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## Commentary on "Outcome Measurement in Speech-Language Pathology and Audiology" by Peter C. Coyte

### *Commentaires au sujet de "L'évaluation des résultats en orthophonie et en audiologie" par Peter C. Coyte*

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As a health care economist, Peter Coyte importantly points out to us that, like other health care professionals, we must now realize that, in response to increasing health care expenditures, there has been a general shift in treatment philosophy and consequently, also a shift in the ethics of providing health care. This problem falls within the domain of economics in so far as economics is concerned with resource allocation problems in a world where human wants are virtually limitless, but resources are in finite supply. Furthermore, it is the business of economists to evaluate not only costs, but also the benefits derived when scarce resources are allocated. Conflicts arise because it is costly for society to provide all treatments that are in the best health interests of all clients and because rationing appears to be unethical, with economic and ethical interests seeming to be opposed. This apparent conflict may be overcome if, instead of adopting a more traditional, narrow medical ethics view in the form of an individualistic ethical code, we adopt a more utilitarian approach in which the consequences for society as a whole are considered. It is claimed by Coyte that by shifting the ethical emphasis from the narrow interests of individuals to the broader interests of society as a whole, we all, health care economists and health care professionals, are provided with opportunities to develop sensible health care policies that are firmly grounded in both economics and ethics. Clearly, speech-language pathologists and audiologists must be informed of these matters if we are to participate in the formulation of health care policies that will impact upon our work.

Accepting (somewhat reluctantly) that we, as part of the community of health care providers, must participate in choosing among treatments and in deciding which clients will receive and which clients will not receive particular treatments, the need for good outcome measures of benefit from treatment must be recognized. By having good outcome measures of benefit from treatment, we may be able to demonstrate that our treatments are effective, and go on to use these measures to select the most cost-effective treatment when (and if) multiple treatment options are available. Coyte argues well for the use of the WHO classification scheme of impairment, disability, and handicap as a framework for outcomes research in communication disorders. Within this framework, reduction of communication handicap is presented as the ultimate goal for speech-language patholo-

gists and audiologists. According to Coyte, "handicap encompasses the direct and indirect impacts on the quality of life of clients with impairments or disabilities, as well as the associated impacts on their family and friends, caused by restrictions on (or burdens of) normal communication activities, whether self or externally imposed." Coyte is to be genuinely thanked for providing us with a timely tutorial on health care economics and ethics.

As a clinician, I would like to reflect on three issues that came to my mind as I read this important paper. Most clinicians, either rather subconsciously in the course of their day-to-day work or consciously as they reflect on trends and discuss them with their colleagues, realize that the nature of our practices is in a state of great flux. Our practices are undergoing a metamorphosis that is driven not only by changes in health care expenditures, but also by the rapid adoption of new diagnostic and rehabilitative technology, by the articulation of consumer demands for our services, by increasingly well-organized consumer associations (e.g., the Canadian Hard of Hearing Association), and by a general increase in the sophistication and maturity of clinicians that is related to changing professional demographics (age, experience, and level of training of professionals) and to the growth of our provincial and national associations. While we are in a state of flux, it is especially important to evaluate critically the success of older forms of practice and to consider carefully in what direction and by what means we want our practices to evolve. In his conclusions, Coyte urges us to actively participate in evaluating our practices so that professional autonomy will be safeguarded rather than threatened and so that we effect significant positive changes in patterns of practice. To fully participate in the enterprise of shaping our own professional destinies, while we pause to consider the health care economy issues outlined by Coyte, we also need to consider how our practices are being shaped in response to other forces. Specifically, I believe we need to come to some conclusion about the extent to which we choose to continue to engage in clinic-based practices as opposed to more ecological practices, the extent to which we will re-align our priorities from being clinician-driven to being consumer-driven, and the extent to which we allow innovation to be guided by outcome measures rather than by increasingly elaborated models of human com-

munication behavior. Our conclusions about these matters will affect the role that outcomes research will play in shaping our practices.

### Clinic-based Versus Ecological Approaches

In reading Coyte's paper, it is important not to be confused by the subtle transition from the term *communication impairment* to the term (*estimated*) *communication function*. For example, he states that, "The assessment process is concerned with the identification of communication impairment. This process yields estimates of defective function through the application of various basic and advanced evaluation techniques. While the assessment process provides estimates of defective communication function, it only yields estimates because 'true' function is unobserved." I fully agree that the classical clinical tools measure impairment and that, because there is only a weak relationship between these clinical measures of impairment and real-world communication function, estimates of communication function based on impairment measures are bound to be unsatisfactory. Furthermore, while Coyte states that the CPHI may be a superior tool for estimating disability because it satisfies the criteria of generality, validity, and reliability, even Demorest and Erdman (1987) point out that although the CPHI justifies claims of content-related validity, ultimately it still will be necessary to provide evidence of the test validity of the CPHI, for example, by determining how the self-reported measures correlate with behavioral measures. Coyte seems to imply that if assessment measures more accurately reflected true communication function, then we would have no need for additional outcome measures to evaluate handicap.

What I think we need to pause to consider, however, is whether clinic-based assessment is a fossil to be discarded, at least in some instances, with a move toward more ecological approaches to assessment using observational techniques. For example, we are already seeing more ecologically valid forms of assessment with in-situ evaluation of communication function of certain sub-populations, such as hearing and language impaired children in the classroom, and hearing and language impaired institutionalized elderly. In the case of these sub-populations, we cannot escape the necessity of including not only the impaired person in the evaluation, but also the relevant communication partners, the communication environment, and the kinds of messages to be communicated. This forces us to utilize fully a model of communication that we are only partially able to employ in clinic-based assessments. Such a model of communication defines communication as the purposeful relay of a message between a sender and a receiver in an environment (for example, see Erber, 1988). While Coyte appropriately works from the WHO model of impairment-disability-handicap and even though he mentions the necessity of considering handicap with respect to friends and family as well as the communication environment, I believe that we would be better

served in this enterprise if even a very simple model of communication were explicitly incorporated into the discussion. By incorporating a model of communication, we readily see the shortcomings of clinic-based evaluation: Impairment measures, at best, only tell about the state of the client as either sender or receiver of an unrealistic message in an unrealistic environment with a clinician as an atypical communication partner. It is not so much that we cannot better measure "true" communication function, but just that it is impossible to measure it much better in the clinic. Classrooms and residential institutions for the elderly are sufficiently well-structured situations that we have dared to begin to work on the real problem of assessing communication function, and not just the client's impairment, in those situations. I suspect that workplace situations, and perhaps even less structured social situations, will also be tackled successfully in time as we shift to the greater use of the field work techniques employed by social psychologists, social linguists, and linguistic anthropologists.

### Clinician-based Versus Client-based Approaches

In conjunction with the move from clinic-based to more ecological practices, I believe that it is natural to simultaneously move from clinician-based practice to client-based practice. In describing older medical models, Coyte writes of the traditional asymmetry of information between providers and clients in which there is an agency relationship concerned with provision of optimal health outcomes, for which providers are trained, rather than outcomes broadly defined, and in which clients are not equal partners in care. Later Coyte refers to, but does not put much emphasis on, the possible use of utility assessment, a measurement technique that elicits client preferences for various outcomes. I am left with the impression that Coyte considers the outcome measures he describes to exemplify a client-centered approach, but I do not think this is a sufficient step in the direction of client-centered practice. We may ask our clients to report their perceptions of their handicap, but in addition to asking them about outcome, I suggest that we need to seriously change our practices by emphasizing client report of communication function during assessment, prior to treatment, and perhaps even more importantly, prior to program development. Furthermore, while the administration of a handicap questionnaire on an individual client today may tell us about short-term benefits from treatment, we need other mechanisms to evaluate long-term benefit and benefit to society at large, and it seems to me that a closer partnership with consumer groups may help us acquire this important perspective. Why have we taken decades to arrive at the point where we are finally paying some attention to the consumers of our service? Indeed, this failing on our part is now a major concern at the Association level, where, for example, only in the last year or so there has been a formal dialogue, and not an easy one at that, between organizations such as the Canadian Hard of Hearing Association and the Canadian Association of Speech Language Pathologists and

Audiologists (see also Jane Little's CASLPA Presidential Address, 1992). At the outset, by asking our consumers when it is important for them to communicate better, I believe it will be possible for us to focus rapidly on innovations in the most crucial areas of practice. Furthermore, by enlisting consumers as more equal partners in practice, we may arrive at more stream-lined and cost-effective ways of accomplishing the shift from clinic-based to more ecological practice.

### Elaborated Models of Human Communication Behaviour

Coyte hints at other factors besides those evaluated with traditional clinic-based assessment procedures that may contribute to client well-being or lack of it (handicap). For example, he states that, "A more complete assessment that includes an estimate of disability also requires a review of each client's personality traits and communication strategies as well as an evaluation of the contribution of these variables to disability," and that, "While client well-being is dependent upon these variables, various other characteristics of the client and her/his communication environment influence well-being." While it is an important first step to recognize that the goal of practice ought to be the reduction of communication handicap, we need to elaborate a model of handicap, wherein the nature and contribution of other factors are specified. As Coyte claims, there is a legitimate need for outcome measures to be used to evaluate benefit from treatment: "...because this research program provides an important input to the evaluation of clinical practices within Speech-Language Pathology and Audiology, it provides a mechanism to reconfigure these practices to ensure that the services received by clients are delivered in a cost-effective manner, the evaluative goal of outcomes research." We should not forget that outcome measures may guide the selection of one program from a set of available alternative programs; however, outcome measures alone should not guide innovation in the development of new programs. We should guard against allowing outcome measures to promote a well-quantified version of an undesirable trial and error approach to program development—an approach that cannot be the most cost-effective way of developing new assessment and treatment practices, even if outcome measures do facilitate the evaluation of the cost-effectiveness of programs once they have been developed. Innovations in clinical practice will continue to rely on the refinement and the application of models of communication behaviour as we further our understanding of communication function gone wrong.

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Coyte appropriately and effectively frames the issue of allocation of scarce resources for Speech-Language Pathology and Audiology services as an ethical issue. He underscores that rationing of health care currently is taking place and always will exist, given the reality of finite resources. His review of the economic issues surrounding current health care expenditures further emphasizes that this ethical dilemma for service providers will only become more acute with time. Coyte challenges speech-language pathologists and audiologists to inform decision makers, through a vigorous program of outcomes research, about decisions that they will have to make regarding expenditures of limited fiscal resources. He argues that it is not only appropriate for professionals to rise to this challenge, but also "incumbent on them" (both financially and ethically) to do so. Coyte not only argues on ethical grounds that professionals should engage in more outcomes research, but also offers a mechanism for doing so by suggesting that the World Health Organization's classifications of impairment, disability, and handicap be used as a framework from which to organize that research. The focus of this commentary will be to extend and qualify some of the points raised in Coyte's carefully reasoned article.

Although Coyte's comments regarding the need for more evaluation methodologies of the economic and societal impact of the treatment outcomes obtained are well-taken, the impression created—that speech-language pathologists and audiologists will be resistant to such work proceeding—may be overstating the case. There are numerous indications of the interest of speech-language pathologists and audiologists in outcomes research. In a report to Congress on Developmental Language Disorders, Tallal (1988) stated that "systematic programmatic research is needed to address the major intervention assumptions and to generate principles for making informed clinical decisions" (p. 253). Within her presentation to a conference on treatment efficacy sponsored by the American-Speech-Language-Hearing Foundation in 1989, McReynolds (published 1990) noted several signs of increasing recognition within the professions of Speech-Language Pathology and Audiology of the importance of treatment efficacy research. Among these were an increase in the number of experimental studies evaluating treatments and treatment variables published in American Speech-Language-Hearing Association journals since 1975 (although that absolute number is admittedly still relatively low) and the results of a survey of clinicians' attitudes toward clinical research that she had conducted previously (Kelly & McReynolds, 1988). The results of this survey indicated that 93% of clinicians surveyed supported the need for evaluations of clinical interven-

tions. A growing interest in the investigation of predictor variables is a further example. At that same 1989 conference, Olswang (1990) concluded, "The recent focus of treatment efficacy research has been on trying to determine more precisely what aspects of the communication system we can change, and how we can most effectively and efficiently bring about the change" (p. 100).

If there is strong interest among clinicians in treatment outcomes research (although as acknowledged above that research may not necessarily be addressing the full set of economic and societal impact questions Coyte has posed), why are the absolute numbers of treatment outcomes investigations so low? What are the barriers to conducting such studies? Two major barriers seem evident. The first is clearly economic. One of the ironies in which allied health care providers are finding themselves is that the funds needed to support large-scale intervention studies that would enable them to address the pressures of limited fiscal resources responsibly (as suggested by Coyte) are not available due to those same limited fiscal resources. For example, allocations of funds to research agencies that may have been able to support such research efforts are being increasingly curtailed. A fiscal commitment on the part of service provider agencies in the form of staff release time to allow participation in research efforts also would be needed, again, at a time when service provider agencies are straining to respond to increasing population needs, sometimes also in the context of reduced staffing allocations.

The second barrier to large scale outcomes research relates to the fact that, in order to conduct outcome studies on the scale needed, outcome researchers and practising clinicians must work collaboratively, as Coyte indicates in the conclusion of his article. This can be another source of difficulties. The barriers to successful partnership in outcomes research include the potential differences in ethical perspectives as discussed by Coyte, but are not limited to these. Even if mutual commitments are achieved regarding research goals and methodologies, numerous differences between the operational styles of clinicians and researchers may present ongoing difficulties in conducting this type of research. As Banja (1992) indicated in a recent conference on models of the evaluation of treatment efficacy, which was jointly sponsored by the American Speech-Language-Hearing Association and the National Institute on Deafness and Other Communication Disorders, researchers tend to view subject participation as altruistic, the goal of the activity as scientific certainty, and the appropriate professional demeanour as one of professional detachment. He proposed that in contrast, clinicians tend to view clients as beneficiaries, the goal of the activity as a positive therapeutic outcome, and the appropriate professional demeanour as one of outcome investment. These differences not only can strain the ongoing working relationships required by such collaborative studies, but also can compromise the validity of claims of objectivity and rationality

that were among the original motivations for conducting the study.

Finally, Coyte's implication that data from outcomes research will influence the formulation of health care policy requires some qualification. Although a relationship does exist between data from outcome studies and the formulation of public policy, as Banja (1992) indicated, this relationship is indirect. Public policy is formulated on the basis of values. Empirical studies do not directly dictate what we ought to do. It is possible, therefore, for the same data to be interpreted as supportive of opposing courses of action, depending upon social values. Such social values are vested in concepts like "societal impact" and "handicap." In a society with multicultural and socioeconomic differences, such concepts may raise questions of bias. One example would be if communication rehabilitation is disproportionately provided for affluent professionals (whose livelihoods can be demonstrated to depend upon communication skills), compared to unskilled labourers (for whom such relationships may not be as apparent). Another example would be if communication rehabilitation is disproportionately provided for members of cultures that value communicative skills highly or that impose greater penalties for imperfections compared to members of cultures that do not share these views. Discussions of the bases upon which our society is comfortable rationing health care will be a debate regarding social values that will be only indirectly informed by outcomes data. This is not an argument against the importance of outcomes research and the exploration of constructs like "societal impact" and "handicap." It is only a qualification on their probable impact within social construct debates of health care policy.

T.M.G.

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