TASK FORCE REPORT

The periodic health examination

CANADIAN TASK FORCE ON THE PERIODIC HEALTH EXAMINATION*

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The Canadian Task Force on the Periodic Health Examination was established in September 1976 to determine how the periodic health examination might enhance or protect the health of the population. The main challenge was to recommend a plan for a lifetime program of periodic health assessments for all persons living in Canada.

This report, which is derived from the formal submission of the task force to the Conference of Deputy Ministers of Health of Canada, summarizes the main aspects of the task force's work, particularly the methods, findings, conclusions and recommendations. The main components of the report are the following: a statement of the terms of reference; a description of criteria for the assessment of potentially preventable conditions and a classification of recommendations regarding inclusion or exclusion of consideration of these conditions in a periodic health examination; a set of age-related health protection packages; an enumeration of research priorities relating to the periodic health examination; a discussion of pertinent social and economic issues; a listing of the task force's overall recommendations; and, finally, some suggestions for a strategy for implementation of these recommendations.

This report is complemented by a monograph of supporting documents that detail the scientific basis for the task force's conclusions and recommendations; such evidence is summarized in this report. *Some supporting and illustrative material from the monograph has been added by the editors of the Journal to the formal submission of the task force; the paragraphs of additional material end with an asterisk.* Whereas the monograph contains a comprehensive bibliography of nearly 1500 citations, of which over 300 have been annotated, the present report contains 318 selected references, 314 of which are related to the conditions studied by the task force. In addition to using citations in the bibliography to develop evidence for particular conditions, the task force also relied on consultants' reports.

The task force was formed at the request of the Conference of Deputy Ministers of Health of Canada and through the coordination of the health services directorate, health services and promotion

branch, Department of National Health and Welfare. The members, who were representative of the appropriate health care disciplines, were nominated by the Canadian Medical Association, the Canadian Public Health Association, the College of Family Physicians of Canada, l'Association des médecins de langue française du Canada and the Royal College of Physicians and Surgeons of Canada. Aiding the members of the task force was an international group of consultants (see the appendix). This report on the periodic health examination, the result of deliberations over 3 years, therefore reflects not only an important aspect of health care today but also Canadian and international viewpoints.

This report is to government and not by government. The members of the task force were clinicians and scientists. In developing conclusions and recommendations our compelling concerns were clinical meaningfulness to our professional colleagues and scientific soundness. The Conference of Deputy Ministers gave us a free hand and reviewed the report only in its final form.

Background: the periodic health examination versus the routine annual check-up

Standards for safe and effective practice in the health field are constantly changing, but in the past three decades the forces of change have intensified. Today, because of the rapid growth of medical knowledge and the widening application of technology to medicine, there is a particular need for a continuing authoritative review of standards for both preventive and therapeutic strategies. Some of these strategies are subsumed under the general category of the periodic health examination.

The periodic health examination has two main goals: the prevention of specific disease and the promotion of health. To achieve these objectives the periodic health examination has traditionally included two main strategies: the "routine check-up" and immunization. Whereas the value of immunization in health protection has been established for many conditions, the value of the routine check-up in preventing disease is uncertain. Even so, both physicians and the public believe in the benefits of the routine check-up, and it has become a firmly established health service. Yet we often lack the evidence to prove that early diagnosis or presymptomatic detection of a given condition improves prognosis at an acceptable risk, and the assumptions underlying the periodic health examination must therefore be questioned.*

On what grounds can the annual physical examination be criticized? First, the content and the frequency of examinations, except for prenatal and well-child examinations, bear little relation to the needs of different age groups. Second, tests and procedures are included in the check-up examination despite scanty evidence for their effectiveness and efficacy as case-finding maneuvers. Third, the procedures are repeated once a year even though many could be performed equally effectively at longer intervals. And fourth, the annual check-up tends to be used mainly by more highly educated and affluent members of society, who are not necessarily in greatest need of an annual physical examination.

These objections have led many to recognize the need for an alternative to the routine annual check-up. The task force concluded that it would be better to identify preventable conditions of importance to each age group, and to assess the detection maneuvers and preventive interventions related to each condition. The task force's main recommendation is, therefore, that the routine annual check-up be abandoned in favour of a selective approach that is determined by a person's age and sex. The task force recommends a specific strategy comprising a lifetime health care plan based on a set of age- and sex-related health protection packages.

Although our main purpose was not to make recommendations leading to a reduction in costs, the plan we propose does have social and economic implications. These we have not ignored. Our recommendations must be regarded as *minimal* standards, and it would be a serious error if health insurance agencies, for example, ever considered them to be maximal standards instead. Many persons who are at special risk will require more than the interventions we have recommended. We do believe, however, that implementation of our recommendations would make more efficient the use of the country's resources. Increased efficiency could result not only from more selective use of tests and procedures but also from more effective deployment of the many different types of health professionals.

Terms of reference

The terms of reference within which the task force worked were relatively straightforward. They were as follows:

- To identify the main killing or disabling conditions, unhealthy states and unhealthy behaviours affecting Canadians and to determine which could possibly be prevented according to present knowledge.
- To consider evidence for the benefit of early detection or prevention of killing or disabling conditions, unhealthy states and unhealthy behaviours in the noncomplainant individual. (If early detection or prevention were judged to be beneficial, the particular entity would be termed preventable.)
- To define groups in the population at high risk for specific preventable conditions, states and behaviours.
- To design health protection "packages" shown to be effective — or, in special circumstances, desirable on other grounds — that should become part of periodic health examinations at defined ages and for defined population groups.
- To make recommendations on the procedures, content, frequency and appropriate providers of periodic health examinations and preventive interventions at defined ages and for defined population groups.
- To propose specific measures for evaluation of the effectiveness and efficiency of the recommended plan for periodic health examinations that would permit recurring reassessment and improvement.

Since most of the discussion on the periodic health examination relates to the prevention of specific diseases rather than the promotion of health, much of the task force's study concerned the prevention of disease. At the same time, the task force remained cognizant of the importance of health promotion.

Definitions and tables

Interpretation of the task force's work and of this report is facilitated by a clear understanding of the use of certain words and expressions. Key definitions are set forth in Table I (page 1203). Three other tables present different aspects of the conclusions and recommendations of the task force. Table II (page 1206) summarizes the effectiveness of prevention and treatment, the quality of evidence, the maneuvers and the recommendations relating to the conditions studied by the task force. Table III (page 1222) details 18 age- and sex-specific health protection packages based on the recommendations summarized in Table II. Table IV (see fold out) shows how the health protection packages can be displayed. The visual display in Table IV identifies, using colour coding, the classification for each recommendation; Table IV can be placed on a wall or notice board for easy reference. It should be used *in addition to, not instead of*, Tables IIB and III.

Criteria for assessment of potentially preventable conditions and for classifying recommendations for inclusion or exclusion of the conditions

The task force and its more than 40 consultants from many disciplines throughout Canada and other countries surveyed the relevant world literature to identify 128 potentially preventable conditions. Of these, more than 90 seemed to merit detailed study by the task force. In judging whether a specific condition should be considered in a periodic health examination three aspects were studied: (a) the current burden of mortality, morbidity and suffering caused by the condition; (b) the validity and acceptability of the maneuver used to identify risk or the early asymptomatic stage of the condition, or the maneuver used to prevent the condition; and (c) the effectiveness of the resulting intervention. In some instances, although the condition might be considered possibly preventable, the relatively light burden of suffering associated with it, its low frequency in Canada or the obvious absence of a suitable detection maneuver led us to omit the condition from detailed study.*

While the point of departure for the delineation of conditions was the official diagnostic coding system of the International Classification of Diseases, Adapted,[315] when we studied the conditions we reclassified them in a manner that conformed as closely as possible to the way the issues are confronted by primary care practitioners in daily practice. (The best example of this approach is a condition that was redesignated "progressive incapacity with ageing" — the constellation of clinical and social problems that affect the elderly, particularly those over the age of 75 years.) Usually redelineation of the problems resulted in the grouping of more conventional designations, but sometimes it resulted in the splitting of rubrics, as with diabetes mellitus in the adult, which was considered separately for pregnant women and for all other adults. In other words, we followed the principle that the conditions about which we reached decisions should be defined in a way that is clinically meaningful to the primary care practitioner. Thus, after we had assessed the evidence about some of the conditions, it proved clearly inappropriate to prepare specific recommendations for them.*

Current burden of suffering

The current burden of suffering was assessed by considering two factors: first, the impact of the particular condition on the individual, as assessed from the years of life lost, the amount of disability, the pain and discomfort, the cost of treatment and the effect on the individual's family; and, second, the impact on society, as assessed from the mortality, the morbidity and the cost of treatment.

Maneuver

The detection (or preventive) maneuver was evaluated by considering three sets of criteria: the risks and benefits; the sensitivity, specificity and predictive value; and the safety, simplicity, cost and acceptability to the patient.

Effectiveness of intervention

The effectiveness of intervention was graded according to the quality of the evidence obtained, as follows:

I: Evidence obtained from at least one properly randomized controlled trial.

II-1: Evidence obtained from well designed cohort or case–control analytic studies, preferably from more than one centre or research group.

II-2: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of the introduction of penicillin in the 1940s) could also be regarded as this type of evidence.

III: Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees.

Classification of recommendations

On the basis of these considerations the task force made a clear recommendation for each condition as to whether it should be specifically considered in a periodic health examination. Recommendations were classified as follows:

A: There is good evidence to support the recommendation that the condition be specifically considered in a periodic health examination.

B: There is fair evidence to support the recommendation that the condition be specifically considered in a periodic health examination.

C: There is poor evidence regarding the inclusion of the condition in a periodic health examination, and recommendations may be made on other grounds.

D: There is fair evidence to support the recommendation that the condition be excluded from consideration in a periodic health examination.

E: There is good evidence to support the recommendation that the condition be excluded from consideration in a periodic health examination.

Because the effectiveness of treatment or of the preventive measure for a condition was of such importance to the task force, the final recommendation for each condition relied heavily on our assessment of

the evidence for effectiveness of treatment. Thus, a class A recommendation was rarely made in the absence of grade I evidence regarding effectiveness of treatment or prevention. However, an exception to this rule occurred when a clinical intervention was shown, in grade II terms, to save the lives of victims of a previously universally fatal condition. For example, if malignant hypertension is left untreated, all affected patients will die; if treated, most will survive. Thus, grade II evidence is sufficient for a class A recommendation. Such examples are rare, however, and grade I evidence was required for the highest recommendation for most of the conditions.

For some of the conditions considered, the final recommendation was less certain than the evidence regarding the effectiveness of treatment. This was due to problems with either the detection maneuver for the condition or determinations regarding the burden of suffering caused by the condition. For example, we were impressed by the evidence for early treatment of carcinoma of the breast and of colorectal carcinoma, but for each of these conditions there are serious problems regarding the detection maneuver. The recommendation for each condition, therefore, encompasses all three dimensions assessed.

Conditions receiving a class C recommendation presented special problems to the task force. In essence, the available evidence did not aid us in deciding whether these conditions should be sought in a periodic health examination, and we were therefore least sure about our recommendations for them. When the evidence was inadequate we judged it best to err in the direction of prudence. The general guidelines used by the task force in making class C recommendations were as follows:

- Seek to minimize harm when adding or retaining a detection maneuver or intervention or when withdrawing a currently used maneuver.
- Enhance the credibility of all recommendations by advocating major changes to accepted practice only on strong substantiation of the need for such change.
- Avoid the possibility of unnecessarily labelling people as "diseased".
- Minimize the cost of health services by avoiding the use of expensive maneuvers of equivocal or unknown benefit.
- Focus on problems and conditions associated with a high burden of suffering for individuals and the population.
- Avoid overlooking the distinctive needs and problems of high-risk groups.

In addition to the final recommendation on each condition, comments were made, when applicable, according to three criteria: (a) the frequency of any proposed test or intervention; (b) the existence of high-risk groups of persons requiring more frequent examination; and (c) when the maneuver should be undertaken. With respect to the third criterion, a maneuver might be performed during an office visit for an unrelated complaint, during a health examination initiated by the patient or a health worker and unrelated to any specific complaint, or as part of a mass community-based program, or a combination.

The individual recommendations for each condition are summarized in Table II.

The health protection packages

We recommend that the annual check-up, as practised almost ritualistically for several decades in North America, be abandoned. We consider that the routine general annual check-up is nonspecific and casts a searching net far too broadly, particularly in the adult, is inefficient and, at times, is potentially harmful.*

The task force is convinced of the superiority of a selective periodic health examination over the routine annual check-up or even the routine frequent complete check-up. To continue advocating an essentially similar complete "work-up" for most adults from age 18 years onward is no longer justifiable from the study of all the evidence on what can and should be prevented. Nor does it make biologic sense that the same preventive measures should apply to a 23-year-old, ostensibly healthy, asymptomatic man, a 49-year-old postmenopausal woman and an 82-year-old man with nothing more than undetected maturity-onset diabetes. To use the same detection maneuvers in all these phases of life is to use an instrument far more blunt than our present state of knowledge justifies, scant as that knowledge is in many areas.

To take the place of the conventional routine approach, we have recommended a series of health protection packages as a selective approach in preventive health care that will help health professionals and the health service system concentrate on the identification and early management of conditions that are potentially preventable. This selective approach restricts detection maneuvers to those for which there is evidence of benefit through case finding or screening, that have promise of identifying health problems with adequate sensitivity, specificity and predictive value, that are acceptable to patients and that are of justifiable cost. The target conditions of interest, the detection maneuvers recommended and the best current estimates of the optimal frequency of the maneuvers are summarized in Tables III and IV.*

A health protection package comprises various detection maneuvers (such as blood pressure measurement and tests for occult blood in the stool) and interventions (such as immunization and counselling) that should be performed during a particular age span of a person's life or, at times, by a particular age. Therefore, the intervals between times that the packages should be implemented vary throughout a person's life. For instance, the intervals are only a few weeks apart in the first few months of life but become longer as the child grows older. Even in a period of life such as the prenatal state the frequency varies considerably within that period. For the nonpregnant adult up to age 74 years we have arbitrarily recommended a 5-year interval as the average. The choice is arbitrary because there is virtually no evidence about the optimal frequency of most of the components of the packages. However, studies in Canada and elsewhere have indicated that, in the average practice, 70% of the practice population see their doctor at least once in a 12-month period and 90% do so in a 5-year period.[316] For those aged 75 years or more the

increased frequency of disease and disability and the increased frequency of visits with health professionals led us to shorten the interval to 2 years.*

We recommend also that, with certain exceptions, the procedures be carried out as case finding rather than screening techniques; that is, they should be performed when the patient is attending for unrelated symptoms rather than for a specific preventive purpose. These visits provide an excellent opportunity for the selective use of detection maneuvers. The exceptions we have in mind are pregnant women, the very young and the very old; for these groups we think it is desirable to arrange a schedule of visits specifically for preventive purposes.

As the tables show, certain classic components of the routine annual check-up have been retained and others, such as electrocardiography, abdominal examination and rectal examination in the adult, have been deleted. Determination of the serum triglyceride concentration is not recommended, but early detection of hypertension is strongly emphasized. Certain preventive activities, such as mammography in screening for cancer of the breast in women, have been recommended in the context of rigorous evaluation because of the surrounding controversy and the potential harm. Counselling as a preventive activity when dangerous risk factors are found, such as smoking and heavy drinking, has been included with cautious optimism while we await evidence about its effectiveness. We did not feel that counselling about health risks was likely to be harmful if done judiciously by physicians and other primary health care practitioners.*

The summary of health protection packages in Table IV facilitates the development of a checklist or cumulative patient profile, to be kept in the practitioner's record and consulted briefly and efficiently each time the patient attends the physician's office for any reason, to help ensure continuity throughout life despite moves of the person or family or the physician. A cumulative patient profile helps the practitioner verify that all the detection maneuvers or interventions recommended for a given age have been done, or at least have been explicitly considered (there may be contraindications for certain components of the packages for a given patient in the clinical judgement of the physician or other professional).*

For some conditions we were aware of the existence of high-risk groups among Canadians and commented on how the packages might be altered. Our recommendations should not be interpreted as providing maximum benefit for the population, because we are concerned about high-risk groups and, particularly, children in families from economically and socially disadvantaged areas and the elderly in similar circumstances. These two subgroups often share the characteristic of not being their own advocates in matters of health.*

Social and economic implications

The health protection packages recommended in this report include primarily the measures demonstrated to reduce the prevalence or progression of specific diseases or disorders. We have emphasized the promotion and protection of health in noncomplainants, stressing abilities rather than disabilities, and we believe that the procedures we endorse should become part of the primary health care of all Canadians. We consider these proposals to be practical applications of strategies already endorsed by Canadian governments, particularly those set forth in "A New Perspective on the Health of Canadians".[317] These proposals do, however, have important social and economic implications that must be touched on, even though these implications are not directly referred to in the task force's terms of reference.*

In discarding the annual general check-up, we have recommended for each age group preventive and counselling maneuvers in addition to detection maneuvers to identify presymptomatic disorders or risk factors that are health hazards. The lifetime plan needs the backing of many affected groups to foster cooperation and participation and to permit assessment of its potential benefit. The public and the professions should be kept well informed about any changes, as our present proposals should be viewed as part of a dynamic program that will change with new knowledge.*

The best place to offer the services recommended in the plan will depend on local circumstances, and may include physicians' offices, hospitals, ambulatory care settings, schools, public health units, occupational health services and voluntary programs.*

The public

The public will have to understand why the routine annual check-up should be discarded and why different procedures should be introduced for different age groups. In particular, the discontinuation of certain expected detection maneuvers, such as electrocardiography in middle-aged men and abdominal palpation for most adults, will require explanations to patients that may be more time-consuming at first than actually doing the procedure. This information should be provided so as to enhance public support and acceptance. With new evidence of the effectiveness of preventive approaches, new approaches in health education that will convert information transfer to changed public behaviour must be studied with scientific rigour. Further, while we endorse emphasis on self-help as a desirable goal, and although we view its extension to mutual help as a complementary measure, we insist on research that will show that the required attitudinal changes and health behaviour in individuals and society can be attained. One example of an important attitudinal change that is necessary to ensure effective public involvement and participation in the implementation of our recommendations is the principle of stressing abilities rather than disabilities, as has been done successfully in the rehabilitation field.*

Dissemination of public information must be sustained, programs must be introduced to improve compliance with efficacious prevention and treatment, and the related evaluation procedures must be kept in force. At the same time we must recognize that substantial social adjustments take time and that obtaining the evidence for the effectiveness of all such approaches requires lengthy and complex research.*

Providers of health services

Many physicians were taught that the routine annual medical check-up was a valuable procedure; similarly, mass screening and batteries of diagnostic tests have had some support. This report calls for a reassessment of these views. The newer concepts of family practice, wherein a practitioner assumes responsibility for a defined population and consequently has an improved opportunity for case finding, must be better recognized. Age–sex registers, for instance, can be the mechanics to define those for whom primary care practitioners are responsible and so facilitate the changes we propose. The medical profession, individually and collectively, will have to be convinced that the new selective approach to prevention offers advantages and that the profession must have a role in it.*

Many of the procedures recommended herein can be carried out, at least in part, by allied health personnel. This would free physicians for activities that require their distinctive competence. A redelineated role for allied health professionals cannot be developed without organizational changes, which may take place within a practice or through support services provided by others in a variety of arrangements.*

Governments

As this report was commissioned by and submitted to the Conference of Deputy Ministers of Health of Canada, presumably governments will take steps to ensure a positive response from the professions. They will undoubtedly be asked to clarify a number of issues that relate to practice and the way it would be affected by the proposals in the report.*

Governments at all levels, and their agencies, should take a definite position on the philosophy, objectives and proposals of this report. If they endorse the report, they will be participants in the implied changes that will be sponsored for the public and the professions. They should be prepared to place a priority on the program, with a clear statement of public policy. Public policy in the health field is identified as social policy. For example, certain groups, such as children and the elderly, cannot exert their own rights or even take responsibility for self-help. Governments have a responsibility, and should be held accountable, for certain health protection measures, such as immunization in children and the availability of housing and food for persons over 75 years of age in accord with their functional status.*

Governments are in the best position, after consultation with the other participants (the public and the professions), to initiate and coordinate the dissemination of information, educational programs and the evaluation of the impact of these measures.*

Social costs and benefits

Maneuvers that result in the early detection of disease generate special social costs because they may label individuals as diseased or at special risk months or years earlier than would have occurred in the routine course of symptomatic care. Thus, the subsequent health benefits of early detection must be weighed against the consequences of such labelling. In the case of symptomless hypertension, labelling may lead to increased absenteeism among workers and decreased psychosocial function.[318] Furthermore, among persons in whom early detection and labelling fail to lead to better health outcomes than those that would have followed the later detection of symptomatic disease, the early detection — in terms of social costs and benefits — would have produced more harm than good.*

The task force did not deal directly with monetary issues. However, the approach and recommendations do have monetary implications. First, we focused on the important conditions for which effective treatment is likely to yield the most substantial cost benefits. Second, we sought to include mainly the conditions for which treatment is available and is effective in improving the quality of life and lessening the burden of disease. These conditions require treatment that is reflected in present health care costs. Third, we recommended restricting the periodic health examination to selected conditions in order to encourage a better and more productive use of health resources.*

Payments to health personnel

The adoption of the proposals in this report will affect payments to health personnel, particularly physicians who are remunerated through fees for service.*

If the selective approach is adopted and the health protection packages are accepted, payments for assessment of asymptomatic, ostensibly healthy persons might be limited to the circumstances outlined in the report. While the proportion of the examinations now listed as "complete physicals" or "general assessments" that would fit into this category is not known (and cannot be extracted from current records), it is believed to be quite large. It is reasonable to expect that paying agencies would take steps to identify examinations in this category and to define criteria that would limit payment to the procedures recommended in this report.*

We emphasize, however, that many of our recommendations regarding content and frequency of periodic health examinations are necessarily rather arbitrary. When scientifically acceptable data did not exist, we based our recommendations on common sense and currently accepted practices.*

Because certain groups and individuals are at high risk for some conditions, health insurance programs should continue to recognize the circumstances of such persons. It will be important to ensure that the families that have the greatest need for preventive intervention — the poor and the disadvantaged, many of whom may require much more frequent visits for preventive care than our schedule recommends for the "average" individual or family — continue to receive benefits.*

Moreover, when there is any doubt about the harm done by withdrawing payment for doing procedures under review (such as mammography), access to such services should not be prematurely barred.*

Under the present methods of payment, practitioners may be penalized for emphasizing prevention and health maintenance, and for employing allied health personnel to collaborate in providing these services. It is important to ensure that this situation be reversed. Counselling is proposed as the maneuver

in some conditions, and there is only limited provision in physician payment schedules for this purpose. However, many of the recommended interventions based on prevention and counselling lend themselves poorly to payment on an item-by-item basis, and hourly rates should replace fees for service in these cases.*

The proposals in this report deal with conditions that represent a heavy disease burden, and the intent is to diminish this burden by using current knowledge to identify effective methods of prevention and earlier cure. While the degree of benefit may be uncertain, there is a substantial potential for lowering the costs of health care.*

Prevention, or earlier identification of treatable conditions, will reduce costs to the degree that early treatment is carried out with a decreased requirement for institutional beds and highly trained personnel. Benefits will only occur if resources are adjusted to reflect this improved state. If the numbers and types of beds presently in the health care system are retained, and if the present numbers and types of personnel continue in the system, expenditures will not be reduced. The attainment of a more favourable relationship between social cost and social benefit can only occur with judicious trimming of resources.*

A realistic expectation, based on straightforward assumptions, is that the selective approach to periodic health examinations can reduce the amount spent annually for complete physical examinations in Canada, even with the addition of realistic fees and salaries for preventive activities and counselling.*

Thrust (investment) funds and incentives

This report calls for a program that will take time to mature and that offers long-range benefits rather than fast results. It requires an initial investment of funds to improve the quality of life and the health status of Canadians. These thrust (investment) funds should be separate from current operating costs, otherwise collaboration of those depending on operating budgets will be reluctantly given. Complex and continuing arrangements are needed to implement this report. Lack of support could seriously prejudice any possible success.*

Incentives are needed to encourage increased emphasis on prevention and health protection. To pursue a specific example considered earlier, governments should help define the patient populations of each primary care practitioner so that follow-up and surveillance can be changed from an overhead burden to a source of monetary and nonmonetary reward. In particular, those willing to concentrate on helping the socially and economically disadvantaged should be encouraged in every possible way through incentives. A similar investment of thrust funds should be identified with the research program.*

Recommendations of the task force

The task force's careful survey of the subject of the periodic health examination led to specific recommendations. We present six that we consider feasible.

1. The routine annual physical examination should be discarded in favour of a selective plan of health protection packages appropriate to the various health needs at the different stages of human life. Our proposals for the content and timing of these packages are based on evaluation of the best available scientific evidence and take into account practical considerations of implementation. For the prenatal, childhood and advanced age phases a specific age-related schedule is proposed; for the other age groups we recommend that the packages be offered in conjunction with occasions when the individual seeks medical care.

2. The various age- and sex-specific health protection packages proposed in this report are based on current (1979) knowledge and should be reviewed frequently and revised on the basis of new knowledge about current preventable problems.

3. The health protection packages should be reviewed by a permanent consulting group responsible to the Conference of Deputy Ministers of Health. The majority of the members of the group should be clinicians and scientists, with support of those experienced in health care policy design. The professionals responsible for implementing the plan under continual review should report annually to the Conference of Deputy Ministers of Health and their reports should be made public.

4. The provinces should review their health insurance plans, and possibly other payment arrangements, and introduce incentives designed to develop the selective approach to preventive medicine. The incentives should encourage primary care practices to participate and should provide fair remuneration for the interventions proposed in the health protection packages.

5. The provinces and the federal government should commission research that will help close many of the larger gaps in current knowledge identified by the task force. The priorities for research should be established by the permanent consulting group on the periodic health examination to provide focus and to make best use of the scarce research resources in this field. Both programs and projects should be supported to ensure continuity of research on prevention, which frequently requires lengthy studies to ascertain outcome.

6. The lifetime plan should be supported as a realistic, integrated strategy. The selective approach was developed as a lifetime plan intended to improve or protect health at all ages. Such an approach, however, does not imply that specific procedures, if they can be applied or rejected, will necessarily jeopardize the value or feasibility of the entire lifetime plan.

Implementation of recommendations

Despite our clear awareness of the importance of the six recommendations, our terms of reference did not clearly include the need to develop a strategy for implementation. We believe, however, that it is important to bring some important issues about implementation to the attention of those charged with the responsibility.

While we recognize that implementing the proposals contained in this report would rest with the provinces, we urge a compatible, nationwide approach so that people moving from one part of the country

to another could continue to participate in the lifetime health plan.

The active support and participation of the medical profession — and other professions and sectors, such as nursing and dentistry — are essential to success. This support should include the backing of national and provincial associations and licensing bodies.

The concept of health maintenance over a person's entire lifetime is important, and steps should be taken to develop a record containing a cumulative patient health protection profile that would move with the patient from practice to practice. Such records should be created by the professional associations whose members are involved in implementing the proposals. Governments should participate to ensure subsequent support for participating practices.

It will be important to identify cooperating practices and to recognize the participation of practitioners in the program in a tangible way. Monetary incentives should relate to the practice (to cover overhead and internal costs and consultation) and the execution of the proposals in the packages. For instance, incentives to encourage the introduction of age–sex registers (manual or computerized) for interested practices should be considered if an evaluation of the cost-effectiveness of such methods demonstrates clear advantages to professionals and to the public. With respect to the task force's definition of the packages, health care professionals should recognize that the task force has had no intention of impeding the provision of additional services if the physician considers this necessary for individuals or groups at high risk. These exceptional circumstances, if they are reasonable, should be recognized in the incentives program. Incentives will also encourage the use of ancillary personnel.

A program for dissemination of information about the selective approach should have continuity and not be a "one-shot" effort. Such a program, designed to inform the public, the providers and governments, should be an important part of the implementation.

As the success of the program depends on public understanding and support, on professional acceptance and participation, and on government initiatives and support, methods should be developed in each province to ensure continuing and effective participation by representatives of the public, the health service professions and government authorities.

While it was encouraging to be able to extract, through literature review and consultation with experts, sufficient information on which to base a practical program, many circumstances require further study. It is important to accord research programs high priority, and continuing effort is needed to shorten the lag time in implementing results. Such a sustained research effort should be a prominent part of the implementation process.

Finally, this report is limited to periodic health examinations as a selective approach to preventive medicine that is provided to individuals through personal health service. A similar approach is needed for environmental and occupational health and for preventive measures aimed at improving community health.

There will inevitably be disagreement about what we have included in and excluded from the packages. We expect vigorous debate and we hope that these exchanges, together with new research, will help those responsible for keeping the guidelines under continuing review.

Research priorities

The paucity of class A and E recommendations in the report indicates the lack of strong experimental evidence for or against most of the measures that we have considered. Most of our recommendations have been of class C and have been based on grade III evidence (professional consensus or the opinion of experts). Even evidence from cohort studies and case–control studies was infrequently found, and many of the reports concerned uncontrolled series and at times were just case reports. Opinion or evidence from nonexperimental studies is a much less satisfactory basis for recommendations.

Certain problems with interpretation of evidence are obvious. First, volunteers for early detection programs are often destined for favourable outcomes even before they participate. Second, the apparent prolongation of life from early detection may indicate only that the presence of a particular disease is known for a longer period than when the disease is identified in a symptomatic individual. Third, the periodic health examination is more likely to detect slowly progressive conditions than rapidly progressive ones. Persons whose conditions are detected in this way will, therefore, survive longer than those whose conditions are detected after symptomatic presentation, even if the treatment they receive is not efficacious.

Research deserves priority in seven areas:

- *Efficacy.* This area is reflected in the question: Does early detection of the disease or risk factor lead to a better outcome *among those who follow the subsequent health advice*?
- *Effectiveness.* The relevant question is: Does early detection of a condition or risk factor benefit *those to whom it is offered*?
- *Efficiency.* The relevant question is: Is the effective maneuver being made available to those who could benefit from it with optimal use of resources?
- *Frequency of performance of detection maneuvers.* If today's detection test for curable cancer gives a negative result, how soon should the test be repeated? We need to learn much more about the elements of this decision (incidence of disease in the interval between attempts at case finding, cost, yield etc.) as well as the natural history of each of the pertinent disorders. Furthermore, we must recognize that the appropriate intervals between detection attempts may differ widely from disorder to disorder and that this may affect the further evolution of the health protection packages.
- *Effectiveness of health promotion, education and counselling.* The recommendations we have made on health promotion, education and health counselling were made with prudence and cautious optimism. Interventions aimed at altering unhealthy states of behaviours such as smoking or the failure to use seatbelts have been evalu-

ated insufficiently, and most of the research lacks rigour. Since the targets for health education and counselling are so important as determinants of disability, ill health and untimely death, evaluation of their effectiveness deserves the utmost in attainable rigour.

● *Effects of labelling people with disease rubrics.* Labelling persons with a diagnosis either prematurely or inappropriately affects some people unfavourably. Also, it is suggested without firm evidence that the families of labelled individuals, particularly the labelled person's children, often suffer the effects of labelling. We neither know enough about such effects nor have given sufficient attention to an assessment of the benefits and disadvantages of identifying persons with a given disease presymptomatically. We also know little about the risks of mislabelling through "false-positive" results, particularly when the specificity of the detection maneuver is low.

● *Performance characteristics of detection maneuvers.* Whether it is an enquiry, an examination procedure, a complete "work-up", or a specific test or a system, such as multiphasic screening, it is clear that we need to know much more about the sensitivity, specificity, predictive value, acceptance and cost of detection maneuvers. It is also important to assess carefully the extent to which one detection maneuver can be substituted for another, especially when pertinent technologic procedures are rapidly being developed. Even in dentistry, which traditionally and appropriately has emphasized prevention and oral health maintenance, the scientific evidence justifying the recommendations to include dental care in the health protection packages is slender except in regard to the topical administration of fluoride. As was true for the medical conditions, we could find no satisfactory evidence about the optimal frequency of the various interventions, yet intensive school and public health educational programs proclaim the desirability of yearly or 6-monthly visits to the dentist or to dental allied health professionals. We were encouraged by the extent to which the experts who advised us on preventive dental practice agreed that there is a great need for research in this area.

Successful research on the periodic health examination must take account of five prerequisites: (a) the availability of well trained personnel; (b) the adequacy of research funds; (c) the availability of standard measures of health status and health utility; (d) the continuation of growth in our knowledge of human biology and the natural history of disease; and (e) a continuing overall assessment of the state of knowledge of preventive medicine.

Table I—Definitions of terms

Beneficial maneuver: an intervention from which more good than harm accrues in its application.

Case finding: detection of disease by means of tests or procedures that are undertaken by health workers on patients who are consulting for unrelated symptoms. (This means that the "case finder" is responsible for the investigation and follow-up of high-risk persons identified in this way.)

Early detection: identification of a disorder before symptoms or signs become apparent to the individual or the family.

Effectiveness: the attribute of an intervention or maneuver that results in more good than harm to those to whom it is offered.

Efficacy: the attribute of an intervention or maneuver that results in more good than harm to those who accept and comply with the intervention and subsequent treatment.

Efficiency: the attribute of an effective intervention or maneuver when it is made available to those who can benefit from it with optimal use of resources.

Groups at high risk for preventable conditions, states and behaviours: groups in which the frequency of such conditions can be demonstrated to be higher than in the general population.

Health protection packages: sets of procedures that are particularly applicable to the periodic health examination at certain ages and in certain "at-risk" groups.

Healthy/unhealthy states and behaviours: states and behaviours in which there is a relatively low/high probability of development of a killing or disabling condition.

Killing or disabling conditions: diseases or disorders that cause untimely death or severe permanent disability.

Mandatory checkpoints: stages of life at which a health examination is recommended for the whole or part of the population (e.g., birth, school entry and retirement).

Noncomplainant: an individual who undergoes a health examination without having specific complaints or concerns about his or her health.

Periodic health examination: a group of tasks designed either to determine the risk of subsequent disease or to identify disease in its early, symptomless state. Simple interventions, such as injections, and recommendations for the prevention of disease or the maintenance of health, are covered by the definition.

Preventable condition, state or behaviour: a condition that has been demonstrated by well designed clinical investigations to be either completely preventable or detectable at a stage when its progress or the impact of its consequences can be favourably affected by treatment.

Prevention: any intervention that reduces the likelihood that a disease or disorder will affect an individual or that interrupts or slows the progress of the disorder. Primary prevention reduces the likelihood of a disease or disorder developing in a person. Secondary prevention interrupts or minimizes the progress of a disease or irreversible damage from a disease by early detection and treatment. Tertiary prevention slows the progress of the disease and reduces the resultant disability through treatment of established disease.

Providers: physicians and other health workers or a health provision system (such as an industrial health clinic) that, as individuals or groups, provide the health examinations considered in this report.

Screening procedures: procedures by which unselected populations are classified into two groups — one with a high probability of being affected by killing or disabling conditions, the other with a low probability.

Table IIA—Alphabetical listing of conditions reviewed by the task force (the number assigned the condition in Table IIB is indicated in parenthesis)

- Accidents (other than motor vehicle accidents) (71)
- Acute gastroenteritis of childhood (19)
- Alcohol consumption (37)
- Alpha-l-antitrypsin deficiency (47)
- Ankylosing spondylitis (73)
- Bacteriuria in pregnancy (66)
- Blood group incompatibility in pregnancy (62)
- Cancer of the bladder (54)
- Cancer of the breast (48)
- Cancer of the cervix (49)
- Cancer of the colon and rectum (50)
- Cancer of the lung (bronchogenic carcinoma) (51)
- Cancer of the oral cavity (57)
- Cancer of the prostate (53)
- Cancer of the skin (55)
- Cancer of the stomach (52)
- Chlamydial genital infection (26)
- Cholelithiasis (76)
- Chronic bronchitis (46)
- Congenital dislocation of the hip (7)
- Congenital syphilis (3)
- Consequences in children of parents with alcoholism (14)
- Cystic fibrosis (9)
- Dental caries (67)
- Diabetes mellitus in the nonpregnant adult (58)
- Down's syndrome (13)
- Duchenne muscular dystrophy (10)
- Family dysfunction and marital and sexual problems (34)
- Gonorrhea (24)
- Hearing impairment (40)
- Hemolytic streptococcal infection resulting in acute glomerulonephritis or acute rheumatic fever (20)
- Hemorrhagic disease of the newborn (2)
- Herpesvirus type 2 and cytomegalovirus infection (27)
- Hodgkin's disease (56)
- Hyperactivity and learning disability (33)
- Hyperlipidemia (42)
- Hypertension (43)
- Hyperthyroidism (59)
- Hypothyroidism (60)
- Immunizable conditions related to international travel (smallpox, cholera, yellow fever, typhus, plague, typhoid and hepatitis) (16)
- Immunizable infectious diseases (15)
- Interventricular septal defect (11)
- Iron-deficiency anemia (45)
- Low birth weight (28)
- Malnutrition (29)
- Menopause (61)
- Motor vehicle accidents (70)
- Neonatal hypothyroidism (5)
- Neural tube defect (8)
- Obesity in childhood (30)
- Ophthalmia neonatorum (gonococcal) (4)
- Orthodontic conditions (68)
- Other immunizable conditions (18)
- Parasitic diseases, excluding toxoplasmosis (23)
- Parenting problems, including child abuse and neglect (32)
- Periodontal disease (69)
- Peptic ulcer (75)
- Phenylketonuria (6)
- Postnatal asphyxia (1)
- Preterm labour (64)
- Primary open-angle glaucoma (41)
- Problems of physical growth (hormonal) (31)
- Progressive incapacity with ageing (78)
- Psychiatric disorders (affective disorders and suicide) (35)
- Recurrent spontaneous abortion (65)
- Refractive defects (39)
- Retirement distress (77)
- Rheumatoid arthritis (74)
- Scoliosis (72)
- Smoking (36)
- Strabismus (38)
- Syphilis (25)
- Tay-Sachs disease (12)
- Thalassemia (44)
- Toxoplasmosis (22)
- Tuberculosis (17)
- Urinary tract infection (21)
- Unwanted teenage pregnancy (63)

Table IIB summarizes the quality of scientific evidence and the recommendations for 78 conditions assessed by the task force. The classifications of quality of evidence and of recommendations are given in the text of this report, and the evidence leading to the recommendations is outlined in the monograph. The availability of consultants' reports is noted by an asterisk against the names of some conditions. The note "Research priority", which appears under the heading "Recommendations and comments" for some conditions, is explained in Table IIC.

Table IIB - Summary of effectiveness of prevention and treatment, quality of evidence, maneuvers and recommendations relating to 78 conditions studied by the task force

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver	Recommendations and comments	
1. Postnatal asphyxia*[1-5]	Prevention: fair	II-1	Detection during pregnancy of causative factors suggesting high risk Fetal monitoring during labour	B	
2. Hemorrhagic disease of the newborn[6,7]	Prevention: effective	II-2	Vitamin K_1, 1 mg after birth	B	
3. Congenital syphilis*[8-10]	Prevention: usually secondary since mother infected Treatment: penicillin before 16th week usually effective	II-2	Serologic testing	B A	For general population For high-risk group

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver		Recommendations and comments
4. Ophthalmia neonatorum (gonococcal)*[11-13]	Prevention: effective	II-2	Instillation of 1% silver nitrate solution into each eye	A	
5. Neonatal hypothyroidism*[14-17]	Efficacy of screening for case finding is excellent Diagnosis in infancy improves mental prognosis Treatment: highly effective	II-1	Thyroxine testing with filter paper in all neonates; ancillary spot testing for thyroid stimulating hormone if necessary	A	Recall serum thyroxine tests may be used as aids when necessary High-risk group: infants whose mothers have taken iodides, propylthiouracil or radioactive iodine
6. Phenylketonuria*[18-21]	Screening and treatment are highly effective if performed between 4 and 21 days of life	II-1	For detection, microbiologic inhibition (Guthrie) and fluorometric tests; may need repeating and supplementing with paper chromatography	A	Since screening of newborns under 4 days of age may result in under-referral, a second test is justifiable
7. Congenital dislocation of hip*[22-26]	Screening and/or case finding detects cases in time to allow corrective treatment	II-2	Clinical examination (flexion, abduction and Ortolani maneuver); confirmation by roentgenography	B	
8. Neural tube defect*[18,27-31]	Primary prevention may imply abortion; hard to assess effectiveness and efficacy In pregnancies tested, about 80% of open neural tube defects are detected	II-1	Maternal serum alpha-fetoprotein testing: with elevated values, supplement with ultrasonography and amniocentesis	B	Screening should be available to pregnant women on request if parents understand that confirmation of result may require ultrasonography and amniocentesis, and are prepared to accept therapeutic abortion if the fetus is affected
9. Cystic fibrosis*[18,32-37]	Prevention secondary or tertiary Early treatment increases survival and is associated with better prognosis	II-2	Detection: iontophoresis sweat test on at least two occasions, and observation for clinical signs	D B	For general population For high-risk group: siblings of cystic fibrosis patients
10. Duchenne muscular dystrophy (DMD)*[38-40]	Prevention: probably effective in identified carriers Treatment: poor	III	Serum creatine phosphokinase determination	C B	For general population For high-risk group: female relatives of DMD patients
11. Interventricular septal defect (VSD)*[41-44]	Treatment by surgical closure of VSD effective	II-2	History taking and clinical examination; chest roentgenography, echocardiography and cardiac catheterization for confirmation	B	High-risk factors: positive family history, certain chromosomal disorders, rubella during pregnancy, low birth weight, prematurity and diabetic mother
12. Tay-Sachs disease[18,45]	Prevention: effective Treatment: ineffective	II-1	Measurement of resistance of serum hexosaminidase to heat inactivation; amniocentesis as confirmatory test	D B	For general population For high-risk group; includes Ashkenazi Jews
13. Down's syndrome*[18,46,47]	Prevention: effective, but identification of women at risk is relatively poor Treatment: none	II-1	Elicit information on patient's history; if positive, amniocentesis only if parents are prepared to accept abortion when it is indicated	D B	For general population For high-risk groups: parents with translocation of chromosome 21 or family history of Down's syndrome and mothers over 35 years of age
14. Consequences in children of parents with alcoholism[48-51]	Counselling effective in reducing both amount of drinking in pregnant women and morbidity in their offspring	II-2	Counselling to reduce alcohol intake; contraception for alcoholic, sexually active women; abortion, if acceptable, for pregnant women at high risk	B	

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver		Recommendations and comments
15. Immunizable infectious diseases					
Diphtheria	Prevention: good	I	Immunization of persons in good health	A	Adult dose after 6 years of age
Measles[52-56]	Prevention: good	I	Immunization of persons in good health	A	Vaccine is contraindicated in children with a history of convulsions and pregnant women; caution is advised in persons allergic to egg protein
Mumps[57]	Prevention: good	I	Immunization of persons in good health	A	Vaccine is contraindicated in pregnant women, persons allergic to neomycin and persons suffering from altered immune states; caution is advised in persons allergic to egg protein
Pertussis[58-60]	Prevention: good	I	Immunization of persons in good health	A	Contraindication: family or personal history of convulsions Immunization not recommended after 6 years of age
Poliomyelitis[61,62]	Prevention: good	I	Immunization of persons in good health	A	In certain circumstances (e.g., immunodeficiency) it is better to use inactivated poliomyelitis vaccine (Salk) instead of oral vaccine (Sabin) Contraindications: treatment with corticosteroids or antileukemic drugs, neurologic conditions such as multiple sclerosis, and oropharyngeal surgery or dental extraction in the previous 2 weeks or the following 2 weeks Immunization of pregnant women is not contraindicated if protection is required
Rubella[53,54,63]	Prevention: good	I	Immunization of children and/or girls and women at risk	A	Contraindication: pregnancy
Tetanus[64,65]	Prevention: good	I	Immunization of persons in good health	A	Multiple inoculations at short intervals may provoke anaphylactic reaction
16. Immunizable conditions related to international travel (smallpox, cholera, yellow fever, typhus, plague, typhoid and hepatitis)[66,67]	Immunization is an effective preventive measure, but not equally so for all conditions	I	Immunization (note contraindications); gamma globulin against hepatitis	E A	For general population For travellers Contraindications: - typhus vaccine: allergy to eggs - yellow fever vaccine: allergy to eggs or altered immune status - smallpox vaccine: skin disorder or altered immune status
17. Tuberculosis[68-71]	Prevention: bacille Calmette-Guérin (BCG) vaccine effective Treatment: chemoprophylaxis prevents development in those infected	I	BCG immunization and chemoprophylaxis	E A	For general population For high-risk group

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver		Recommendations and comments
18. Other immunizable conditions					
Influenza[72,73]	Vaccine is efficacious	I	Immunization	E A	For general population For high-risk groups: persons 65 years of age or older and those with chronic debilitating disease Contraindication: allergy to egg protein
Pneumococcal pneumonia[74]	Vaccine is efficacious against 80% of pneumococcal infections	I	Immunization	E A	For general population For high-risk groups: persons with chronic debilitating illness, sickle-cell anemia or asplenia Do not revaccinate before 3 years Vaccine should be avoided in children younger than 2 years; effects on the fetus are unknown
Meningococcal meningitis[75,76]	Vaccine is efficacious; immunity ranges from a few months to 3 years depending on vaccine	I	Immunization	E A	For general population For high-risk groups: military recruits and travellers in infected countries Serogroup C vaccine should be avoided in children younger than 2 years; effects of vaccine on the fetus are unknown
19. Acute gastroenteritis of childhood*[77-79]	Prevention: anecdotal evidence for efficacy of breast-feeding Treatment: effective in infants whose condition is not otherwise adversely affected	II-2	Not yet available	D	Serious illness usually occurs in infants under 2 years of age; its expression tends to be influenced by socio-economic as well as nutritional factors
20. Hemolytic streptococcal infection resulting in acute glomerulo-nephritis or acute rheumatic fever*[80,81]	Secondary prevention effective in communities under certain conditions	General population screening: I High-risk groups: III	Elicit history of exposure to beta-hemolytic streptococcal infection; throat culture	E C	For general population For high-risk groups
21. Urinary tract infection*[82-90]	Screening detects some cases, but yield is low Reinfection often follows treatment	II-2	Urinalysis	D	
22. Toxoplasmosis*[91-94]	Hygienic measures effective	III	Elicit information on exposure; serologic testing for Toxoplasma gondii and counselling on hygiene for high-risk group	C A	For general population For high-risk group: nonimmune pregnant women who keep a cat at home or eat raw meat
23. Parasitic diseases, excluding toxoplasmosis*[95,96]	Hygienic measures effective	III	No specific maneuver	C	For high-risk group (in Canada those at high risk for infection with Ascaris lumbricoides and Giardia lamblia may include Indians and Inuit)
24. Gonorrhea[97-99]	Prevention: limited effectiveness Treatment: efficacious if given early	II-2	Smears of cervix and urethra and cultures of cervical and urethral secretions and of first-voided urine	D A A	For general population Pregnant women should be examined For high-risk group: persons with a history of multiple sexual partners

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver		Recommendations and comments
25. Syphilis[100]	Prevention: limited effectiveness Treatment: efficacious if given early	II-2	Various blood tests	D A A	For general population For pregnant women For high-risk group: persons with a history of multiple sexual partners
26. Chlamydial genital infection[101-103]	Prevention: difficult Treatment: antibiotics	III	Blood tests, cultures and smears	C	
27. Herpesvirus type 2 and cytomegalovirus infection[104,105]	Prevention: unknown Treatment: none efficacious	III	Blood tests, cultures and microscopy	C	
28. Low birth weight[106-110]	Prevention: adequate diet by mother (especially proteins) efficacious; abstinence from smoking advised	II-2	Ensure adequacy of protein and energy intake; advise mother to abstain from or reduce smoking	B	
29. Malnutrition*[111-120]	Prevention: uncertain Treatment: fair	III	History taking, height and weight measurement and other anthropometric measurements and determination of serum protein concentration for high-risk groups	C B	For general population For high-risk groups: adolescent girls, pregnant women, those nursing for unusually long periods, food "faddists", and Indians and Inuit
30. Obesity in childhood*[121-124]	Evidence for effectiveness of prevention and treatment is lacking	III	Accurate serial measurements of height and weight	C	
31. Problems of physical growth (hormonal)*[125-129]	Treatment: effective and efficacious for short stature due to hypothyroidism, hypopituitarism and congenital adrenal hyperplasia	II-2	Serial measurements of height and weight and other anthropometric measurements	B	Research priority
32. Parenting problems, including child abuse and neglect*[130-139]	Intervention may be effective in preventing child abuse	Child abuse: II-1 Parenting: III	Appropriate history taking, counselling and assessment of parent-child interaction	A C	Child abuse Parenting Research priority
33. Hyperactivity and learning disability*[140-142]	Prevention: ineffective Treatment: efficacious for hyperactivity	Hyperactivity: I Learning disability: II-2	Assess parent-child interaction; preschool educational screening	C	For both conditions Research priority
34. Family dysfunction and marital and sexual problems*[143-146]	Uncertain	III	History taking and counselling	C	Research priority
35. Psychiatric disorders (affective disorders and suicide)*[147-152]	For psychotic affective disorders treatment is efficacious For neurotic or reactive affective disorders treatment is of uncertain efficacy For suicide the value of prevention has not been demonstrated	I II-1 II-2	No predictive maneuver is available	D	For all conditions Research priority
36. Smoking[153-155]	Counselling efficacious rather than effective	Efficacy: II-1 and II-2 Effectiveness: III	History taking and counselling	C	High-risk groups: women taking oral contraceptives, diabetics, individuals with hypertension and/or elevated blood cholesterol concentration, persons with evidence of disease attributable to smoking, workers in asbestos, silica, uranium, coal and grain industries Research priority

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver		Recommendations and comments
37. Alcohol consumption*[51,156-159]	Prevention: not yet effective Treatment: efficacious to some degree	III	History taking and counselling	C	Research priority
38. Strabismus[160,161]	Secondary prevention of amblyopia effective	II-1	Simple inspection and cover-uncover test	B	Research priority
39. Refractive defects[162,163]	Prevention: not possible Treatment: effective	III	Visual acuity testing	C	Research priority
40. Hearing impairment[164,165]	Prevention: ineffective Treatment: some benefits from remedial therapy	II-2	History taking and clinical examination	B	Individuals who warrant further study include: - infants whose parents suspect a defect, who fail to react to a novel noise outside their field of vision or who manifest decreased or absent "babbling" - children with retarded or defective speech development - adults with hardness of hearing or who fail to respond to the normal spoken voice Research priority
41. Primary open-angle glaucoma*[166-173]	Early treatment prevents symptomatic visual loss	III	Funduscopy, visual field testing and measurement of intraocular pressure	C	Research priority
42. Hyperlipidemia*[174-177]	Unclear	III	Taking family history in young males and determining serum cholesterol and triglyceride concentrations	C	
43. Hypertension[178,179]	Prevention: not possible Treatment: efficacious	I	Blood pressure measurement; evaluation and treatment as appropriate	A	Labelling to be avoided unless treatment and prolonged follow-up are planned
44. Thalassemia*[180-183]	Unknown	III	History taking, laboratory screening and counselling	C B	For general population For Asian, African and Mediterranean people of parenting age Since assistance to carriers is not available, members of the high-risk group should be asked whether they want to participate in screening, having first been informed of the pertinent facts Research priority
45. Iron-deficiency anemia*[184-186]	Prevention: possible Treatment: will raise hemoglobin concentration but value unclear	III	Determination of blood hemoglobin concentration	C	High-risk groups: premature babies, babies born of a multiple pregnancy or an iron-deficient woman, and persons in low socioeconomic circumstances
46. Chronic bronchitis*[154,187-190]	Prevention: abstinence from smoking is associated with absence or lower frequency of airway obstruction and low respiratory disease mortality Treatment: cessation of smoking is effective	II-1	Encourage abstinence from smoking	D	
47. Alpha-1-antitrypsin deficiency*[191-193]	Prevention and treatment: unclear	II-1	Encourage abstinence from smoking	D	

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver		Recommendations and comments
48. Cancer of the breast[194-197]	Mortality in women aged 50 to 59 years is lowered by early detection through physical examination and mammography	I	For women aged 50 to 59 years: annual mammography and physical examination of the breast	A	Research priority
49. Cancer of the cervix[198]	Prevention and treatment: efficacious	II-1	Papanicolaou smear	B	For all sexually active women at least every 3 years up to age 35 and every 5 years thereafter For high-risk groups (early age of sexual activity and/or variety of sexual partners) smears should be taken at least annually Research priority
50. Cancer of the colon and rectum*[199-201]	Prevention: fair, some evidence of secondary prevention through screening using sigmoidoscopy Treatment: fair with early surgical treatment in presymptomatic phase	I and II-2	Testing stool for occult blood	B	High-risk groups: persons with history of colitis, familial polyposis or villous adenomas, or family history of cancer of the colon Research priority
51. Cancer of the lung (bronchogenic carcinoma)*[188,202-204]	Prevention: abstinence from smoking efficacious	II-1	None validated	D	Research priority
52. Cancer of the stomach[205-209]	Some evidence of value of secondary prevention through screening using endoscopy, photofluorography and gastric cytologic analysis	III	Photofluorography, saline wash and cytologic examination of gastric contents, and examination of stool for occult blood	C	High-risk region: Newfoundland
53. Cancer of the prostate*[210-217]	Prevention and treatment: no evidence of efficaciousness at present	III	Digital palpation per rectum, prostatic massage and cytologic examination, and determination of serum acid phosphatase concentration	C	
54. Cancer of the bladder[218]	Prevention: unknown Treatment: fair	III II-1	Cytologic analysis of urine	D B	For general population For high-risk groups: workers occupationally exposed to bladder carcinogens, and smokers
55. Cancer of the skin[219-222]	Prevention: unknown Treatment: effective	II-1	Counselling and inspection	D B	For general population For high-risk groups: outdoor workers and those in contact with polycyclic aromatic hydrocarbons
56. Hodgkin's disease[223,224]	Prevention: ineffective Treatment: relatively effective	III	Physical examination and roentgenography	C	
57. Cancer of the oral cavity*[225-228]	Prevention: unknown; early detection is possible, but effect on outcome is unclear Treatment: depends on site of lesion	Early detection: III Effectiveness of ensuing treatment: II-1	Visual examination	C	Males and all smokers are at increased risk Early diagnosis is enhanced by the toluidine blue test, cytologic examination and/or biopsy when indicated by clinical inspection
58. Diabetes mellitus in the nonpregnant adult*[158,229-236]	Treatment of asymptomatic persons has not been shown to be effective in controlling complications	I; II-2	Urine testing for glucose, and fasting and postcibal blood glucose tests	D B	For general population High-risk factors: family history of diabetes, abnormalities associated with pregnancy and physical abnormalities such as circulatory dysfunction and frank vascular impairment

←For prescribing information see page 1262

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver		Recommendations and comments
59. Hyperthyroidism*[237,238]	Treatment is effective, but therapy in asymptomatic phase is not necessary	II-2	Measurement of serum thyroxine and triiodothyronine concentrations and thyroid binding globulin saturation index	D	
60. Hypothyroidism*[238,239]	Treatment of clinical hypothyroidism is effective	III	Clinical examination in postmenopausal women	C	Research priority
61. Menopause[240-242]	Prevention: impractical since women in whom vasomotor symptoms will develop cannot be identified Treatment (of hot flushes, vaginal dryness and mood disturbances): effective	III	Measurement of plasma estradiol concentration	C	
62. Blood group incompatibility in pregnancy*[243-245]	Both high when Rh hyperimmune globulin given to Rh-negative women	I	Blood group and antibody tests	A	
63. Unwanted teenage pregnancy[246,248]	Little evidence for prevention of first pregnancy Good evidence for prevention of second pregnancy	III I	Counselling on contraceptive use and follow-up; abortion	C A	
64. Preterm labour[249,250]	For incompetence of cervix: fair For other causes of preterm labour: further study required	II-2 III	Elicit previous history; cerclage of cervix Elicit previous history; pharmacologic treatment; delivery in specialized centre	B C	Research priority
65. Recurrent spontaneous abortion[249,251]	Potential causative factors are identifiable in 30% of cases, but not all are amenable to treatment	III	Investigation to detect possible cause of problem	C	
66. Bacteriuria in pregnancy*[252-256]	Secondary and tertiary prevention: effective Treatment: long-term effectiveness not established	II-1	Microbiologic examination of urine	B	
67. Dental caries*[227,257-265]	Both prevention and treatment give excellent results	Topical application of fluoride: I Water fluoridation: II-1 Dietary counselling: II-2 Secondary preventive measures: III Regular check-up: III Frequency of check-up: III	Visual and tactile examination, and roentgenography if appropriate Fluoride application for residents of areas without fluoridated water supply Water fluoridation	C A	Those at highest risk are between ages 3 and 20 years Research priority
68. Orthodontic conditions*[227,266-268]	Both prevention and treatment can give excellent results	Early detection: II-2 Treatment: II-2	Oral examination and roentgenography	B	Research priority
69. Periodontal disease*[227,261,269,270]	Prevention and treatment: unclear	Efficacy of preventive measures: III Frequency of examination: III	Visual and tactile examination and encouragement of daily oral hygiene	C	Research priority

Condition and reference	Effectiveness of prevention and treatment	Quality of evidence	Maneuver		Recommendations and comments
70. Motor vehicle accidents*[271-274]	Unclear	III	Control of underlying medical conditions, counselling of disabled, and encouraging the use of seat belts by all drivers and passengers	C	Special attention should be given to persons at high risk because of physical defects or impairment
71. Accidents (other than motor vehicle accidents)[275-278]	No evidence available	Cannot be assessed	Use periodic health examinations scheduled for other purposes to encourage safety in the home and the community	C	An important proportion of accidents occur at home, where young children and the elderly are particularly at risk
72. Scoliosis*[279-282]	Unknown	III	Physical inspection in schools by nurses	C	
73. Ankylosing spondylitis[283]	Both are of limited effectiveness	III	Detection of individuals with HLA-B27 antigen	C	
74. Rheumatoid arthritis[284-287]	Prevention: unknown Treatment: fair	III	Unclear	C	
75. Peptic ulcer[288-293]	Prevention: no available means Treatment: efficacious	II-2	Elicit history	D	
76. Cholelithiasis*[294-302]	Chenodeoxycholic acid is efficacious for primary and secondary prevention for limited periods; its effectiveness has not been studied	III	For primary prevention, duodenal drainage of bile (limited use); for secondary prevention, oral cholecystography ± duodenal drainage	C	
77. Retirement distress*[303-309]	Prevention: effective but largely psychologic	III	Final counselling examination before retirement as part of a series of periodic health examinations throughout adulthood	C	
78. Progressive incapacity with ageing*[310-314]	Detection of undeclared health conditions and correction of unsuitable living conditions: effective	II-2	Enquiry by health care professional into physical, psychologic and social competence, conducted in the home, with organ-system enquiry and further action if indicated	B	

Table IIC - Basis for research priority*

Condition	Priority	Comments
31. Problems of physical growth (hormonal)	+ +	To determine the optimal frequency of height and weight measurements
32. Parenting problems, including child abuse and neglect	+ + +	To identify specific maneuvers that would be effective in assessing and treating parenting problems

Condition	Priority	Comments
33. Hyperactivity and learning disability	+ +	To determine the specificity and sensitivity of the measuring instruments, the groups at risk for learning disorders and the effectiveness of early intervention for these groups
34. Family dysfunction and marital and sexual problems	+	To determine the effectiveness of prevention
35. Psychiatric disorders (affective disorders and suicide)	+	To determine if enquiry during a periodic health examination about depression and suicidal ideas followed by treatment of identified cases does more good than harm
36. Smoking	+	To establish the effectiveness of counselling as a means of cessation and, if not satisfactory, research into better methods of compliance with abstinence from smoking
37. Alcohol consumption	+	To determine if counselling has any effect in reducing alcohol consumption
38. Strabismus	+	To determine the optimal frequency of examination
39. Refractive defects	+ +	To determine the value of presymptomatic detection of refractive defects
40. Hearing impairment	+	To determine the value of early detection and of detection strategies available
41. Primary open-angle glaucoma	+ +	To obtain data on the epidemiology and natural history of the various types of glaucoma, the effectiveness of treatment and the magnitude of long-term compliance among patients, the ability of various types of health care providers to perform optic disc examinations, and the appropriate screening periods for different age groups and persons with and without ocular hypertension
44. Thalassemia	+	To determine the effectiveness of prevention
48. Cancer of the breast	+ + +	To determine the separate benefits of mammography and clinical examination, and the optimal frequency of these maneuvers, the benefits in age groups other than the sixth decade, especially the fifth, the risk of harm from irradiation by current techniques, compliance in a nonselected population, the specific benefit of breast self-examination and the advantage of employing allied health professionals in screening programs
49. Cancer of the cervix	+	To determine the optimal age and frequency for taking Papanicolaou smears

Condition	Priority	Comments
50. Cancer of the colon and rectum	+ +	To determine the sensitivity, specificity, acceptability, side effects and appropriate frequency for simple detection maneuvers such as testing the stool for occult blood since grade I evidence for the effectiveness of preventive maneuvers applies only to sigmoidoscopy
51. Cancer of the lung (bronchogenic carcinoma)	+	To determine the effectiveness of existing strategies against smoking and, if not satisfactory, research into better methods of obtaining compliance with abstinence from smoking
60. Hypothyroidism	+ +	To obtain evidence that treating subclinical or biomedical hypothyroidism alters the clinical course
64. Preterm labour	+	To determine how to identify women at risk and the effectiveness of the treatments currently used
67. Dental caries	+	To determine the optimal frequency of examination
68. Orthodontic conditions	+	To determine the optimal frequency of examination
69. Periodontal disease	+	To determine the optimal frequency of examination and the effectiveness of counselling on oral hygiene

*+ = research priority; ++ = high research priority; +++ = high and urgent research priority.

Table III displays 18 health protection packages for various phases of life, beginning with the earliest, and for both sexes. Each package, as well as each item in the package, has been given a code. In some instances the letter representing the recommendation made by the task force is followed by the letter R, which indicates that the recommendation was made only for a designated high-risk group. In some packages, in addition to the conditions that apply to the general population, conditions are listed that should be sought only in defined high-risk situations, which are identified by the letter R within the code. In a few packages the task force included target conditions that are not supported by a summary in Table IIB (e.g., breast-feeding).

Table III - Health protection packages

Health protection package P (prenatal)				
Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver*	Remarks
P1	Postnatal asphyxia (B)	Detection during pregnancy of causative factors suggesting high risk Fetal monitoring during labour	At first prenatal visit and during follow-up visits	High risk associated with toxemia, renal and heart diseases, diabetes, gynecologic anatomic disorders and previous obstetric problems (e.g., neonatal deaths)

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
P2	Neural tube defect (B)	Determination of maternal serum alpha-fetoprotein (AFP) level by radio-immunoassay. If AFP value is elevated, supplement with amniocentesis and ultrasonography	At 16 to 18 weeks of pregnancy	Screening should be available to pregnant women on request if parents understand that confirmation of results may require amniocentesis and ultrasonography, and are prepared to accept therapeutic abortion if the fetus is affected
P3	Down's syndrome (B)	Elicit information on patient's history If positive, perform amniocentesis only if parents are prepared to accept abortion if an affected fetus is detected	At first prenatal vist	Positive history includes: - evidence that a parent carries a translocation of chromosome 21 - history of Down's syndrome in previous children or among close relatives - mother older than 35 years
P4	Rubella (A)	Hemagglutination inhibition test Administration of gamma globulin to exposed nonimmune women if abortion is not acceptable	At first prenatal visit	Repeat if a nonimmune patient is later exposed to the disease
P5	Toxoplasmosis (A)	Elicit information on exposure Serologic testing for evidence of Toxoplasma gondii infection and counselling on hygiene for high-risk group	At first prenatal visit, every 3 months thereafter and at the time of delivery	High-risk patients are those keeping a cat at home or eating raw meat
P6	Gonorrhea (A)	Cervical and urethral smears, and cultures of cervical and urethral secretions and of first-voided urine	At first prenatal visit	Repeat at 36 weeks for high-risk patients
P7	Syphilis (A-R)	Serologic tests for syphilis	At first prenatal visit	Repeat tests in last trimester if woman considered at high risk
P8	Malnutrition (C) and low birth weight (B)	Determination of serum protein and hemoglobin concentrations Counselling on abstinence from smoking and on adequate protein and energy intake; measurement of height and weight	At first prenatal visit At first prenatal visit and during follow-up visits	Repeat hemoglobin determination between 28 and 32 weeks; prevention of malnutrition may require provision of food supplements to some individuals and population groups
P9	Parenting problems (C), including child abuse and neglect (A)	Appropriate history taking; determine the parents' attitudes toward the coming baby; counselling	At first prenatal visit and as appropriate on the basis of clinical judgement	High and urgent research priority: identification of specific maneuvers that would be effective in assessing and treating parenting problems
P10	Alcohol consumption (B)	Elicit information; counselling to reduce alcohol intake; abortion, when acceptable, if the risk to the fetus is considered high	At first prenatal visit and as appropriate on the basis of clinical judgement	Complete abstention from alcohol should be considered during pregnancy
P11	Hypertension (A)	Blood pressure measurement	At all visits	Test for proteinuria at all visits
P12	Diabetes mellitus (B)	Elicit information and test for glucosuria; if result is positive, do fasting and postcibal blood glucose tests; glucose tolerance test at 28 weeks for patients at risk of gestational diabetes	At first prenatal visit and during follow-up visits	Factors suggestive of diabetes: - previous birth of infant large for gestational age, previous stillbirth, recurrent abortion and fetal abnormalities - family history of diabetes - physical abnormalities e.g., circulatory dysfunction and obesity

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
P13	Blood group incompatibility (A)	Determination of blood group (ABO and Rh); screening for antibodies	At first prenatal visit	See Red Cross manual for techniques generally accepted throughout Canada
	Rh-negative state	Screening for anti-D antibodies	At 20 weeks and then every month until 28 weeks; every 2 weeks thereafter	
		Administration of Rh hyperimmune globulin	At 28 weeks if no antibodies were detected in the previous 4 weeks Within 72 hours of delivery if the newborn is Rh-positive and the mother had no anti-Rh antibodies	Other indications: - spontaneous or induced abortion - amniocentesis - administration of mismatched Rh-positive blood - significant uterine bleeding
	Rh-positive state	Screening for antibodies	Between 32 and 36 weeks	
P14	Preterm labour (B)	Elicit information on previous history If history positive: - for incompetence of cervix (B): cerclage of cervix - for other causes (C): referral to high-risk pregnancy care centre	At first prenatal visit	Research priority: how to identify women at risk; to establish the effectiveness of current treatments
P15	Recurrent spontaneous abortion (C)	Elicit history; if positive, investigate to detect possible causes of problem	At first prenatal vist	Possible causes: endocrinopathies, uterine anomalies, chromosomal anomalies, infections and corpus luteum defects
P16	Bacteriuria (B)	Microbiologic examination of urine	In first trimester Repeat each trimester and at 6 weeks post partum	
P17	Breast-feeding (C)	Counselling	At regular prenatal visits	
P18	Postpartum depression (C)	Counselling; elicit symptoms	At routine postpartum visit	

*Although the optimal frequency of follow-up visits has not been established, they are currently scheduled as follows: once a month through the 28th week, twice a month from the 29th to the 36th week and once a week thereafter.

Health protection package N (for infants at birth and during first week of life)

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
N1	Postnatal asphyxia (B)	Clinical examination	At birth	Risk factors: respiratory, metabolic and cardiac anomalies, sepsis and seizures
N2	Hemorrhagic disease of the newborn (B)	Administration of 1 mg of vitamin K_1	At birth	
N3	Congenital syphilis (A-R) (B)	Serologic testing of cord blood	At birth	
N4	Ophthalmia neonatorum (gonococcal) (A)	Instillation of 1% silver nitrate solution into each eye	At birth	

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
N5	Neonatal hypothyroidism (A)	Thyroxine testing with filter paper in all neonates; ancillary spot testing for thyroid stimulating hormone if necessary	During first week of life	Recall serum thyroxine tests may be used as aids when necessary
N6	Phenylketonuria (A)	Microbiologic inhibition assay (Guthrie) and fluorometric tests	Once each before and after 4 days of age	The tests may need repeating and supplementing with study of amino acids in plasma or blood by paper chromatography
N7	Congenital dislocation of hip (B)	Clinical examination (flexion, abduction and Ortolani maneuver); confirmation by roentgenography	During first 2 to 3 days of life	
N8	Interventricular septal defect (B)	Clinical examination and history taking	At birth and at discharge from nursery	Unwarranted labelling for benign murmurs may be harmful; additional tests, if necessary, include chest roentgenography, echocardiography and cardiac catheterization
N9	Problems of physical growth and development (B); malnutrition (C)	Clinical examination; measurement of length, weight and head circumference	At birth	Record findings on standardized growth chart Research priority: to determine the optimal frequency of measurements
N10	Parenting problems (C), including child abuse and neglect (A)	Obtain family history; assessment of parent-child interaction; counselling	During regular visits and rooming-in	High and urgent research priority: identification of specific maneuvers that would be effective in assessing and treating parenting problems
N11	Strabismus (B)	Inspection of the eyes; cover-uncover test	During first week of life	Research priority: to determine the optimal frequency of examination
N12	Hearing impairment (B)	Check newborn's startle or turning response to a novel noise outside field of vision	Once before discharge from nursery	Research priority: to determine the value of early detection and of the detection strategies available
N13	Blood group incompatibility (A)	Cord blood: Coombs' test and determination of blood hemoglobin and bilirubin levels Clinical examination	At birth	
N14	Accidents (home and motor vehicle) (C)	Counselling of parents about car seat restraints and home safety	Once before discharge from nursery	
NR15	Cystic fibrosis (B)	Iontophoresis sweat test on at least two occasions; clinical observation	At birth and at discharge from nursery	Siblings of cystic fibrosis patients
NR16	Toxoplasmosis (A)	Serologic testing for evidence of Toxoplasma gondii infection	At birth	When the mother was from a high-risk group
NR17	Iron-deficiency anemia (C)	Determination of blood hemoglobin concentration	At birth and at discharge from nursery	High-risk group: premature babies and those born of a multiple pregnancy, an iron-deficient woman or parents in low socioeconomic conditions

Health protection package NF (for newborns aged 2 to 4 weeks)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
NF1	Congenital dislocation of hip (B)	Clinical examination (flexion, abduction and Ortolani maneuver); confirmation by roentgenography	Once	
NF2	Lower urinary tract anomalies (males) (C)	Ask about force of urinary stream	Once	
NF3	Problems of physical growth (B) and nutrition (C)	Clinical examination; measurement of length, weight and head circumference	Once	Record findings on standardized growth chart Research priority: to determine the optimal frequency of measurements
NF4	Parenting problems (C), including child abuse and neglect (A)	Assessment of parent-child interaction; counselling	At each contact with the family	High and urgent research priority; identification of specific maneuvers that would be effective in assessing and treating parenting problems
NF5	Accidents (home and motor vehicle) (C)	Home assessment; counselling of parents about car seat restraints and home safety	Once	Home visit by allied health professional desirable
NFR6	Congenital syphilis (A)	Serologic testing	Weekly	If mother was at high risk

*This package can be provided by a suitably prepared nonmedical health professional. Provision of the package in the home has important benefits, especially for disadvantaged families.

Health protection package 2I (for infants aged 2 months)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
2I1	Interventricular septal defect (B)	Clinical examination and history taking	Once	Unwarranted labelling for benign murmurs may be harmful; additional investigations, if necessary, include chest roentgenography, echocardiography and cardiac catheterization
2I2	Diphtheria, pertussis, tetanus and poliomyelitis (A)	Immunization	Once	First doses: - Only persons in good health should be immunized - The vaccine against pertussis is contraindicated in patients with a history of convulsions - In certain circumstances (e.g., for persons with immunodeficiency) it is better to use inactivated poliomyelitis vaccine (Salk) instead of oral vaccine (Sabin) - Poliomyelitis vaccine is contraindicated in certain conditions

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
2I3	Problems of physical growth (B) and nutrition (C)	History taking; measurement of length, weight and head circumference	Once	Record length and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements
2I4	Developmental delay (C)	Administration of the Preschool Development Questionnaire	Once	May be supplemented by the Denver Developmental Screening Test on the basis of clinical judgement
2I5	Parenting problems (C), including child abuse and neglect (A)	Assessment of parent-child interaction; counselling	During regular visit(s)	High and urgent research priority; identification of specific maneuvers that would be effective in assessing and treating parenting problems
2I6	Strabismus (B)	Inspection of the eyes; cover-uncover test	Once	Research priority: to determine the optimal frequency of examination

*This package can be provided by a suitably prepared nonmedical health professional except for auscultation of the heart.

Health protection package 4I (for infants aged 4 months)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
4I1	Diphtheria, pertussis, tetanus and poliomyelitis (A)	Immunization	Once	Second doses: - Only persons in good health should be immunized - The vaccine against pertussis is contraindicated in patients with a history of convulsions - In certain circumstances (e.g., for persons with immunodeficiency) it is better to use inactivated poliomyelitis vaccine (Salk) instead of oral vaccine (Sabin) - Poliomyelitis vaccine is contraindicated in certain conditions
4I2	Problems of physical growth (B) and nutrition (C)	History taking; measurement of length, weight and head circumference	Once	Record length and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements
4I3	Developmental delay (C)	Administration of the Preschool Development Questionnaire	Once	May be supplemented by the Denver Developmental Screening Test on the basis of clinical judgement
4I4	Parenting problems (C), including child abuse and neglect (A)	History taking and observation; counselling	During visits for other reasons	High and urgent research priority: identification of specific maneuvers that would be effective in assessing and treating parenting problems

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
4I5	Accidents (home and motor vehicle) and poisoning (C)	Counselling	During visits for other purposes	If warranted by earlier assessment

*This package can be provided by a suitably prepared nonmedical health professional; however, the responsible physician should be informed of the child's health status.

Health protection package 6I (for infants aged 6 months)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
6I1	Diphtheria, pertussis, tetanus and poliomyelitis (A)	Immunization	Once	Third doses: - Only persons in good health should be immunized - The vaccine against pertussis is contraindicated in patients with a history of convulsions - In certain circumstances (e.g., for persons with immunodeficiency) it is better to use inactivated poliomyelitis vaccine (Salk) instead of oral vaccine (Sabin) - Poliomyelitis vaccine is contraindicated in certain conditions
6I2	Problems of physical growth (B) and nutrition (C)	History taking; measurement of length, weight and head circumference	Once	Record length and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements
6I3	Developmental delay (C)	Administration of the Preschool Development Questionnaire	Once	May be supplemented by the Denver Developmental Screening Test on the basis of clinical judgement
6I4	Parenting problems (C), including child abuse and neglect (A)	History taking and observation; counselling	During visits for other reasons	High and urgent research priority: identification of specific maneuvers that would be effective in assessing and treating parenting problems
6I5	Hearing impairment (B)	Check startle or turning response to a novel noise produced outside field of vision; check for absence of babbling	Once	Research priority: to determine the value of early detection and of the detection strategies available
6IR6	Measles (A)	Immunization	Once	In high-risk groups: - Only persons in good health should be immunized - The vaccine is contraindicated in patients with a history of convulsions (no reaction has been reported in persons allergic to egg protein but caution is advised) - Revaccination at 12 to 15 months

*This package can be provided by a suitably prepared nonmedical health professional.

Health protection package 9I (for infants aged 9 months)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
9I1	Problems of physical growth (B) and nutrition (C)	History taking; measurement of length, weight and head circumference	Once	Record length and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements
9I2	Developmental delay (C)	Administration of the Preschool Development Questionnaire	Once	May be supplemented by the Denver Developmental Screening Test on the basis of clinical judgement
9I3	Parenting problems (C), including child abuse and neglect (A)	History taking and observation; counselling	Optional, during visit for other purposes	High and urgent research priority; identification of specific maneuvers that would be effective in assessing and treating parenting problems
9I4	Accidents (home and motor vehicle) and poisoning (C)	Counselling	Once, during visit for other purposes	
9IR5	Iron-deficiency anemia (C)	Determination of blood hemoglobin concentration	Once	In infants affected by low socioeconomic conditions

*This package can be provided by a suitably prepared nonmedical health professional. A home visit may be advisable, especially for economically or socially disadvantaged groups.

Health protection package 12I (for infants aged 12 to 15 months)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
12I1	Measles (A)	Immunization	Once	The vaccine may be given alone or in combination with mumps and rubella vaccines, but: - Only persons in good health should be immunized - Measles vaccine is contraindicated in patients with a history of convulsions (caution is advised in persons allergic to egg protein)
12I2	Mumps (A)	Immunization	Once	Only persons in good health should be immunized Mumps vaccine is contraindicated in persons allergic to neomycin and those suffering from altered immune states (caution is advised in persons allergic to egg protein)
12I3	Rubella (A)	Immunization	Once	Only persons in good health should be immunized

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
12I4	Problems of physical growth (B) and nutrition (C)	History taking; measurement of height, weight and head circumference	Once	Record length and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements
12I5	Parenting problems (C), including child abuse and neglect (A)	History taking and observation; counselling	Optional, during visits for other reasons	High and urgent research priority: identification of specific maneuvers that would be effective in assessing and treating parenting problems

*This package can be provided by a suitably prepared nonmedical health professional, but the responsible primary care physician should be given an opportunity to review the health status of the infant at this stage.

Health protection package 1C (for children aged 18 months)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
1C1	Diphtheria, pertussis, tetanus and poliomyelitis (A)	Immunization	Once	Fourth doses: - Only persons in good health should be immunized - The vaccine against pertussis is contraindicated in patients with a history of convulsions - In certain circumstances (e.g., for persons with immunodeficiency) it is better to use inactivated poliomyelitis vaccine (Salk) instead of oral vaccine (Sabin) - Poliomyelitis vaccine is contraindicated in certain conditions
1C2	Problems of physical growth (B)	History taking; measurement of height, weight and head circumference	Once	Record length and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements
1C3	Behavioural and developmental problems (C)	Assessment of parent-child interaction; administration of the Preschool Development Questionnaire	Once	May be supplemented by the Denver Developmental Screening Test on the basis of clinical judgement

*This package can be provided by a suitably prepared nonmedical health professional.

Health protection package 2C (for children aged 2 to 3 years)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
2C1	Problems of physical growth (B)	Measurement of height, weight and head circumference	Once	Record height and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
2C2	Behavioural and developmental problems (C)	Assessment of parent-child interaction; administration of the Preschool Development Questionnaire	Once	May be supplemented by the Denver Developmental Screening Test on the basis of clinical judgement
2C3	Strabismus (B) and refractive defects (C)	Inspection of the eyes; cover-uncover test and visual chart test	Once	High research priority: to determine the optimal frequency of eye examination for strabismus and the value of presymptomatic detection of refractive defects
2C4	Hearing impairment (B)	Elicit history (particularly of retarded or defective speech development) and conduct clinical examination	Once	Research priority: to determine the value of early detection and of the detection strategies available
2C5	Dental caries (A)	Oral examination, plus roentgenography if indicated Fluoride application is recommended for residents of areas without fluoridated water supply	Annually (from age 2 years)	Preferably done in dental office Research priority, particularly to establish the optimal frequency of examination

*This package can be provided by a suitably prepared nonmedical health professional.

Health protection package 4C (for children aged 4 years)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
4C1	Problems of physical growth (B)	Measurement of height, weight and head circumference	Once	Record height and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements
4C2	Behavioural problems (C)	Assessment	Optional	As warranted by earlier assessments
4C3	Dental caries (A)	Oral examination, plus roentgenography if indicated Fluoride application is recommended for residents of areas without fluoridated water supply	Annually	Preferably done in dental office Research priority, particularly to establish the optimal frequency of examination

*This package can be provided by a suitably prepared nonmedical health professional.

Health protection package CSE (for children aged 5 to 6 years, at time of school entry)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
CSE1	Diphtheria, pertussis, tetanus and poliomyelitis (A)	Immunization	Booster: once	Booster doses: - Only persons in good health should be immunized - The vaccine against pertussis is contraindicated in patients with a history of convulsions - In certain circumstances (e.g., for persons with immunodeficiency) it is better to use inactivated poliomyelitis vaccine (Salk) instead of oral vaccine (Sabin) - Poliomyelitis vaccine is contraindicated in certain conditions
CSE2	Problems of physical growth (B)	Measurement of height, weight and circumferences of head, chest and arms	Once	Record height and weight on standardized growth chart Research priority: to determine the optimal frequency of measurements
CSE3	Behavioural and developmental problems (C)	Assessment of parent-child interaction; enquiry about educational progress	Once	
CSE4	Strabismus (B) and refractive defects (C)	Inspection of the eyes; cover-uncover test and visual chart test	Once	Research priority: to determine the optimal frequency of examination
CSE5	Hearing impairment (B)	Elicit history (particularly of retarded or defective speech development) and conduct clinical examination	Once	Research priority: to determine the value of early detection and of the detection strategies available
CSE6	Dental caries (A) and orthodontic conditions (B)	Oral examination, plus roentgenography if indicated Fluoride application is recommended for residents of areas without fluoridated water supply	Annually	Verification that earlier examinations were done Research priority, particularly to establish the optimal frequency of examination
CSE7	Accidents (home, motor vehicle and water) (C)	Counselling	During visits for other purposes	Research priority: to establish the effectiveness of counselling
CSER8	Tuberculosis (A)	Tuberculin sensitivity testing; immunization with bacille Calmette-Guérin vaccine and chemoprophylaxis as necessary	Once	For children in contact with tuberculosis patients or living in communities with a high infection rate

*The task force recommends that school health professionals ensure that all the detection maneuvers in this package and in the packages recommended from birth on have been performed. This package is considered a very important encounter with the health care system and a mandatory checkpoint for verification.

Health protection package 11C (for children aged 10 to 11 years)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
11C1	Rubella (A)	Immunization of girls	Once	If immunization has not been carried out before
11C2	Problems of physical growth (B)	Measurement of height, weight and circumferences of head, chest and arms	Once	Research priority: to determine the optimal frequency of measurements
11C3	Behavioural and developmental problems (C)	Assessment of parent-child interaction; enquiry about educational progress	Optional	If warranted by earlier assessments
11C4	Refractive defects (C)	Testing with visual chart	Optional	High research priority: to determine the value of presymptomatic detection of defects
11C5	Hearing impairment (B)	Elicit history and conduct clinical examination	Once	Research priority: to determine the value of early detection and of the detection strategies available
11C6	Dental caries (A) and orthodontic conditions (B)	Oral examination, plus roentgenography if indicated Fluoride application is recommended for residents of areas without fluoridated water supply	Annually	Preferably done in dental office Research priority, particularly to establish the optimal frequency of examination
11C7	Accidents (home, motor vehicle and water) (C) Use of alcohol (C) Smoking (C) Problems related to sexual development (C)	Counselling	At each regular visit, on the basis of clinical judgement	Research priority: to establish the effectiveness of counselling

*The examination can be done anytime between 10 and 11 years.

Health protection package 15C (for children aged 12 to 15 years)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
15C1	Problems of physical growth (B)	Measurement of height, weight and circumferences of head, chest and arms	Optional	As warranted on the basis of clinical judgement
15C2	Accidents (C) Use of alcohol (C) Smoking (C) Sexual development (including unwanted teenage pregnancy) (C & A)	Counselling; abortion if acceptable	Optional	As warranted Research priority: to establish the effectiveness of counselling
15C3	Dental caries (A) Orthodontic conditions (B) Periodontal diseases (C)	Oral examination, plus roentgenography if indicated; encourage daily oral hygiene Fluoride application is recommended for residents of areas without fluoridated water supply	Annually	Preferably done in dental office Research priority, particularly to establish the optimal frequency of examination

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
15CR4	Malnutrition (C) (B-R)	Determination of serum protein concentration; history taking; measurement of height, weight and circumferences of head, chest and arms	At appropriate intervals on the basis of clinical judgement	Adolescent girls
15CR5	Muscular dystrophy (B)	Determination of serum creatine phosphokinase concentration	Frequent testing may be required since there may be an overlap between values in carriers and in unaffected women	Female relatives of muscular dystrophy patients
15CR6	Cancer of the cervix (B)	Papanicolaou smear	When first sexually active; recheck within 1 year	Girls should be tested as soon as they become sexually active

*The examination can be done anytime between 12 and 15 years.

Health protection package 44WM (for women and men aged 16 to 44 years)

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
44WM1	Poliomyelitis (A)	Immunization	Booster at age 16	Only persons in good health should be immunized In certain circumstances (e.g., for persons with immunodeficiency) it is better to use inactivated poliomyelitis vaccine (Salk) instead of oral vaccine (Sabin) The vaccine is contraindicated in certain conditions Immunization of pregnant women is not contraindicated if protection is required
44WM2	Tetanus and diphtheria (A)	Immunization	Booster every 10 years (optional for diphtheria)	Only persons in good health should be immunized
44WM3	Alcoholism (C) Smoking (C) Motor vehicle accidents (C)	Elicit information on patient's history; counselling; provide effective contraceptive services to alcoholic sexually active women; control of underlying medical conditions	At first encounter and at regular and appropriate intervals thereafter	Research priority: to establish the effectiveness of counselling
44WM4	Family dysfunction; marital and sexual problems (C)	Elicit history; counselling	Appropriate intervals based upon clinical judgement	Research priority: to determine the effectiveness of preventive maneuvers
44WM5	Hearing impairment (B)	Elicit history and conduct clinical examination	During visits for other reasons	Research priority: to determine the value of early detection and of the detection strategies available
44WM6	Hypertension (A)	Blood pressure measurement	At least every 5 years	At every visit made for other reasons

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
44WM7	Dental caries (A) Periodontal diseases (C) Oral cancer (C)	Oral examination, plus roentgenography if indicated; encourage daily oral hygiene	Annually	Research priority, particularly to establish the optimal frequency of examination
44W8	Rubella (A)	Immunization of women at risk	Once	If immunization has not been carried out before, and provided the woman is not pregnant and will avoid becoming pregnant for the next 3 months
44W9	Cancer of the cervix (B)	Papanicolaou smear	When first sexually active, but recheck within a year, then every 3 years to age 35 and every 5 years thereafter	For subjects at high risk: annual smears, particularly when early age of onset of sexual activity and multiplicity of sexual partners Research priority: to determine the optimal age and frequency for taking smears
44WR10	Muscular dystrophy (B)	Determination of serum creatine phosphokinase concentration	Frequent testing may be required since there may be an overlap between values in carriers and in unaffected women	For female relatives of muscular dystrophy patients
44WMR11	Immunizable conditions related to international travel (A)	Immunization; prophylaxis	Varies with different conditions	
44WMR12	Tuberculosis (A)	Tuberculin sensitivity testing; immunization with bacille Calmette-Guérin vaccine and chemoprophylaxis as necessary	On the basis of clinical judgement	For persons exposed to the disease through their work, in contact with infected people or living in communities with a high infection rate
44WMR13	Gonorrhea (A)	Smears of cervix and/or urethra; cultures of cervical and/or urethral secretions and of first-voided urine	At appropriate intervals on the basis of clinical judgement	Pregnant women should be tested; incidence higher in persons with a history of multiple sexual partners
44WMR14	Syphilis (A)	Serologic testing	At appropriate intervals on the basis of clinical judgement	Pregnant women should be tested; incidence higher in persons with a history of multiple sexual partners
44WMR15	Thalassemia (B)	Elicit history; laboratory screening; counselling	Once	For Asian, African and Mediterranean persons of parenting age who, having first been informed that no assistance is available to the carrier, still want to be screened Research priority: to determine the effectiveness of preventive maneuvers
44WMR16	Iron-deficiency anemia (C) and malnutrition (B)	History taking; determination of serum protein and hemoglobin concentrations; measurement of height and weight	At appropriate intervals on the basis of clinical judgement	Women in low socioeconomic circumstances; Indians and Inuit; food faddists
44WMR17	Cancer of the skin (B)	Inspection; counselling	At appropriate intervals on the basis of clinical judgement	High-risk groups: persons who work outdoors or are in contact with polycyclic aromatic hydrocarbons

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
44WMR18	Tay-Sachs disease (B)	Measurement of resistance of serum hexosaminidase to heat inactivation	As part of premarital screening	High-risk groups: Ashkenazi Jews; amniocentesis can confirm the diagnosis if expectant parents are known carriers
44WMR19	Cancer of the bladder (B)	Cytologic analysis of urine	On the basis of clinical judgement	High-risk groups: workers occupationally exposed to bladder carcinogens, and smokers

Health protection package 64WM (for women and men aged 46 to 64 years)*

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
64WM1	Cancer of the colon and rectum (B)	Testing stool for occult blood	Not more frequently than annually	High research priority: to define the sensitivity, specificity, acceptability, side effects and appropriate frequency for simple detection tests
64WM2	Retirement distress (C)	Final counselling examination before retirement as part of a series of periodic health examinations	Once	
64W3	Cancer of the breast (A)	Mammography plus physical examination of the breast	Annually for women aged 50 to 59 years	Research priority: to determine - the separate benefits of mammography and clinical examination - the optimal frequency of these maneuvers - the benefits in age groups other than the sixth decade, especially the fifth decade - the risk of harm from irradiation using current techniques - compliance in a non-selected population - the specific benefit of breast self-examination - the advantages of employing allied health professionals in screening programs
64W4	Hypothyroidism (C)	Clinical examination in postmenopausal women	Every second year	High research priority: to determine if treatment of subclinical hypothyroidism alters the clinical course

*Same package as 44WM minus 44W8, 44WMR15 and 44WMR18 plus the above four items.

Health protection package 74WM (for women and men aged 65 to 74 years)

Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
74WM1	Tetanus and diphtheria (A)	Immunization	Booster every 10 years (optional for diphtheria)	Only persons in good health should be immunized

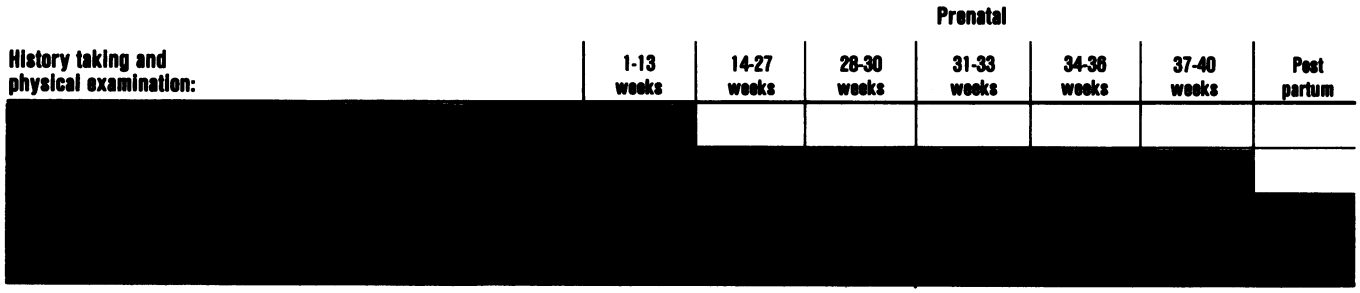
Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
74WM2	Influenza (A)	Immunization	Annually	Health professionals should be alert to antigenic shifts of organisms in any given year Contraindication: allergy to egg protein
74WM3	Hearing impairment (B)	Elicit history and conduct clinical examination	During visits for other reasons	Research priority: to determine the value of early detection and of the detection strategies available
74WM4	Hypertension (A)	Blood pressure measurement	At least every 2 years	At every visit made for other reasons
74WM5	Dental caries (A) Periodontal diseases (C) Oral cancer (C)	Oral examination, plus roentgenography if indicated; encourage daily oral hygiene	Annually	Research priority, particularly to establish the optimal frequency of examination
74WM6	Cancer of the colon and rectum (B)	Testing stool for occult blood	Not more frequently than annually	High research priority: to define the sensitivity, specificity, acceptability, side effects and appropriate frequency for simple detection tests
74WM7	Malnutrition (C) (B-R) Progressive incapacity with ageing (B)	Assessment of physical, social and psychologic function	Every 2 years	Home visiting is a useful detection procedure Diagnosis should be de-emphasized; protection of abilities should be emphasized Research priority: to establish the optimal content and frequency of assessment
74W8	Hypothyroidism (C)	Clinical examination	Every 2 years	High research priority: to determine if treatment of subclinical hypothyroidism alters the clinical course
74WMR9	Immunizable conditions related to international travel (A)	Immunization; prophylaxis	Varies with different conditions	
74WMR10	Tuberculosis (A)	Tuberculin sensitivity testing; immunization with bacille Calmette-Guérin vaccine and chemoprophylaxis as necessary	On the basis of clinical judgement	For persons exposed to the disease through their work, in contact with infected people or living in communities with a high infection rate
74WMR11	Cancer of the skin (B)	Inspection; counselling	At appropriate intervals on the basis of clinical judgement	
74WMR12	Cancer of the bladder (B)	Cytologic analysis of urine	On the basis of clinical judgement	High-risk groups: workers occupationally exposed to bladder carcinogens, and smokers
74WR13	Cancer of the cervix (B)	Papanicolaou smear	Every 5 years or at appropriate intervals on the basis of clinical judgement	If prior smears have been abnormal Research priority: to determine the optimal age and frequency of examination

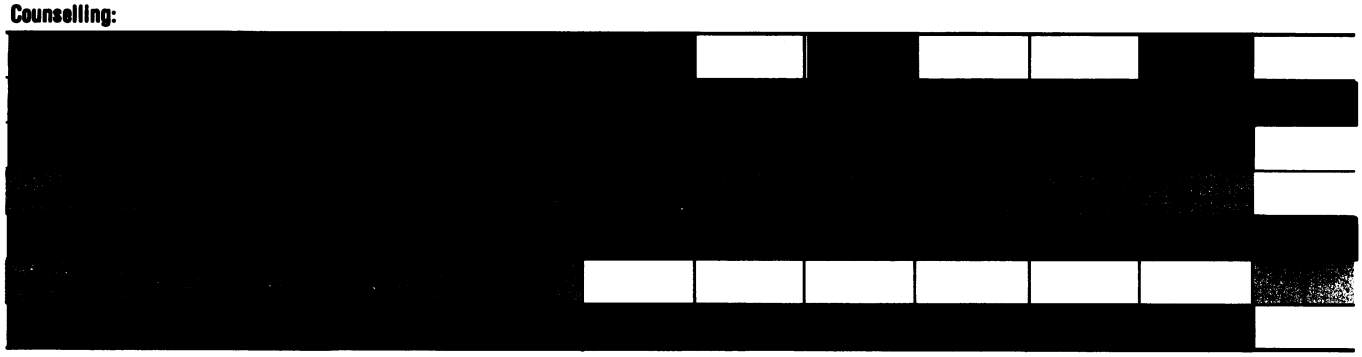
Health protection package 75+WM (for women and men aged 75 years or more)*

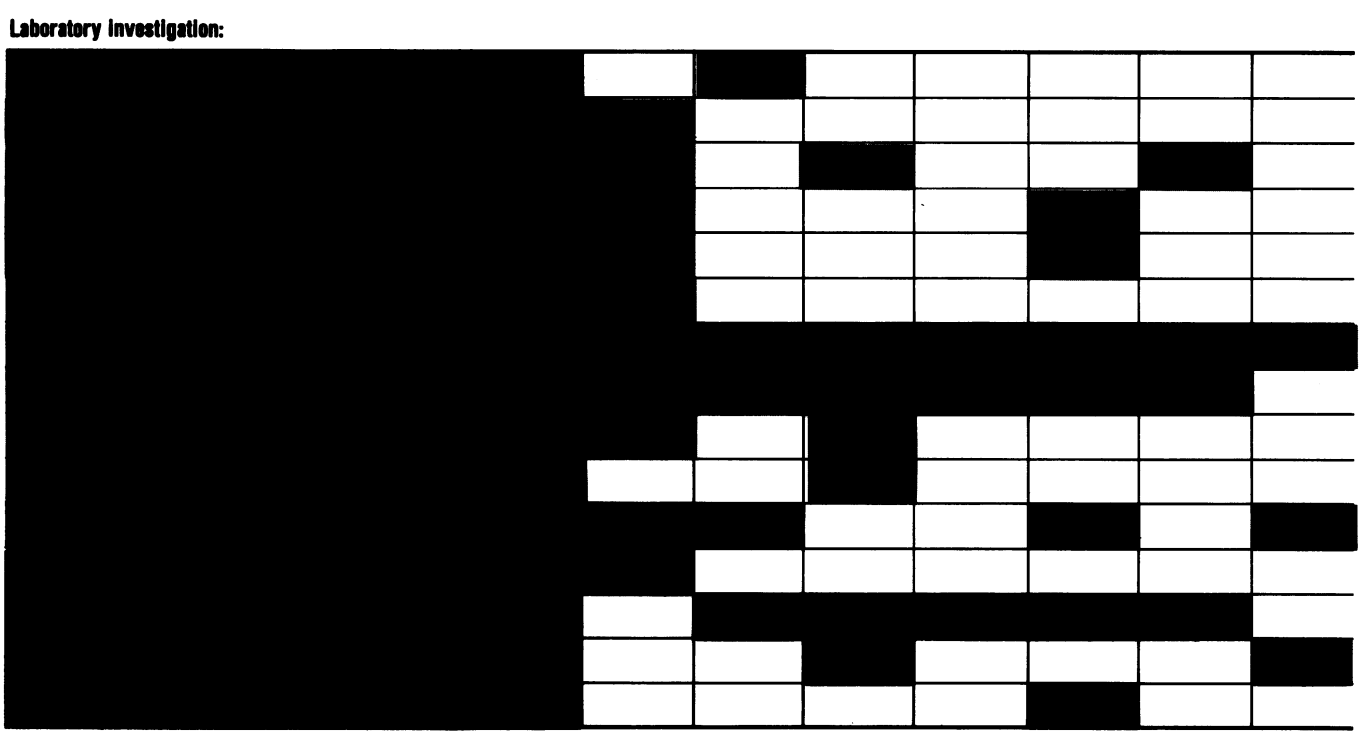
Code	Target condition and recommendation	Maneuver	Best current estimate of optimal frequency of maneuver	Remarks
75+WM1	Tetanus and diphtheria (A)	Immunization	Booster every 10 years (optional for diphtheria)	Only persons in good health should be immunized
75+WM2	Influenza (A)	Immunization	Annually	Health professionals should be alert to antigenic shifts of organisms in any given year Contraindication: allergy to egg protein
75+WM3	Hearing impairment (B)	Elicit history and conduct clinical examination	In the course of visits for other reasons	Research priority: to determine the value of early detection and of the detection strategies available
75+WM4	Hypertension (A)	Blood pressure measurement	At least every 2 years	At every visit made for other reasons
75+WM5	Cancer of the colon and rectum (B)	Testing stool for occult blood	Not more frequently than annually	High research priority: to define the sensitivity, specificity, acceptability, side effects and appropriate frequency for simple detection tests
75+WM6	Oral cancer (C)	Oral examination	Annually	Research priority, particularly to establish the optimal frequency of examination
75+WM7	Progressive incapacity with ageing (B) Malnutrition (C) (B-R)	Assessment of physical, social and psychologic function	Annually	This is the most important assessment for this age group and should preferably be done during home visits Diagnosis should be de-emphasized; protection of abilities should be emphasized Research priority: to establish the optimal content and frequency of assessment
75+W8	Hypothyroidism (C)	Clinical examination	Every 2 years	High research priority: to determine if treatment of subclinical hypothyroidism alters the clinical course
75+WMR9	Immunizable conditions related to international travel (A)	Immunization; prophylaxis	Varies with different conditions	
75+WMR10	Tuberculosis (A)	Tuberculin sensitivity testing; immunization with bacille Calmette-Guérin vaccine and chemoprophylaxis as necessary	On the basis of clinical judgement	For persons exposed to the disease through their work, in contact with infected people or living in communities with a high infection rate
75+WMR11	Cancer of the skin (B)	Inspection; counselling	At appropriate intervals on the basis of clinical judgement	
75+WMR12	Cancer of the bladder (B)	Cytologic analysis of urine	On the basis of clinical judgement	High-risk groups: workers occupationally exposed to bladder carcinogens, and smokers
75+WR13	Cancer of the cervix (B)	Papanicolaou smear	Every 5 years or at appropriate intervals on the basis of clinical judgement	If prior smears have been abnormal Research priority: to determine the optimal frequency of examination

*This package can appropriately be provided by a suitably prepared nonmedical health professional.

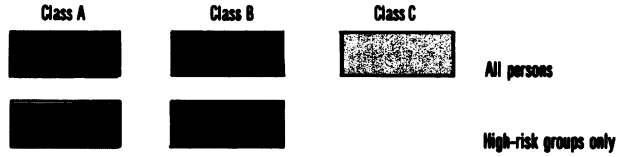
Table IV — Visual displays of health protection packages







This table should be used in addition to, not instead of, Table IIB (summary of the 78 conditions) and Table III (health protection packages).



This table should be used in addition to, not instead of, Table IIB (summary of the 78 conditions) and Table III (health protection packages).

Children (18 months - 15 years)

History taking and physical examination:	18 months	2-3 years	4 years	5-6 years	10-11 years	12-15 years
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]					Discretionary	
[redacted]					Discretionary	
[redacted]						
[redacted]					Discretionary	
[redacted]						Annually

Immunization:

[redacted]						
[redacted]						
[redacted]						

Counselling:

[redacted], including motor vehicle, and water safety				←	Discretionary	→
[redacted] development					← Discretionary →	
[redacted] of alcohol and drugs					← Discretionary →	
[redacted]					← Discretionary →	
[redacted] oral hygiene						Annually

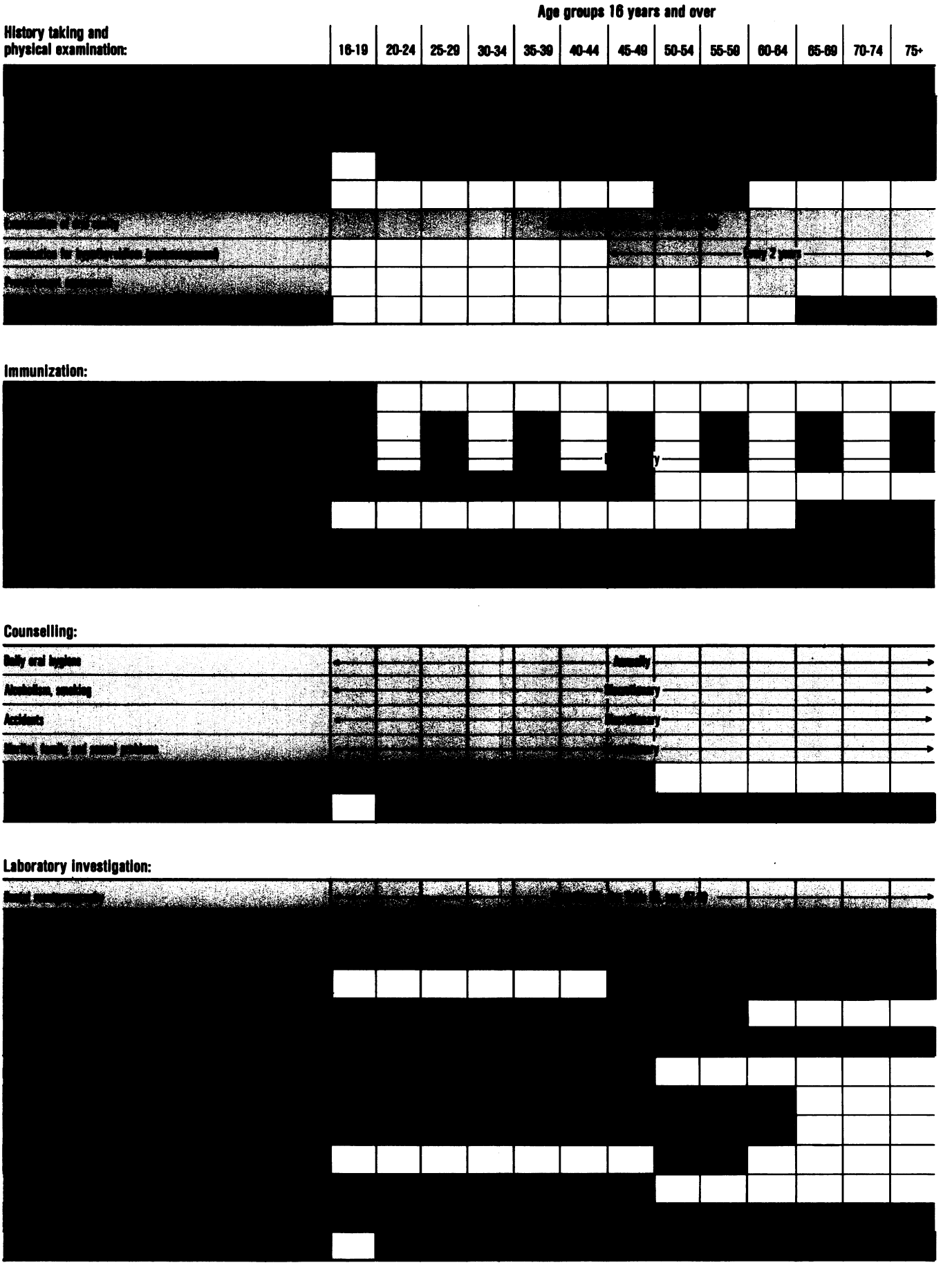
Laboratory investigation:

[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						

This table should be used in addition to, not instead of, Table IIB (summary of the 78 conditions) and Table III (health protection packages).

* Should have been done by this age; health professional to check and intervene if necessary.

	Class A	Class B	Class C	
All persons				
High-risk groups only				


Age groups 16 years and over
History taking and physical examination:
16-19
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
75+
Immunization:
Counselling:
Daily oral hygiene
Alcoholism, smoking
Accidents
Laboratory investigation:
This table should be used in addition to, not instead of, Table IIB (summary of the 78 conditions) and Table III (health protection packages).
* Should have been done by this age; health professional to check and intervene if necessary.
Class A
Class B
Class C
All persons
High-risk groups only

Appendix—External consultants to the task force

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BOOKS

This list is an acknowledgement of books received. It does not preclude review at a later date.

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