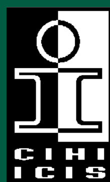
National Health Expenditure Database

Public Health and Administration in National Health Expenditures

Feasibility Study



Canadian Institute
for Health Information

Institut canadien
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Public Health and Administration in National Health Expenditures

Feasibility Study

by

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June 2002

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Executive Summary

This report discusses the results of a CIHI Roadmap project to examine the National Health Expenditures (NHEX) category of Public Health and Administrative Costs to determine the feasibility of separating public health expenditures from administrative cost estimates.

Provincial and territorial estimates were revised back to 1989–1990 to separate public health and administration. Factors influencing the variability of provincial estimates were identified and recommendations to achieve greater consistency were developed. Differences in the way specific expenditures are reported in provincial public accounts are responsible for much of the variability and will continue to pose challenges in classifying expenditures for NHEX.

The report also recommends definitions for government administrative costs and prepayment administration that will result in more consistent classifications and resolve ambiguities that presently exist in classifying the administrative costs associated with delivering specific service programs.

Conclusions and recommendations are summarized below:

1. The category now reported as public health and administrative costs should be separated into components of (i) public health and community based services[1]) and (ii) government administrative costs.

2. Additional work should be carried out with a view to (i) achieving a consistent classification of community based mental health and other community based services across the provinces and (ii) resolving ambiguities noted in the review of provincial accounts.

3. Expenditure data from the MIS reporting system and the Annual Hospital Survey should be used where possible to assist in resolving issues such as the reporting of institutional administrative expenses in Alberta.

4. The administrative costs associated with delivering specific programs should consistently be included with the program to which they apply. Working definitions for public sector administrative costs to be identified separately in NHEX should be:

   Government administrative costs: Administrative costs of a government department or branch responsible for health programs, or general administrative services such as health information systems.

   Prepayment administration: Costs of a provincial government unit responsible for administration and payment of services insured under the Canada Health Act. At

[1] Community based services refers to mental health, nursing and miscellaneous services such as public health nursing and other types of care provided by provinces or district authorities. Community based services by physicians, other providers and home care programs would not be affected by this recommendation.

present, prepayment administration is limited to hospitals and physicians' services, for which consistent standards of coverage exist in all jurisdictions. In future, if additional services were brought under the Act the definition of Prepayment Administration could be extended to those services.

5. There is merit in considering a re-combination of published estimates so that:
   - Public health estimates would include occupational health.
   - A new aggregate category of administrative expenditures would include both government administrative expense and prepayment administration. Separate estimates would continue to be available for each component.

The NHEX Expert Group considered these recommendations in June 2002, and amendments suggested by the group have been incorporated. The group also suggested expanding the definition of Prepayment Administration to include the administrative costs of provincial pharmacare programs operated on a third party payment principle (i.e. where pharmacies or patients submit claims, which are then reimbursed by a government department or agency responsible for the plan). An initial review of public accounts data found that only five jurisdictions publish pharmacare administrative costs in public accounts. A more thorough review of information sources is underway and a decision about expanding the definition will be taken during the production cycle for the NHEX 2003 report.

CIHI intends to implement the first part of Recommendation 4 (including program administration costs with the program to which they apply) and to ensure, to the extent possible, that Prepayment Administration does not include either program or general government administration during the NHEX 2002 report cycle. Work on other recommendations will commence during this cycle but will not be completed until the 2003 report cycle.

Definitions

Health Expenditures. Expenditures for which the primary objective is to improve or prevent the deterioration of health status. The phrase '*primary objective*' is interpreted in terms of normal usage, not personal motivation, which may change according to circumstance.

Health Program. An organized activity meant to preserve or improve health (e.g. public health activities) or a type of insured health service (e.g. physicians' services or prescription drugs).

Sector of Finance. In the National Health Expenditure series the term, sector, refers to the sources of health finance. The public sector is broken down into federal direct, provincial, municipal and social security funds. The private sector is broken down into insurance, household out-of-pocket and non-consumption expenditure.

Category of Expenditure. The classification of health expenditures based on type of service or commodity purchased.

Public Health. Services meant to improve population health, such as health promotion, disease prevention and health inspection services. In NHEX public health also includes mental health, addiction, nursing and miscellaneous services provided in the community (but not home care).

Home Care. Care provided in the home by members of health occupations or through organized health programs supported by governments at the provincial, regional or community level.

Government administrative costs. Administrative costs of a government department or branch responsible for health programs, or general administrative services such as health information systems.

Prepayment administration. In the public sector, costs of a provincial government unit responsible for administration and payment of services insured under the Canada Health Act. At present, prepayment administration is limited to hospitals and physicians' services. In the private sector, the difference between premiums collected and claims payments.

Foreword

This paper is one in a series of feasibility studies that explores various topics associated with the National Health Expenditure (NHEX) Database administered by the Canadian Institute for Health Information (CIHI). The studies are part of the NHEX portion of the CIHI Roadmap Initiative—a national vision and four-year action plan to modernize Canada's health information system. (See Appendix A for a description of the NHEX Database and NHEX Roadmap project.)

Background

In past, the NHEX Public Health category included government expenditures for prevention, health promotion, and mental health, addiction, nursing and miscellaneous services provided in the community. The category also included administrative expenditures for health departments and, in some provinces, for the administration of specific government programs. Expenses for occupational health and prepayment administration are separate categories (they were included in the All Other category of NHEX publications).

A discussion paper prepared for the NHEX Roadmap initiative[2] suggested examining the public health category to see if it could be '...broken down into functional categories that are relevant to current concerns about the role of the public sector in population health activities (e.g. disease prevention, health promotion).

A preliminary analysis of the public health category was presented to the NHEX Advisory Group in June 2001. Subsequently, CIHI began a feasibility study to determine if the category could be split into separate components so as to separate public health and community health services from administrative costs. The existing category was renamed Public Health and Administration to better describe its contents and NHEX 2001 broke out this category from the All Other category estimates. This report presents the results of efforts to separate public health from administration in the estimates.

Revision of Provincial and Territorial Estimates

Historic estimates of the Public Health category in provincial government expenditures were revised back to 1989–1990, separating the estimates into public health (including community based services) and administration. The data showed considerable variation in expenditure per capita between provinces and through time. In an attempt to understand the reasons for these variations a detailed examination of 1999–2000 data was carried out.

Figures 1 and 2 compare expenditure per capita in the provinces and Territories for each of the sub-categories. Data for the territories were above normal and highly variable due to special circumstances.

[2] *National Health Expenditures Discussion Paper,* CIHI, June 1, 1999 (modified May 2000)

- Public health expenditures per capita in Ontario and the eastern provinces are lower than the Western provinces. Saskatchewan is highest, with per capita expenditure more than five times the level in Nova Scotia and Quebec, which have the lowest values.
- Administration expenditures are less than public health (the national averages in 1999–2000 were $81 for public health and $34 for administration). Most provinces had values between $20 and $60. Alberta represents an extreme at $131 per capita.

The next section discusses findings from the review of provincial accounts for 1999–2000.

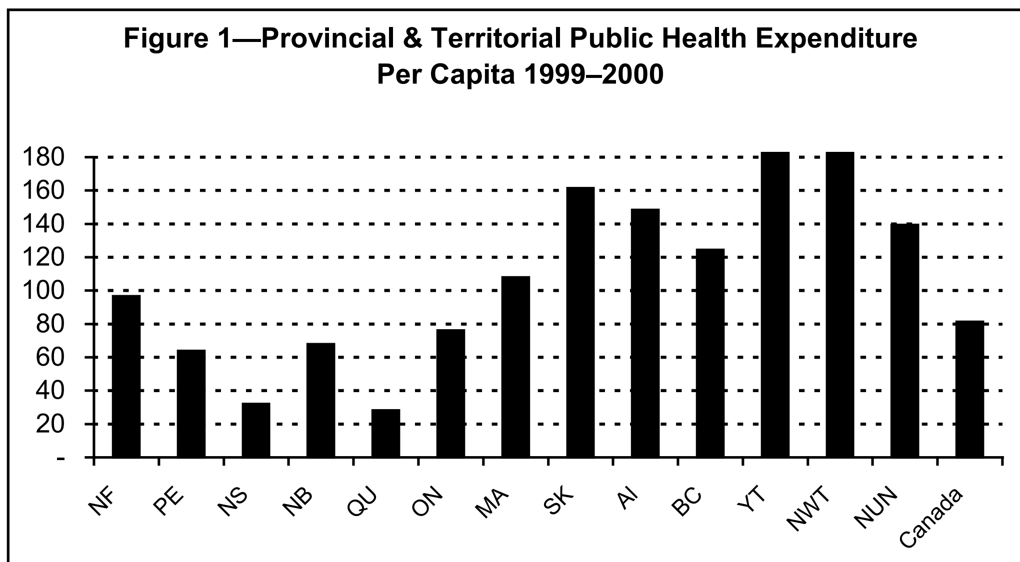


Figure 1—Provincial & Territorial Public Health Expenditure Per Capita 1999–2000

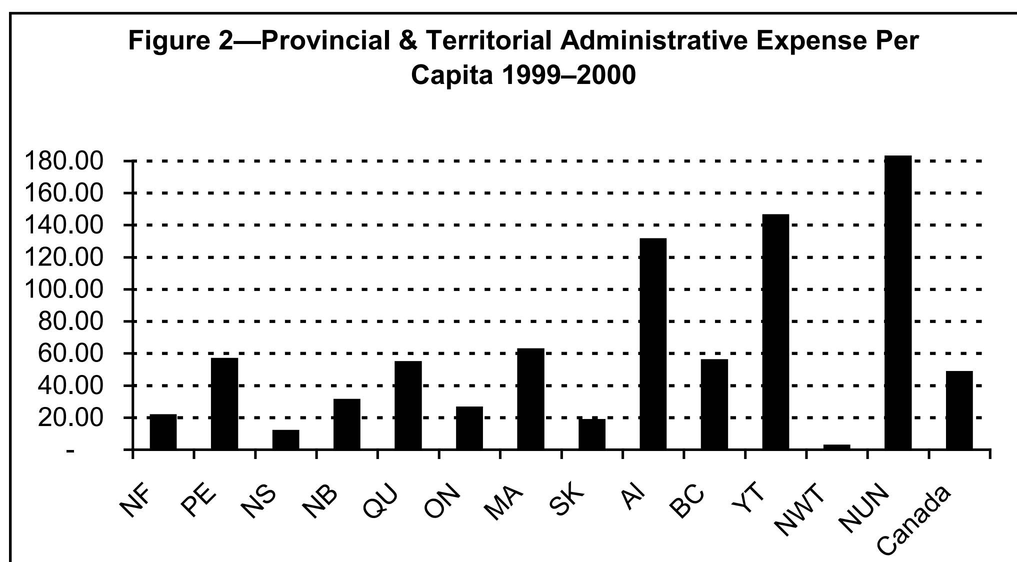


Figure 2—Provincial & Territorial Administrative Expense Per Capita 1999–2000

Review of Provincial Public Accounts

Public Accounts were reviewed for 1999–2000 with a view to identifying reasons for differences between provinces that might have resulted from the way in which data are reported in provincial documents. The review confirmed that the availability of detail in public accounts is a major constraint to producing comparable estimates across the provinces. Mental health, community based services and program administrative costs were identified as important issues and findings of the review are discussed below.

Ambiguity in matching provincial accounts to categories that can be aggregated for provincial comparisons in NHEX is a third issue. In some instances there is a lack of information about the nature of specific provincial expenditures, or unusual items. CIHI must classify expenditures within the limitations of existing category definitions and in some instances it is difficult to achieve a 'good fit' between the expenditure item and existing categories.

Mental Health and Community-based Health Services

Community based mental health services are identified explicitly in New Brunswick and Manitoba. In New Brunswick, mental health services accounted for one-half the public health category and in Manitoba they accounted for 81%. In Ontario and most of the Western provinces mental health services appear to be subsumed in larger community based services categories in public accounts. Nova Scotia does not distinguish between in-patient and out-patient mental health services and district mental health expenditures are classified as mental hospital services in NHEX. The review of 1999–2000 data suggested that estimates might become more consistent if mental health services were clearly separated into institutional and community based services[3.] On the other hand, it would be difficult to achieve a clear breakdown of public health into sub-categories such as prevention and promotion, mental health, addiction and other community based services. A comparison of Saskatchewan and Nova Scotia (which had the highest and lowest per capita expenditure) illustrates both points (Table 1).

In Saskatchewan, the main item of expenditure is Community Health Services, which includes mental health and addiction services, prevention, health promotion and a number of other public health services. In-patient mental health is identified separately and classified within the Hospitals category of NHEX. In Nova Scotia, community based public health expenditure is much lower than Saskatchewan, but almost all mental health is classified within the Hospitals category. Saskatchewan also contains explicit expenditure items for blood and provincial lab services, which presumably would be classified as hospital expenditure in Nova Scotia. Saskatchewan public health expenditure appears to be genuinely higher than Nova Scotia in some respects, but the level of detail in Saskatchewan also permits a finer examination of the data, which in turn affects the classification of estimates. It seems reasonable to conclude that, given comparable levels of data, differences between the provinces would narrow, both for public health and for hospitals (in 1999–2000, provincial hospital expenditure per capita was $1,000 in Nova Scotia and $734 in Saskatchewan).

[3] The term, institutional, is used rather than in-patient because hospital in-patient and out-patient expenditures are both assigned to the Hospitals category.

The implications of this analysis for future work are:

1. There is potential to improve the estimates by distinguishing between mental health services provided through an acute care institution and services provided in the community.
2. There are practical limits to the extent to which categories such as public health can be disaggregated into separate components such as prevention, promotion and community services

Table 1. Components of Public Health and Community Services Expenditure Saskatchewan & Nova Scotia Expenditure Per Capita—Fiscal 1999–2000

Saskatchewan	**$**	**Nova Scotia**	**$**
Community Health Services	119.28	District Public Health	27.00
Immunization	4.28	Community Health Services	0.94
Canadian Blood Services & Provincial Lab	32.13	Provincial Public Health	0.94
HIV Assistance	0.43	Provincial Mental Health & Addiction	1.43
Health Organizations & Services	5.33	Nursing Initiatives	1.55
Sub-total	161.45	Sub Total	31.86
Services classified as mental hospitals			
Mental Health Inpatient	36.10	District Mental Health	76.94

Administrative Costs

Administrative costs included in the Public Health and Administrative Costs category in past include most government administrative costs except the costs of services insured under the Canada Health Act, which are classified as Prepayment Administration.

Administrative costs for specific programs (e.g. home care) are subsumed in the program estimates in most provinces but are broken out in others. This difference in reporting was an important factor in differences between per capita expenditure in Figure 2. In Alberta, even institutional administrative costs in the regions appear to be broken out in the public accounts and classified as administration in NHEX (Alberta regions use MIS functional categories in reporting expenditures).

This study proposes that program administrative costs should consistently be identified with the specific program to which they apply. In effect, this would mean that the administrative costs incurred in the process of providing services would be treated consistently for services provided by autonomous or private providers (e.g. hospitals and physicians) and services provided directly by government agencies. Working definitions for administrative costs that would be identified separately in NHEX would be:

Government administrative costs: Administrative costs of a government department or branch responsible for health programs, or general administrative services such as information systems.

Prepayment administration: Costs of a government unit responsible for administration and payment of services insured under the Canada Health Act. At present, prepayment administration is limited to hospitals and physicians' services, for which consistent standards of coverage exist in all jurisdictions. In future, if additional services were brought under the Act the definition of Prepayment Administration could be extended to those services[4].

As illustrated in the Alberta accounts, there will be benefit in triangulating estimates from different CIHI databases to achieve consistent classifications—in particular the estimates provided for the MIS system and the Annual Hospital Survey. Additional work in this area is recommended as a follow-up to this study.

Alternative Classifications of Public Health and Administrative Costs

Table 2 shows per capita estimates for public health (PH) and administrative costs (AD) together with the related categories of Occupational Health (OH) and Prepayment Administration (PA).

- Occupational health is included in the Public Health category as defined by OECD. It is a relatively small item in the provincial estimates and has a negligible effect on the variability of the combined estimates.
- Prepayment administration in NHEX is meant to include only the costs of administering services covered by the Canada Health Act. It is not certain that this objective is achieved in all provinces, however, and the combination of AD and PA reduces variability among the provinces in both sub-categories.

[4] The Canada Health Act also provides funding for Extended Health Benefits, but the benefits are not defined consistently across provinces and territories.

Table 2. Expanded Definitions of Public Health and Administration Per Capita Expenditure Provincial Sector—1999–2000

Prov	PH	OH	Total		AD	PA	Total
NF	96.68	4.99	101.67		21.26	66.64	87.90
PE	63.90	1.09	64.99		56.57	19.98	76.54
NS	31.92	1.17	33.10		11.51	11.27	22.78
NB	67.95	1.43	69.38		31.03	8.47	39.50
QU	28.11	4.60	32.72		54.44	56.54	110.98
ON	76.18	3.51	79.70		26.19	9.70	35.89
MA	108.01	4.16	112.16		62.55	7.84	70.39
SK	161.45	3.71	165.16		18.33	17.67	36.00
AI	148.32	1.29	149.61		131.11	3.21	134.32
BC	124.39	0.00	124.39		55.69	8.09	63.78
YT	437.00	10.68	447.63		46.10	23.72	169.78
NWT	201.40	-	201.36		2.5	248.26	250.73
NUN	139.30				312.8		
Canada	81.37	3.02	84.26		48.23	21.73	69.68

10 Province Statistics

Average	90.69	2.60	93.29		46.87	20.94	67.81
St. Dev	43.14	1.68	43.11		33.12	20.96	34.13
Variability	47.6%	64.9%	46.2%		70.7%	100.1%	50.3%

There is merit in considering a re-combination of published estimates so that:

- Public health in future would include prevention, promotion, community based services (including mental health) and occupational health.
- A new aggregate category of administrative expenditures include both government administrative expense and prepayment administration. Separate estimates would continue to be available for each component.

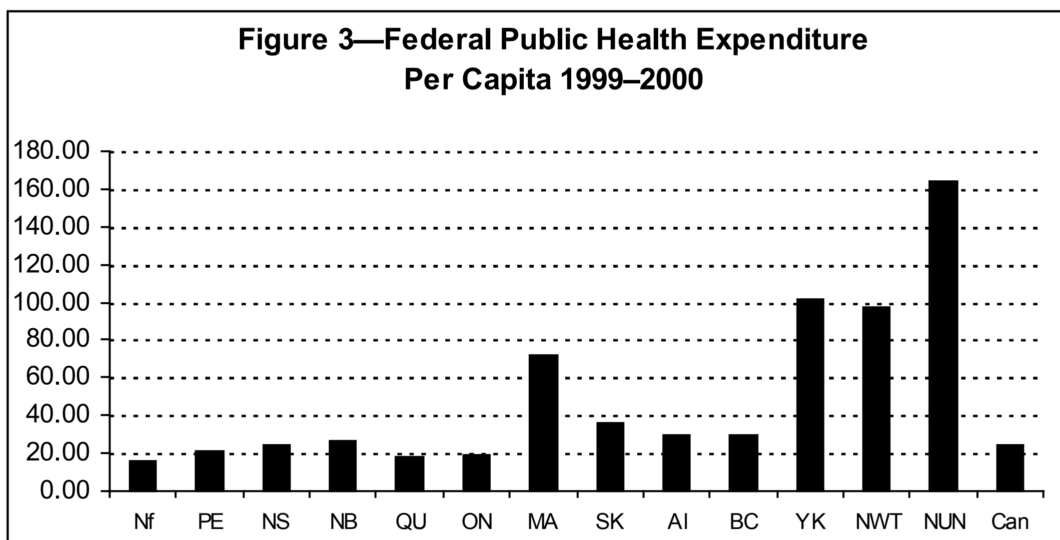
Federal Municipal and WCB Estimates

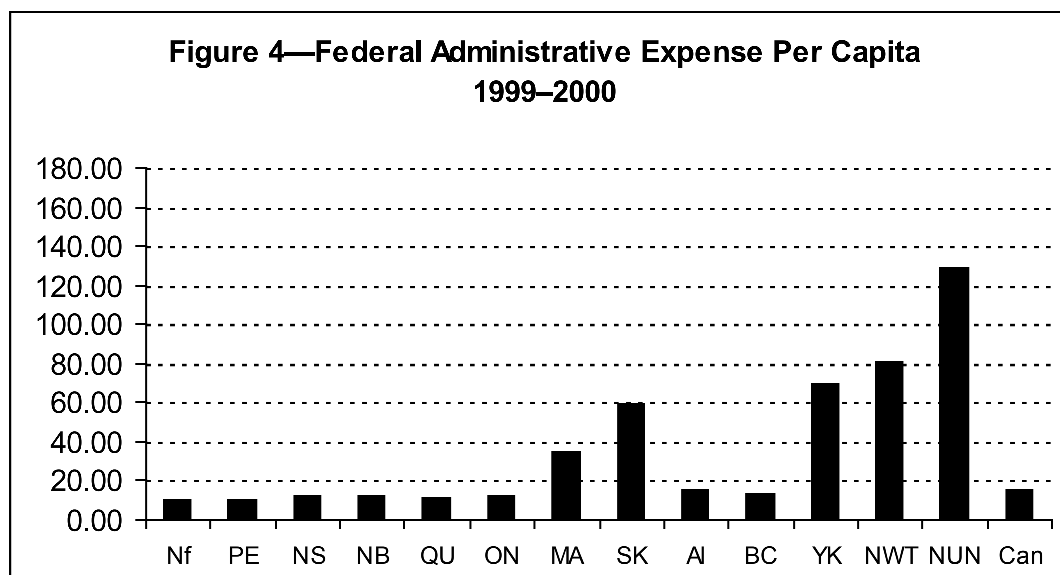
Federal expenditures were allocated between public health and administrative expenditures for 1999–2000 only, due to time and resource constraints. The results are shown in Figures 3 and 4. About 60% of federal expenditures for the Public Health and Administration category were considered to be public health and, except for Manitoba, were quite consistent across the provinces. Administrative expenditures were also quite

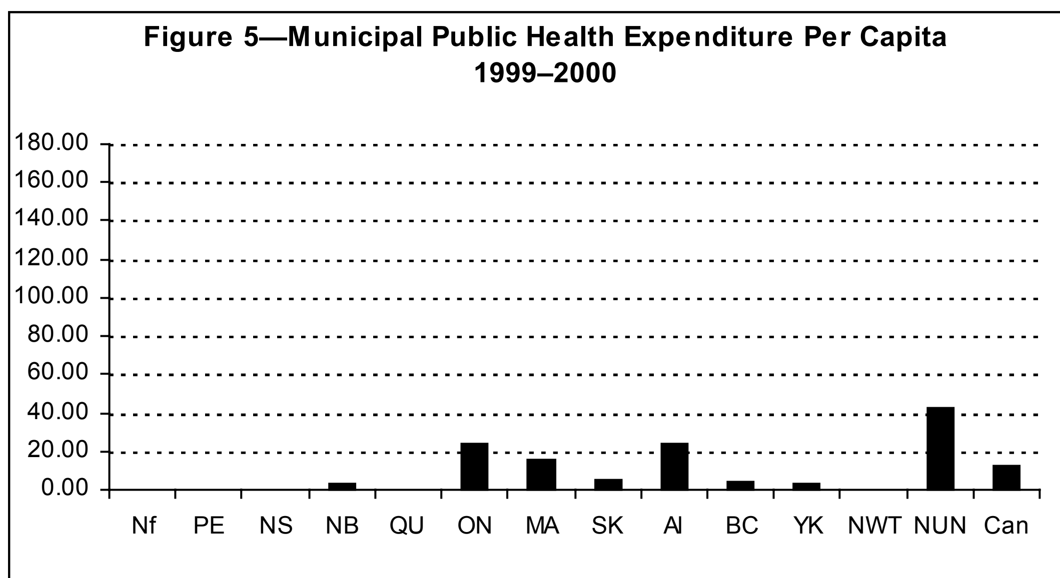
consistent, with the exception of Manitoba and Saskatchewan. Since federal expenditures in each province are all obtained from the same federal departments there is less variation resulting from different nomenclature than in provincial and territorial accounts. In all, there were 11 different departments reporting.

Municipal expenditures are shown in Figure 5. They tend to be relatively low in most provinces. All were considered to fall in the category of public health.

WCB expenditures were only reported in Ontario ($1.46 per capita) and British Columbia ($0.43 per capita). Expenditures were considered to be public health in both instances.







Conclusions and Recommendations

Conclusions and recommendations discussed in this report are summarized below:

1. The category now reported as public health and administrative costs should be separated into components of (i) public health and community based services[5] and (ii) government administrative costs.

2. Additional work should be carried out with a view to (i) achieving a consistent classification of community based mental health and other community based services across the provinces and (ii) resolving ambiguities noted in the review of provincial accounts.

3. Expenditure data from the MIS reporting system and the Annual Hospital Survey should be used where possible to assist in resolving issues such as the reporting of institutional administrative expenses in Alberta.

4. The administrative costs associated with delivering specific programs should consistently be included with the program to which they apply. Working definitions for administrative costs to be identified separately in NHEX should be:

   Government administrative costs: Administrative costs of a government department or branch responsible for health programs, or general administrative services such as health information systems and overseeing contracts with independent providers.

[5] Community based services refers to services such as mental health, public health nursing and other types of care provided by provinces or district authorities. Community based services by physicians, other providers and home care programs would not be affected by this recommendation.

Prepayment administration: Costs of a provincial government unit responsible for administration and payment of services insured under the Canada Health Act. At present, prepayment administration is limited to hospitals and physicians' services, for which consistent standards of coverage exist in all jurisdictions. In future, if additional services were brought under the Act the definition of Prepayment Administration could be extended to those services.

5. There is merit in considering a re-combination of published estimates so that:
    - Public health estimates would include occupational health.
    - A new aggregate category of administrative expenditures include both government administrative expense and prepayment administration. Separate estimates would continue to be available for each component.

Appendix A
National Health Expenditure Database Roadmap Initiative

Background

The National Health Expenditure (NHEX) database is the authoritative source of information about health expenditures and health expenditure trends in Canada. The database is compiled with aggregate expenditure information from 110 different sources. It is updated continuously by a process that includes data collection and consultations with data suppliers.

The NHEX database presently includes health expenditure estimates from 1960 to 1997 and projections for 1998 and 1999. Estimates by source of funds are available at the national level for four sub-divisions of the public sector and for three sub-divisions of the private sector. Estimates by use of funds are available for all sectors within seven major categories, which are subdivided into greater detail in the database.

Definition of Health Expenditures

Health expenditures are defined as "*expenditures for which the primary objective is to improve or prevent the deterioration of health status*". The phrase '*primary objective' is* interpreted in terms of normal usage, not personal motivation, which may change according to circumstance. The measurement of health expenditure is conceptually similar to the expenditure-based National Income and Expenditure Accounts[6]. Health expenditures are the final value of goods and services, capital investment, research and administrative costs in the public and private sectors of the economy. Estimates are available in both current dollars and constant prices.

The objectives of the health expenditure series are:

1. To support the development and evaluation of health programs in Canada by all levels of government, and within the private sector; and
2. To compile information on health expenditures that will accurately portray the importance of health care as a component of national expenditure.

Features that increase the usefulness of the expenditure estimates include:

- *Comprehensiveness*: All health expenditures in Canada are included in the estimates.
- *Consistency*: Annual estimates from reliable sources are available for all data elements. Definitions and methods of organizing data are the same from year-to-year. Historical estimates are revised when definitions or data collection methodologies change.
- *Data Standards*: Expenditure estimates meet standards for national health accounts developed by the Organization for Economic Cooperation and Development. Data concepts conform to definitions used in reporting systems for health care institutions, health human resources and, at highly aggregate levels, population utilization of health services.

[6] *Gross Domestic Product, by income and expenditure.* Canadian Economic Observer, Periodical. Statistics Canada, Ottawa.

NHEX Vision

The vision for the NHEX database is that it will be a strong, well-defined component of a Canadian health information system. The NHEX database will focus on health expenditures and will use classification systems that are relevant to the needs of health care stakeholders and the public. The health information system will allow information on health expenditures to be integrated with information about resource availability, resource usage and health outcomes produced from other databases or research projects.

Project Scope

The scope of the NHEX roadmap project includes an assessment of the existing database, including data quality and level of detail, in light of current and emerging user needs. Emerging issues and data quality improvements will be prioritized according to their importance to national and provincial health policy.

A series of feasibility studies will be conducted on priority issue areas. After each study, decisions will be taken about the advisability and possibility of expanding estimates in the NHEX database to include data on the topic studied. This process will guide required modifications to the database.

Project Goal and Objectives

The goal of the NHEX roadmap project is to make enhancements to the NHEX database to ensure its continued relevance and usefulness in supporting accurate macro level analysis of Canadian health spending. Specific objectives include:

- To identify current and emerging issues;
- To assess the relative importance of identified issues to the National Health Expenditure database;
- To reconcile differences in the classification of health expenditures;
- To identify data quality issues in current database, prioritize required changes and implement, where possible; and
- Where required, to implement modifications to the database.