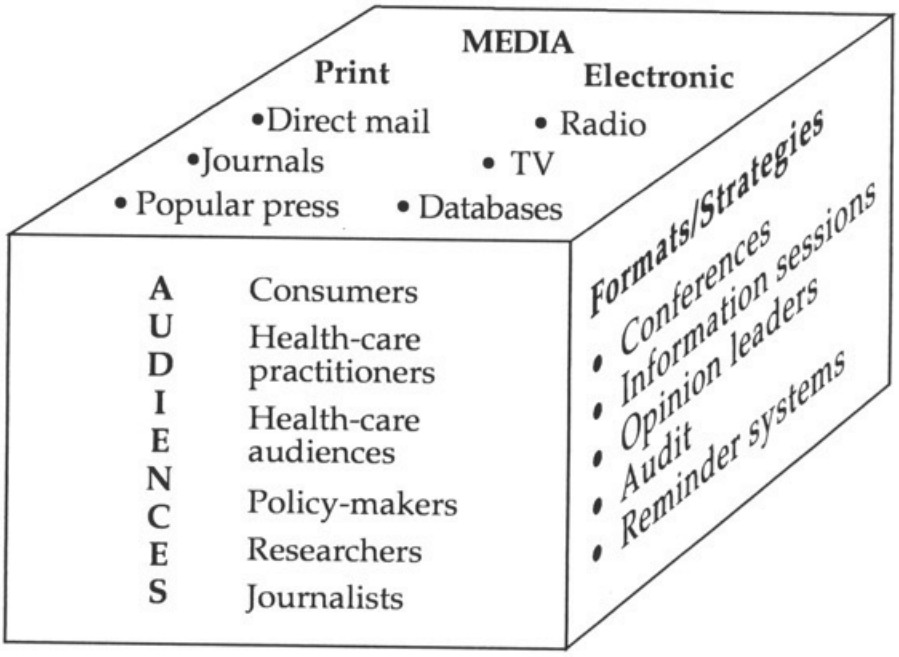
Utilization: Decision-Making in Planning and Policy Development

Research information is but one scientific input to the decision-making process. Results must be relevant to current questions, translated, interpreted, and synthesized with assessments of values/ideologies and institutional realities/logistics. The use of research information in policy-making is in part determined by how that information does or does not resonate with individual and group values, and the use of frameworks that do or do not facilitate that process of resonance. The central concepts of a framework for explaining use of research infor-

mation are elaborated elsewhere (Fooks, 1989), including in an analysis of how health-services research underlies much of Canada's health policy (Lomas, 1990, 1997).

Figure 1 illustrates three additional components of dissemination: the audience, the medium, and the channel.

Figure 1 *Audience, Medium, and Channel*



The key audiences are government decision-makers, health-care practitioners, and the receptor sites (government, national organizations) most likely to use the information. Multimedia and other formats should be matched to each audience.

Production, Dissemination, and Use of Information on More Effective Ways of Serving Single Parents and Children on Welfare: A Case Example

A public relations firm was hired to condense two of the Unit's project reports into a digestible message. They prepared the following communication:

> The System-Linked Research Unit on Health and Social Service Utilization of McMaster University, with major funding from Health Canada, published two studies in December 1998.

The studies, "When the Bough Breaks" and "Benefitting All the Beneficiaries" (Browne et al. [Browne, Byrne, Roberts, Gafni, & Watt, 1999, in press]), concluded that providing additional health and social services to mothers of social assistance families and making quality childcare and recreation services available pays for itself in a relatively short period, and produces more permanent beneficial outcomes in families at risk. The methodology of the two studies is more completely dealt with in the reports and their abstracts, but the research consisted of examining 765 households comprising 1,300 children aged 0–24. The research unit, headed by Dr. Gina Browne, made a number of key findings:

- Half of the heads of sole-support families suffer from mental health problems. Assisting clients with depression and other disorders gives them the self-esteem and confidence they need to contemplate exiting social assistance.
- Offering a full range of services to families — such as public health nurse visits for mothers and subsidized recreation for children — produced social assistance exit rates of 25% compared to 10% for those receiving no supplementary services.
- The cost of provision of additional public health nurses is more than offset by a reduction in inappropriate and more expensive medical services employed when the subjects sought out help for themselves; i.e., emergency visits, specialists, hospitalization.
- Offering recreational services helps psychologically disordered children achieve social, physical and academic competence at a rate equal to a non-disordered child. Recreation paid for itself through reduced use of social and health services — probation, child psychiatry, child psychology and social work.
- Even providing a partial menu of supplementary services produced greater social assistance exit rates compared to parents who did not receive the service:
  - subsidized recreation alone; 10% greater exit rate
  - public health visits alone; 12% greater exit rate
  - employment retraining alone; 10% greater exit rate

Program Description

The demonstration project consisted of two broad service dimensions used to augment employment retraining for single parents and their children on welfare.

- Increased visitation by public health nurses. Primarily the PHN's were asked to identify and deal with mental health issues — par-

ticularly depression experienced by mothers, but also behavioural and other health issues experiences by all family members.
- Provision of subsidized recreation programs to children and youths. The services were supplied through access to a local network of recreation providers, including the YMCA and other not-for-profit youth agencies.

The study worked with families having children of all ages, but the bulk of the study group consisted of children and young adults aged 6–21. As mentioned earlier, groups who received both recreation and increased access to public health nurses showed the most significant increase in exit rates from social services — up to 15% more. Enhanced access to a public health nurse alone yielded an increased exit rate of 12%.

Costing Considerations

The study concludes that a broad roll-out of the recommendations contained in Browne et al. [1999; Browne, Byrne, Roberts, et al., in press] would be revenue-neutral in the short to medium term and would produce, in the longer term, considerable savings to the social services system. Using the Regional Municipality of Hamilton-Wentworth as the example, the unit was able to project a rapid payback based on the following methodology:

Cost of Additional Services

The three key costing components referenced in the study are:
- Additional recreation co-ordinators who would stream children and young persons into age-appropriate recreation programs.
- The cost of providing those recreation programs.
- Increased access to public health nurses.

Using Hamilton-Wentworth as a model the caseload dimension was identified as follows:
- Total Social Services caseload
  - 6,000 sole support families
  - 12,000 children of all ages

Personnel requirements were identified as follows:
- Recreation coordinators = 15
- Caseload 6,000 = 400 per coordinator
- Public Health Nurses = 75
- 50% of 6,000 families have mental health issues
- 80% are willing to see a PHN = 2,400 cases
- Caseload = 32 per PHN.

Investment Required:

• 15 recreation co-ordinators @ $40,000	$ 600,000
• 75 Public Health Nurses @ $50,000	$ 3,750,000
• Recreation Placements 12,000 @ $170/yr	$ 2,040,000
Total Investment	$ 6,390,000

Payback of Investment

The following program payback calculation addresses payback to the social service system alone. It assumes the costs of Public Health Nurses are borne by the Social Services infrastructure — although it is more likely this cost would involve Health, possibly reimbursed through transfers. Further, in calculating the benefit to the system of social service exits, we have used the direct social assistance payment component only.

One Year Payback Model

Program Investment = $6,390,000
Annual saving per family exit = $12,000

Exits required to amortize investment = 533 families or 9% of the Hamilton-Wentworth social service caseload. As noted above, the study predicted exit rates of 20 to 25% utilizing the above supplementary services.

In the case of the health care system the study indicated that the cost of additional public health nurses was more than offset by decreases in the inappropriate use of more costly medical services such as emergency room visits, specialist referrals and other medical costs. There is a saving in the correctional system in the form of fewer police, court and probation interventions.

An unexpected but additional benefit comes from the screening process used to determine eligibility for additional public health nurse visits. Caseworkers are able to identify a stream of clients who possess requisite job-readiness for placement in Ontario Works (OW). This is particularly valuable as OW begins to interact with the private sector where there will be greater emphasis on job readiness in accepting placements. A fall provincial roll-out would require an investment of between $120 to $130 million.

Policy Implications

The study provides an encouraging approach in seeking more permanent solutions to systemic dependence on social services. Its underlying philosophy of redirecting direct payments into supplementary supports seems very much in keeping with other

initiatives presently underway or contemplated by the government. The investments required relative to the overall social service envelope are modest. The estimated payback interval is surprisingly short.

Dissemination and Utilization Activities

Unit meetings and workshops were used to help shape final interpretation of the data. This process served immediately to acknowledge the importance of social influence (Mittman et al., 1992) in acquisition and application of information, diffusion of innovations by closed communities of providers undergoing a staged process of adoption (Coleman et al., 1966; Dixon, 1990; Greer, 1988; Limerick & Cunnington, 1993; Rogers, 1983; Stocking, 1985), and adult learning theory (Fox et al., 1989; Gree & Eriksen, 1988), as well as the importance of persuasive education in precipitating behavioural change.

As partners and investigators discussed the results, there emerged new policy initiatives allowing social-service commissioners to apply findings in practice. Dissemination, digestion, and uptake occurred simultaneously throughout the Unit. Partner agencies advised provincial and regional decision-makers on social-marketing techniques, offering presentations to regional health and social-service committees. A provincial interministerial meeting was held to discuss the implications of the findings for the re-allocation of funding and to advise on current initiatives and regulations concerning single mothers on welfare.

An appropriate next step provincially would be simultaneous field trials of the Browne et al. methodology in a number of jurisdictions. The social-service commissioners recently examined the Browne report, and several have indicated their interest in rolling out trials in their communities. In some cases funding may come from the unconditional National Child Benefit being made available to municipalities. The province might want to contemplate accelerating this process by directing a portion of its share of the funding, especially to those communities where other pressing social-service needs may preclude the use of National Child Benefit funding for new initiatives.

The Ontario Report was disseminated federally because NHRDP and Children's Mental Health of Canada were the primary funders, along with the Hamilton Community Foundation. After dissemination via national television and journal venues, it is now being used to inform policy in the provinces of Nova Scotia and Prince Edward Island.

Considerable time, effort, networking skills, and an inclusive method of working — as well as scholarly publication — are required in carrying out these dissemination and utilization functions. Additional strategic alliances of professional associations and government offices are being used for the purpose of dissemination, with inclusion and ownership of findings offered in exchange. Participating organizations include the Sparrow Lake Alliance, the Canadian Council on Social Development, the National Council of Welfare, and the Ontario Association of Children's Mental Health Treatment Centres. Enhanced funding for dissemination, personnel, and activities is acknowledged in the 1996 NHRDP Program Funding update. In addition, funding is now available to test the comparative effects and expense of dissemination strategies on utilization by decision-makers (practitioners, policy-makers).

Dissemination strategies that foster utilization require strategic alliances and networking among organizations at the municipal, provincial, and national levels.

Pooled resources
makes everyone richer,
pooled information
makes everyone wiser,
nothing is lost in the dispersal.

– Ferguson (1980), p. 332

References

Agency for Health Care Policy and Research. (1992). *Annotated bibliography: Effective dissemination to health care practitioners and policy makers.* Washington: Author. AHCPR Pub. #92-0030.

Arpin, K., Fitch, M., Browne, G., & Corey, P. (1990). Prevalence and correlates of family dysfunction and poor adjustment to chronic illness in specialty clinics. *Journal of Clinical Epidemiology, 45*(4), 373–383.

Battista, R.N. (1989). Innovation and diffusion of health related technologies: A conceptual framework. *International Journal of Technology Assessment in Health Care, 5,* 227–248.

Broadhead, W.E., Kaplan, B., James, S.A., Wagner, E.H., Schoenbach, V.J., Grimson, R., Heyden, S., Tibblin, G., & Gehlbach, S.H. (1983). The epidemiological evidence for a relationship between social support and health. *American Journal of Epidemiology, 117,* 525.

Browne, G., Arpin, K., Corey, P., Fitch, M., & Gafni, A. (1990). Individual correlates of health service utilization and the cost of poor adjustment to chronic illness. *Medical Care, 18*(1), 43–58.

Browne, G., Byrne, C., Roberts, J., Gafni, A., & Watt, S. (1999). Benefiting all the beneficiaries of social assistance: The 2-year effects and expense of subsidized versus nonsubsidized quality child care and recreation. *National Academies of Practice Forum, 1*(2[April]), 131–142.

Browne, G., Byrne, C., Roberts, J., Gafni, A., & Watt, S. (in press). When the bough breaks: Provider-initiated comprehensive care is more effective and less expensive for sole support parents on social assistance. *Social Science & Medicine.*

Browne, G., Byrne, C., Roberts, J., Streiner, D., Fitch, M., Corey, P., & Arpin, K. (1988). The Meaning of Illness Questionnaire: Reliability and validity. *Nursing Research, 37,* 368–373.

Browne, G., Gafni, A., Roberts, J., & Hoxby, H. (1995). *Approach to the measurement of costs (expenditures) when evaluating the efficiency of health and social programmes.* System-Linked Research Unit on Health and Social Service Utilization, Working Paper #95-11, McMaster University, Hamilton, Ontario.

Browne, G., Humphrey, B., Pallister, R., & Browne, J. (1982). Prevalence and characteristics of frequent attenders in family practice. *Journal of Family Practice, 14,* 63–71.

Browne, G., Roberts, J., Gafni, A., Byrne, C., Weir, R., Majumdar, B., & Watt, S. (in press). Economic evaluations of community based care: Lessons from twelve studies in Ontario. *Journal of Evaluation in Clinical Practice.*

Browne, G., Roberts, J., Gafni, A., Weir, R., Watt, S., & Byrne, C. (1993). More effective and less expensive: Lessons from five studies examining community approaches to care. System-Linked Research Unit on Health and Social Service Utilization, Working Paper #93-11, McMaster University, Hamilton, Ontario.

Browne, G., Roberts, J., Weir, R., Gafni, A., Watt, S., & Byrne, C. (1993). The cost of poor adjustment to chronic illness: Lessons from three studies. *Health & Social Care, 2,* 85–93.

Browne, G., Watt, S., Roberts, J., Gafni, A., & Byrne, C. (1994). A system-linked research unit on health and social service utilization. *Canadian Journal of Nursing Research, 26*(3), 97–102.

Browne, G., Watt, S., Roberts, J., Gafni, A., & Byrne, C. (1997). Within our reach: Evidence-based practice resulting from alliances in health and social services. *Clinical Excellence for Nurse Practitioners, 1*(2), 127–140.

Burns, L., Denton, M., Goldfein, S., Warrick, L., Morenz, B., & Sales, B. (1992). The use of continuous quality improvement methods in the development and dissemination of medical practice guidelines. *Quality Review Bulletin, Dec.,* 434–439.

Byrne, C., Bell, B., Roberts, J., Browne, G., Jamieson, E., & Vandervlist, I. (1996). Problems of people who use primary care in Ontario, Canada: Implications for the complementary role of the nurse practitioner. *Clinical Excellence for Nurse Practitioners, 1*(1), 1–7.

Cassileth, B.R., Lusk, E.J., Strouse, T.B., Miller, D.S., Brown, L.L., Cross, P.A., & Tenaglia, A.N. (1984). Psychosocial status in chronic illness. *New England Journal of Medicine, 311,* 506–511.

Chalmer, J. (1993). The Cochrane Collaboration: Preparing, maintaining and disseminating systematic reviews of the effects of health care. *Annals of the New York Academy of Science, 703,* 156–165.

Coleman, J., Katz, E., & Menzel, H. (1966). *Medical innovation: A diffusion study.* Indianapolis: Bobbs-Merrill.

Crook, J. (1994). A longitudinal epidemiological study of injured workers: Prognostic indicators of work disability. Unpublished Ph.D. thesis, University of Toronto, Ontario.

Crook, J., Tunks, E., Rideout, E., & Browne, G. (1986). Epidemiologic comparisons of persistent pain sufferers in a specialty pain clinic and in the community. *Archives of Physical Medicine Rehabilitation, 67*(7), 451–455.

Davis, D., Thomson, M., Oxman, A., & Haynes, R. (1992). Evidence for the effectiveness of CME: A review of 50 randomized controlled trials. *Journal of the American Medical Association, 268,* 1111–1117.

Dixon, A. (1990). The evolution of clinical policies. *Medical Care, 28,* 201–220.

Domenghetti, G., Luraschi, P., Gutzwiller, F., Pedrinis, E., Casabianca, A., Spinelli, A., & Repetto, F. (1988). Effect of information campaign by the mass media on hysterectomy rates. *Lancet, 24*(31), 1470–1473.

Ferguson, M. (1980). *The Aquarian conspiracy: Personal and social transformation in the 1980s.* Los Angeles: Tarcher.

Fooks, C. (1989). *Research and the health policy process: Proceedings of the second annual health policy conference.* Hamilton, ON: Centre for Health Economics and Policy Analysis, McMaster University.

Fox, R., Mazmanian, P., & Putnam, R.W. (1989). *Changing and learning in the lives of physicians.* New York: Praeger.

Frank, J. (1992). Balancing relevance and excellence: Organizational responses to link research with decision making. *Social Science & Medicine, 35,* 1397–1404.

Gerbarg, Z.B., & Horwitz, R.I. (1988). Resolving conflicting trials: Guidelines for meta-analysis. *Journal of Clinical Epidemiology, 41*(5), 503–509.

Goldberg, H., Cummings, M., Steinberg, T., Ricci, E., Shannon, J., Soumerai, S., Millman, B., Eisenberg, J., & Heck, D. (1994). Deliberations on the dissemination of port products: Translating research findings into improved patient outcomes. *Medical Care, 32*(7[suppl]), JS90–JS110.

Goodman, S.N. (1989a). Meta-analysis and evidence. *Controlled Clinical Trials, 10,* 188–204.

Goodman, S.N. (1989b). Response to commentary of Zucker and Yusef. *Controlled Clinical Trials, 10,* 209–210.

Gree, L., & Eriksen, M. (1988). Behavioral determinants of preventive practices by physicians. *American Journal of Preventive Medicine, 4*(suppl), 101–107.

Greer, A.L. (1988). The state of the art vs. the state of the science: The diffusion of new medical technologies into practice. *International Journal of Technology Assessment in Health Care, 4,* 5–26.

Hay, I., Browne, G., Roberts, J., & Jamieson, E. (1993). Prospective care of elderly patients in family practice. Part 3: The prevalence of unrecognized treatable health concerns among the elderly, by age, gender and user group. System-Linked Research Unit on Health and Social Service Utilization, Working Paper #93-9, McMaster University, Hamilton, Ontario.

Haynes, B., Sackett, D., Gray, J., Cook, D., & Guyatt, G. (1996). Transferring evidence from research into practice: The role of clinical care research evidence in clinical decisions. *Evidenced Based Medicine, Nov/Dec.,* 196–197.

Judd, L., Browne, G., & Craig, H. (1985). The prevalence and correlates of poor psychosocial adjustment among patients with "COPD." *International Journal of Rehabilitation Research, 8,* 88.

Kotler, P., & Roberto, E. (1989). *Social marketing.* New York: Free Press.

Kritchevsky, S., & Simmons, B. (1991). Continuous quality improvement: Concepts and applications for physician care. *Journal of the American Medical Association, 266,* 1817–1823.

Limerick D., & Cunnington, B. (1993). *Managing new organizations: A blue-print for networks and strategic alliances.* San Francisco: Jossey-Bass.

Lomas, J. (1990). Finding audiences, changing beliefs: The structure of research use in Canadian health policy. *Journal of Health Politics, Policy & Law, 15*(3), 525–542.

Lomas, J. (1993). *Teaching old (and not so old) docs new tricks: Effective ways to implement research findings.* Hamilton, ON: Centre for Health Economics and Policy Analysis, McMaster University.

Lomas, J. (1997). *Improving research dissemination and uptake in the health sector: Beyond the sound of one hand clapping.* Hamilton, ON: Centre for Health Economics and Policy Analysis, McMaster University. Working Paper.

Lomas, J., Enkin, M., Anderson, G., Hannah, W., Vayda, E., & Singer, J. (1991). Opinion leaders versus audit and feedback to implement practice guidelines: Delivery after previous caesarean section. *Journal of the American Medical Association, 265,* 2202–2207.

Lomas, J., & Haynes, R. (1988). A taxonomy and critical review of tested strategies for the application of clinical practice recommendations: From "official" to "individual" clinical policy. *American Journal of Preventive Medicine,* 4(suppl), 77–97.

Mittman, B., Tonesk, X., & Jacobson, P. (1992). Implementing clinical practice guidelines: Social influence strategies and practitioner behaviour change. *Quality Review Bulletin, 12,* 413–422.

Reynolds, D.L., & Chambers, L.W. (1992). Healthy communications: Producing a health report *(Infowatch)* for monitoring and promoting health in local communities. *Canadian Journal of Public Health, 83*(4), 271–273.

Roberts, J., Bohn Browne, G., Streiner, D., Gafni, A., Pallister, R., Hoxby, H., Drummond-Young, M., LeGris, J., & Meichenbaum, D. (1995). Problem-

solving counselling or phone-call support for outpatients with chronic illness: Effective for whom? *Canadian Journal of Nursing Research, 27*(3), 111–137.

Roberts, J., Browne, G., & Gafni, A. (in press). Specialized continuing care models for persons with dementia: A systematic review of the research literature. *Canadian Journal on Aging.*

Rogers, E. (1983). *Diffusion of innovations.* New York: Free Press.

Sacks, H.S., Berrier, J., Reitman, K., Ancon-Berk, V.A., & Chalmers, T.C. (1987). Meta-analysis of randomized controlled trials. *New England Journal of Medicine, 316*(8), 450–455.

Shaughnessy, P., Crisler, K., Schlenker, R., & Arnold, A. (1997). Outcomes across the case continuum: Home health care. *Medical Care, 35*(11), NS115–NS123, and 35(12), 1225–1226.

Soumerai, S., Ross-Degnan, D., & Kahn, J. (1992). Effects of professional and media warnings about the association between aspirin use in children and Reye's syndome. *Milbank Quarterly, 70,* 155–182.

Stocking, B. (1985). *Initiative and inertia: Case studies in the NHS.* London: Nuffield Provincial Hospitals Trust.

Weir, R., Browne, G.B., Tunks, E., Gafni, A., & Roberts, J. (1992). A profile of users of specialty pain clinic services: Predictors of use and cost estimates. *Journal of Clinical Epidemiology, 45*(12), 1399–1415.

Winkler, J., Lohr, K., & Brook, R. (1985). Persuasive communication and medical technology assessment. *Archives of Internal Medicine, 145,* 314–317.

Zucker, D., & Yusef, S. (1989). The likelihood ratio versus the p value in meta-analysis: Where is the evidence? *Controlled Clinical Trials, 10,* 205–208.