Introduction

This book is designed to serve as a practical guide to clinicians, health professionals, professional associations and health care planners in determining the inclusion or exclusion, content and frequency of a wide variety of preventive health interventions.

The Canadian Task Force on the Periodic Health Examination was established in September, 1976 by the Conference of Deputy Ministers of Health of the ten Canadian provinces. Its stated mandate was "to determine how the periodic health examination might enhance or protect the health of Canadians and to recommend a plan for a lifetime program of periodic health assessments for all persons living in Canada".

The original Task Force was chaired by Dr. Walter O. Spitzer. Its membership included epidemiologists, health care researchers and clinicians, both primary caregivers and specialists.

The Task Force spent the first two years of its existence developing a methodology for weighing the scientific evidence for and against the effectiveness of an intervention in the prevention of a disease or disorder. The methodology that evolved from this process included a bi-directional system for grading the strength of any recommendation for or against the inclusion of a particular maneuver in the periodic health examination. The Task Force recognized then, as it does now, that in clinical practice, caregivers dealing with individual patients, must make binary decisions ("do it" or "don't do it"). It also recognizes, however, that for many preventive interventions, the scientific evidence does not lend itself to such simple two-dimensional alternatives. What may be an advisable preventive intervention for one individual or population group may be totally inappropriate for another. The particular characteristic that distinguishes the Task Force methodology from traditional approaches to decision-making on prevention issues is that evidence takes precedence over consensus. What at first seemed like an inordinate amount of time spent developing a rigorous evidence-based methodology turned out (with the wisdom of hindsight) to have been time very well spent. Several years later, the Canadian Task Force methodology

was adopted with minimal modification by the U.S. Preventive Services Task Force. It has now been applied successfully by the two task forces to evaluate the preventability of over 200 conditions adversely affecting health, and has achieved international recognition as a basis for developing guidelines for clinical practice and public health policy.

Specific criteria have guided the selection of particular conditions for assessment by the Task Force. These have included the current burden of suffering (prevalence, morbidity and mortality) and the effectiveness and acceptability of the preventive maneuver.

The first Task Force report, published in 1979, reviewed the scientific evidence for preventability of 78 conditions and arrived at an important central recommendation, namely that the undefined "annual check-up" should be abandoned. In its stead, the Task Force recommended a series of age-specific "health protection packages" that could be implemented in the course of medical visits for other purposes.

Since 1979, the Canadian Task Force has published 9 updates, evaluating the preventability of 19 conditions not considered previously and revising 28 earlier reports in the light of new evidence. For many years the Canadian Task Force and its American counterpart, the U.S. Preventive Services Task Force have worked together in a close, constructive collaboration. The strength of this association has grown with the passing years. Each group has built on the virtues of the other, often adopting reviews and recommendations of the other body with little or no change when both were essentially in agreement, as was usually the case. Most meetings of either Task Force have been attended by representatives of the other. Further tangible evidence of the strength of this binational collaboration was the publication of the book, "Preventing Disease: Beyond the Rhetoric" (Springer-Verlag, New York, 1990), containing extensive scientific reviews on the preventability of over 40 conditions and detailed discussions of issues such as scientific admissibility of evidence, technology assessment, integration of preventive services in primary care and the role of counselling in prevention. Most contributors were members of the Canadian or U.S. Task Force, and some chapters were co-authored by members of the two bodies. The book was edited jointly by the Chairpersons of the Canadian and U.S. Task Forces.

The Canadian Guide to Clinical Preventive Health Care has also benefitted from the strength of the Canadian-U.S. collaboration. Both task forces have updated their analyses of the scientific evidence and recommendations concerning most conditions reviewed previously and have added reviews of additional conditions. Again, each group has borrowed freely from the work of the other to avoid unnecessary duplication of effort. Through a similar process, the U.S. Task Force is currently updating its 1989 Guide to Clinical Preventive Services.

Readers will be struck by the remarkably small number of conditions for which high quality (Type I) scientific evidence for effective prevention is available, and for which it can be stated that "there is *good* evidence that the condition be included in the context of the periodic health examinations" (an A Recommendation).

By the same token, clinicians may be frustrated by the large number of C Recommendations ("poor or insufficient evidence to exclude or include") – leaving the decision to be made on other grounds. In some instances, we have indicated the type of other considerations that may help decide whether a particular preventive maneuver should be performed. But the Task Force methodology by its very nature, does not permit us to go beyond what is supported by solid scientific evidence.

What some may consider an unduly conservative position on C Recommendations should, however, carry significant benefits for the future of preventive health care. Every equivocal recommendation automatically generates an agenda for future research, designed to establish or refute a positive benefit : harm ratio of a particular preventive intervention. Also, a C Recommendation can serve as a caution to those who have to decide which preventive measures justify public funding.

The largest number of A Recommendations apply to preventive maneuvers performed at the beginning of the life cycle, such as newborn screening for inherited metabolic disorders and congenital hypothyroidism and childhood immunizations. Generally speaking, the later in life a preventive maneuver is applied, the less dramatic its benefits are likely to be. Finally, many preventive interventions that have the potential to improve the health of the nation's citizens undoubtedly lie outside the context of the clinician-patient encounter – the

prevention of poverty, of violence and of pollution are striking examples.

Although cost-effectiveness analysis has not been a major focus of Task Force evaluations, the issue is inescapable in an era of acute concern over the need to control health care expenditures. Sooner or later, everyone involved in health care will have to face difficult choices between unrelated interventions. The mere demonstration that a particular intervention may offer *some* excess of benefit over harm may be insufficient justification for population-wide implementation, especially if the costs are high and the benefits modest. Unlike several preventive maneuvers applied in the early years of life, many preventive interventions aimed at adults represent add-on costs to the health care budget rather than the savings that some would have us believe. This is not to suggest that monetary costs should be the principal or the sole criterion for adoption or rejection of an effective preventive measure. Nevertheless, these are inescapable and serious considerations. When preventive maneuvers are costly, especially if applied widely, we will have to ask how great is the margin of good over harm?

We also underline the need for honest comprehensiveness in accounting for *all* varieties of benefit and harm associated with any preventive maneuver. Benefits may include improved quality or length of life, anxiety relieved or money saved. Possible adverse effects that must be taken into account include cost, "labelling" associated with false positive tests and the attendant anxiety generated, and, for some interventions the added anxiety induced by earlier diagnosis when such diagnosis does not lead to a better outcome. These issues are especially important when screening to identify conditions in the pre-symptomatic stage.

The mathematical terms used to express benefit or harm must not be misleading. A 30% reduction in mortality may sound very worthwhile, but in fact may be neither statistically nor clinically significant if the incidence and/or mortality of the condition is low to begin with. Caregivers, planners and the public must be told the odds in terms that are not misleading so that sensible, rational decisions can be made both for individuals and for society.

Task Force members have repeatedly had to confront the question of whether early detection of disease leads to a better outcome or merely advances the onset of anxiety and prolongs its duration for the patient and family. Examples abound: Is earlier diagnosis of Alzheimer's disease a provable benefit? Does detection of diabetes in the pre-symptomatic phase improve health prospects for the patient? Where various cancers are concerned, is it plausible (as we naturally *wish* to believe) that early detection regularly improves the probability of a successful response to treatment. It has been said, for instance, that more men die *with* prostate cancer than die *of* it. At this time of writing, we are still unsure whether the new and more sensitive detection methods for prostate cancer will lead to more good than harm. The history of preventive health care is replete with examples of interventions whose proponents failed to look before they leaped. These instances are important items on our agendas for future research.

In weighing the balance of good versus harm for any preventive intervention we must also look beyond the impact of the intervention on the target condition alone. The issue of preventing coronary artery disease is a case in point. Lowering of serum cholesterol may reduce the incidence and mortality of coronary heart disease. But if, as some studies have suggested, the intervention fails to reduce mortality from all causes, can it be recommended unhesitatingly as the road to better health. Every one of us must grow old, wither and die. We may be edging toward a time when society may have to choose the diseases from which they prefer to die. Prevention is not without its ethical dilemmas. Like it or not, choices may have to be made, on both monetary and ethical grounds, between preventive interventions for unrelated conditions. It is more than hypothetical to suggest that Canadians and others might soon have to decide whether they prefer to put their limited resources into smoking cessation or extensive mammography programs; into universal immunization against various infections or education programs on AIDS prevention or prevention of child maltreatment. Such comparisons and decisions can be counted on to generate a good deal of emotion. But if the comprehensive benefits and disadvantages of every program are weighed in the balance, the priorities should become much clearer and the decisions more acceptable. This is where the evidence-based approach of the Canadian and U.S. Task Forces

serves society best. By giving scientific evidence precedence over consensus, reason supersedes emotion when wise decisions have to be made.

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