



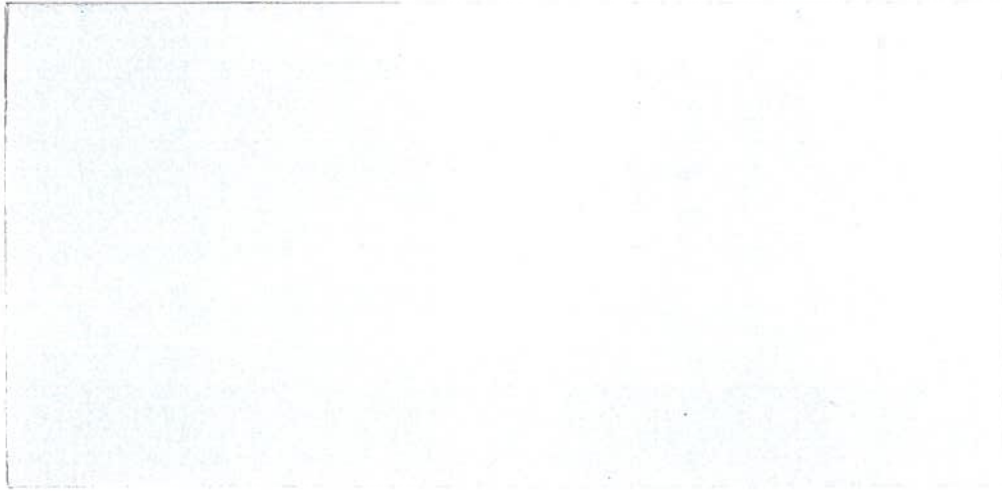
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**HEALTH TECHNOLOGY ASSESSMENT IN CANADA:
A TEN YEAR REVIEW
PART 2**

Devidas Menon ^{1,2}

Working Paper 00-5

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A TEN YEAR REVIEW
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Working Paper 00-5

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LIST OF FIGURES

| | |
|-----------------------------|----|
| FIGURE 1..... | 12 |
| Diagnostic Technologies (%) | |
| FIGURE 2..... | 13 |
| Therapeutic Technologies | |
| FIGURE 3..... | 14 |
| Screening Technologies | |
| FIGURE 4..... | 15 |
| Other Technologies | |
| FIGURE 5..... | 16 |
| Devices | |
| FIGURES 6..... | 17 |
| Procedures | |
| FIGURE 7..... | 18 |
| Drugs | |
| FIGURE 8..... | 19 |
| Other | |
| FIGURE 9..... | 20 |
| Costs | |
| FIGURE 10..... | 21 |
| Effectiveness | |
| FIGURE 11..... | 22 |
| Safety | |
| FIGURE 12..... | 23 |
| Ethics | |
| FIGURE 13..... | 24 |
| Liability | |
| FIGURE 14..... | 25 |
| Other | |
| FIGURE 15..... | 26 |
| Policy Question Defined | |

| | |
|--|----|
| FIGURE 16..... | 27 |
| Decision Maker – Government | |
| FIGURE 17..... | 28 |
| Decision Maker – Institutional/Regional Health Authority | |
| FIGURE 18..... | 29 |
| Decision Maker – Health Professional | |
| FIGURE 19..... | 30 |
| Decision Maker – Consumer | |
| FIGURE 20..... | 31 |
| Decision Maker – Not Specified | |
| FIGURE 21..... | 32 |
| Methods (Reviews) | |
| FIGURE 22..... | 33 |
| Methods (Meta-analyses) | |
| FIGURE 23..... | 34 |
| Methods (Surveys) | |
| FIGURES 24..... | 35 |
| Methods (Economics/Costing) | |
| FIGURE 25..... | 36 |
| Methods (Other) | |
| FIGURE 26..... | 37 |
| Search Strategy Clear | |
| FIGURE 27..... | 38 |
| Selection Criteria Clear | |
| FIGURE 28..... | 39 |
| Included Summary/Abstract | |
| FIGURE 29..... | 40 |
| Recommendations Provided | |
| FIGURE 30..... | 41 |
| Conclusions Provided | |
| FIGURE 31..... | 42 |
| Recommendations or Conclusions | |

EXECUTIVE SUMMARY

Background

Since 1988, four health technology assessment (HTA) organizations have been created by Canadian federal and provincial governments. These are the Canadian Coordinating Office for Health Technology Assessment (CCOHTA); the Conseil d'évaluation des technologies de la santé du Québec (CETS); the British Columbia Office of Health Technology Assessment (BCOHTA), and the Alberta Heritage Foundation for Medical Research (AHFMR) Health Technology Assessment Unit.

Objectives

The objectives of this study were to review the reports in English issued by these four agencies, and to identify areas of focus and trends in their publications in the period from 1988 to 1998.

Methods

Publications were requested from the four organizations. Reports which were not externally reviewed were excluded from this study. A total of 117 reports were included (18 from AHFMR, 22 from BCOHTA, 38 from CCOHTA and 39 from CETS). Each document was classified according to: technology type(s), assessment focus, policy decision specified, relevant decision maker, data sources, methodologies used, and whether or not conclusions or recommendations were made. By grouping the period 1988-1998 into three time frames, trends by each agency over time were obtained.

Results

All agencies have concentrated on therapeutic technologies. CCOHTA's focus has been on drugs, AHFMR's on devices, and BCOHTA's and CETS' on procedures. In assessment, safety, effectiveness and costs were commonly examined

INTRODUCTION

In Part 1 of the report, *Health Technology Assessment in Canada: A Ten Year Review*, 117 health technology assessment (HTA) documents from the four Canadian HTA agencies (the Conseil d'évaluation des technologies de la santé du Québec (CETS), the Canadian Coordinating Office for Health Technology Assessment (CCOHTA), the British Columbia Office of Health Technology Assessment (BCOHTA), and the Alberta Heritage Foundation for Medical Research, Health Technology Assessment Unit (AHFMR)), produced during the period 1988 to 1998, were reviewed. The intent was to identify areas of focus and trends in Canadian HTA as a whole. In this second part, the results of the analysis at the individual organization level are provided.

MANDATES OF CANADIAN HTA AGENCIES

Although all agencies assess health technologies, each has a somewhat different mandate and role within the national and provincial health care system. The roles of each agency are outlined below in excerpts taken from the publications of each agency.

Canadian Coordinating Office for Health Technology Assessment

CCOHTA was established to provide information on emerging and existing health care technologies to decision makers, and to facilitate the exchange and coordination of information on health technologies.¹

CCOHTA's mission is to contribute to the health of Canadians by encouraging the appropriate use of health technology, through the collection, analysis, creation and dissemination of information concerning the effectiveness and cost of technology and its impact on health, and the provision of this information to decision-makers. CCOHTA's goals are: to improve decision-making regarding health technologies at government, institutional, professional and individual levels so that effective, appropriate and cost-effective health care is the result; to promote an evaluative culture in health care, with its shared meanings, norms and practices based on knowledge.²

REVIEW OF REPORTS*

95 of the 117 publications were classified as full technology assessment reports, whereas the remainder of publications were issued in summary form (ie. briefs, technotes, bulletins, etc.) For the purposes of the final analysis, and the relatively small number of reports produced on average by any individual organization each year, data are presented over three time periods. Following are the numbers of reports by agency during these three periods.

| | CETS | CCOHTA | BCOHTA | AHFMR | ALL |
|---------|------|--------|--------|-------|-----|
| 1989-92 | 16 | 12 | 4 | 0 | 32 |
| 1992-95 | 11 | 8 | 9 | 0 | 28 |
| 1996-98 | 12 | 18 | 9 | 18 | 57 |

NB. Note that the AHFMR unit produced its first report in 1996.

1. Technologies

The technologies being assessed were classified in two ways: a) diagnostic, therapeutic, screening, and “other”, and b) devices, drugs, procedures, and “other”. Some reports examined more than one type of technology. Figures 1 to 8 show the trends in the focus on specific technology types for each agency.

2. Focus of Assessment

The focus (or foci) of each assessment was (were) classified as follows: costs, effectiveness, safety, ethics, liability, and “other”. (See Figures 9 to 14.)

3. Policy Question

Each report was also assessed as to whether the policy question being addressed through the assessment was clearly stated. Results are presented in Figure 15.

* See Appendix 1 for a list of all the reports

for which trend data are available, the proportion of reports on therapeutic technologies stayed constant or increased over the three time periods. No other major trends are noticeable.

BCOHTA assessments looked at screening technologies more often than the other agencies, in all three time periods, although the number of BCOHTA reports assessing screening was the same as CETS. On the other hand, the focus of different agencies on drugs, devices and procedures has been different. Procedures were assessed most often by CETS (69% of all reports) and BCOHTA (50%), while drugs were assessed most often by CCOHTA (55%) and devices by AHFMR (56%). The only noticeable trends over time were in CETS reports on devices and CCOHTA reports on drugs, both of which increased considerably over the three time periods.

Focus of the Technology Assessment (Figures 9 to 14)

Costs, effectiveness and safety were aspects of the assessment in most reports of all agencies over the period of review. Effectiveness was assessed in at least 60% of reports of all agencies in each of the three time periods. Effectiveness analyses were included more often in CCOHTA, BCOHTA and AHFMR reports than by CETS. Costing, cost analysis and economic evaluation were often a focus of CETS (64%) and CCOHTA (89%) assessments. In 29% of all reports, an “other” focus of assessment was specified. These included utilization, quality of life, policy analysis and program issues.

Reason for the Assessment (Figures 15 to 20)

In most of the reports in this review (96 of 117, or 82%), a policy question was well defined. Over the entire time period, this ranged from 63% for CCOHTA to 100% for AHFMR. In general, reports have improved in this aspect over the three periods of time.

In 29% of all reports, the relevant decision-maker for the report was not well identified. Among the agencies, this “non-specification” ranged from 5% of CETS reports to 59% of BCOHTA reports. As far as a trend over the three time periods was concerned, CETS reports performed best. In 1989/92, 77% of CETS reports clearly identified the intended audience for the assessment, and in the following periods the decision maker was identified in all CETS studies.

Reporting and Conclusions (Figures 28 to 31)

Nearly three-quarters of all reports over the review period contain an executive summary or a structured abstract. The trend over the three time periods has been towards all reports having one of these. The proportion of such reports rose from 38% to 91% to 100% for CETS, 17% to 63% to 94% for CCOHTA, and 50% to 78% for BCOHTA.

Almost all reports provided conclusions and / or recommendations (112 of 117, or 96%). However, except with CETS reports, most reports stopped short of recommendations. Of the 15 of 117 reports that had recommendations over the review period, 11 were CETS reports.

CONCLUSIONS

1. Assessments of therapeutic technologies were the most common, and the proportion of such assessments has increased over the three time periods in almost all cases.
2. In comparison to the other agencies, a greater percentage of BCOHTA assessments focused on screening technologies.
3. Most CETS and BCOHTA assessments were on procedures. CCOHTA assessments were most often on drugs, and AHFMR assessments were primarily on medical devices.
4. Assessment of effectiveness of the technology was the most common aspect of the HTA reports. But both safety and cost analysis / economic evaluations have frequently been included.
5. The policy question that an assessment was intended to address was stated clearly most of the time, and the reports improved consistently over time for all agencies.
6. In almost a third of all reports, the decision maker for whom the assessment was intended was not clearly identified. CETS performed best in this regard in all three time periods.
7. All agencies have primarily undertaken assessments for use by government, though in one case, (AHFMR), more than a third of reports were targeted to health institutions and / or health authorities.
8. Literature reviews and economic evaluation (in this order), are the most frequently used methods in the assessments. The focus of CCOHTA reports on economic evaluation has increased significantly over the three time periods.
9. Explicit reporting of literature search strategies and inclusion / exclusion criteria used in an assessment has improved, particularly in BCOHTA and CCOHTA reports. CETS reports provided this information far less frequently.

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4. Kazanjian A. Foreward. In: A systematic review and critical appraisal of the scientific evidence on craniosacral therapy. Vancouver, BC: B.C. Office of Health Technology Assessment; 1999. p. iii.
5. Conseil d'évaluation des technologies de la santé du Québec. Activity report, April 1, 1996 to March 31, 1997. Montréal, QC: Conseil d'évaluation des technologies de la santé du Québec; 1998. p. 2-3.

Figure 2. Therapeutic Technologies

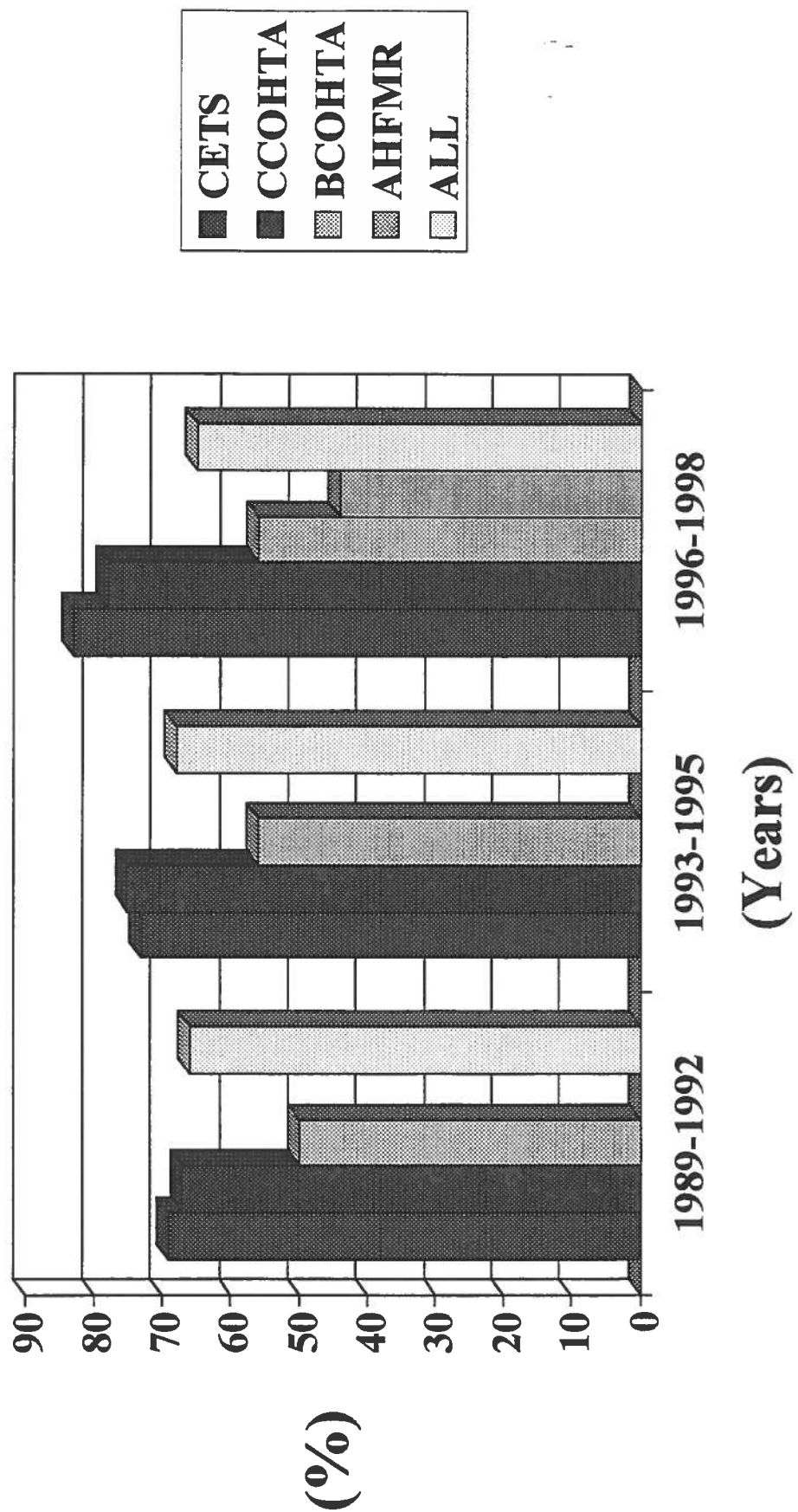


Figure 4. Other Technologies

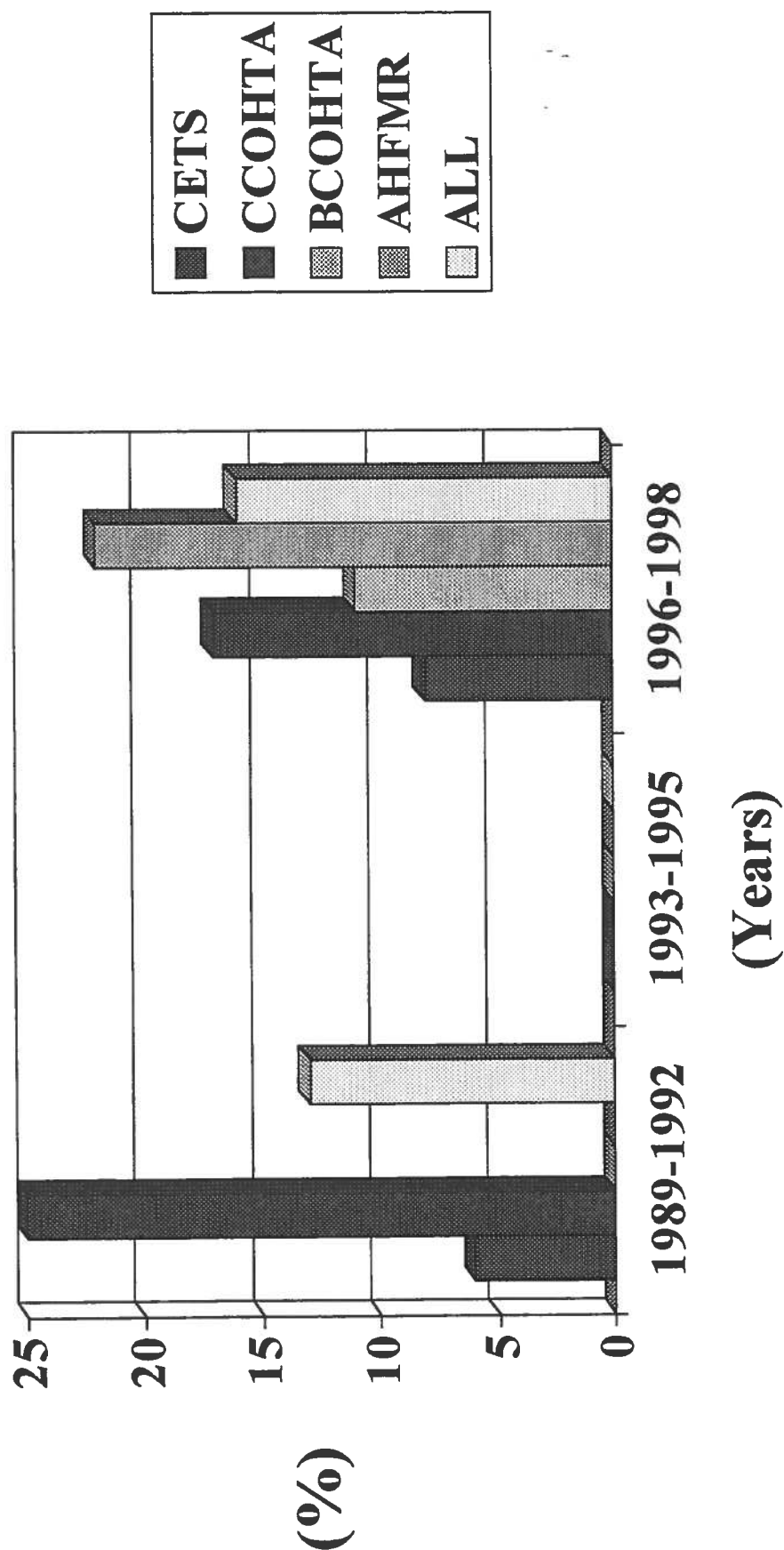


Figure 6. Procedures

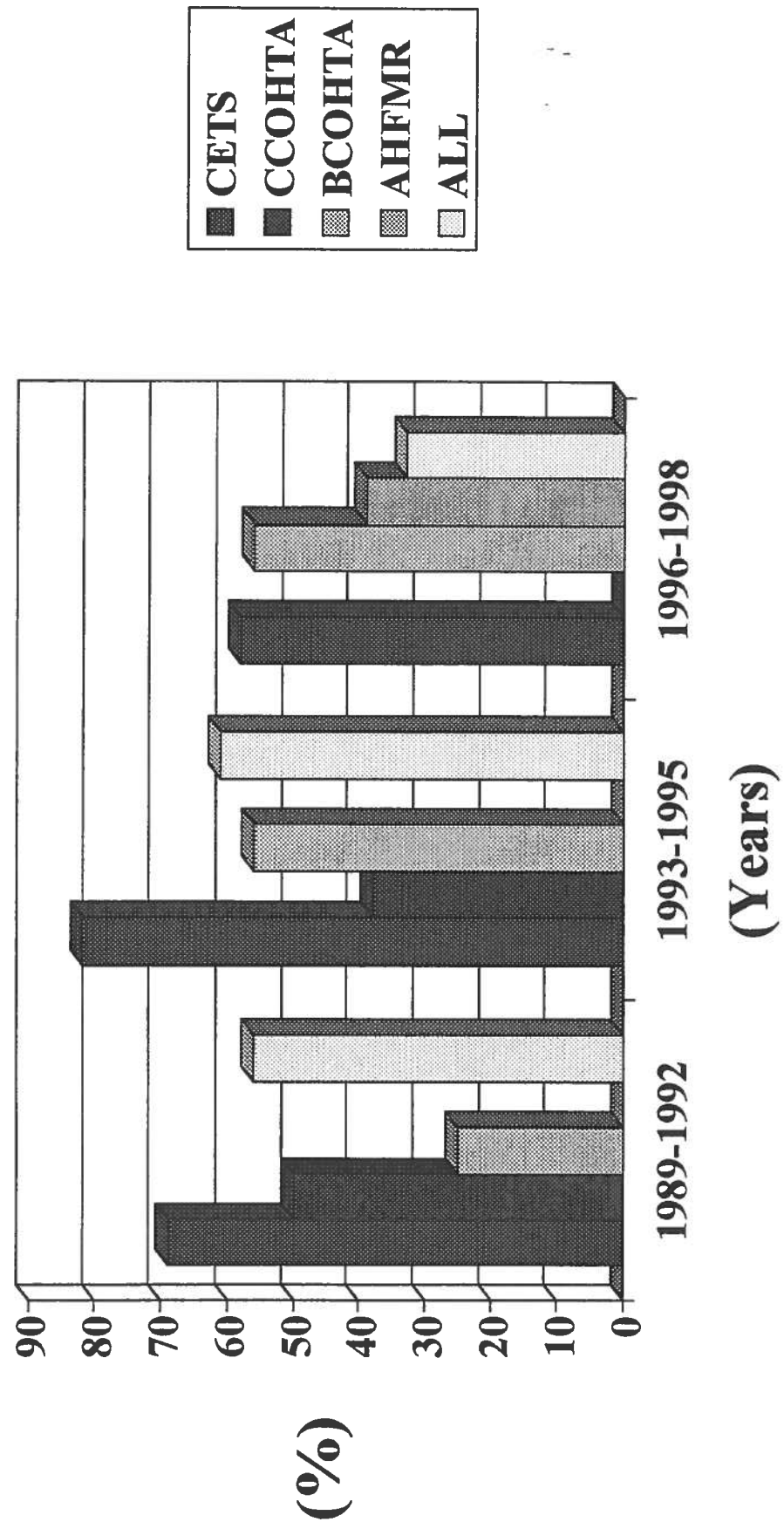


Figure 8. Other

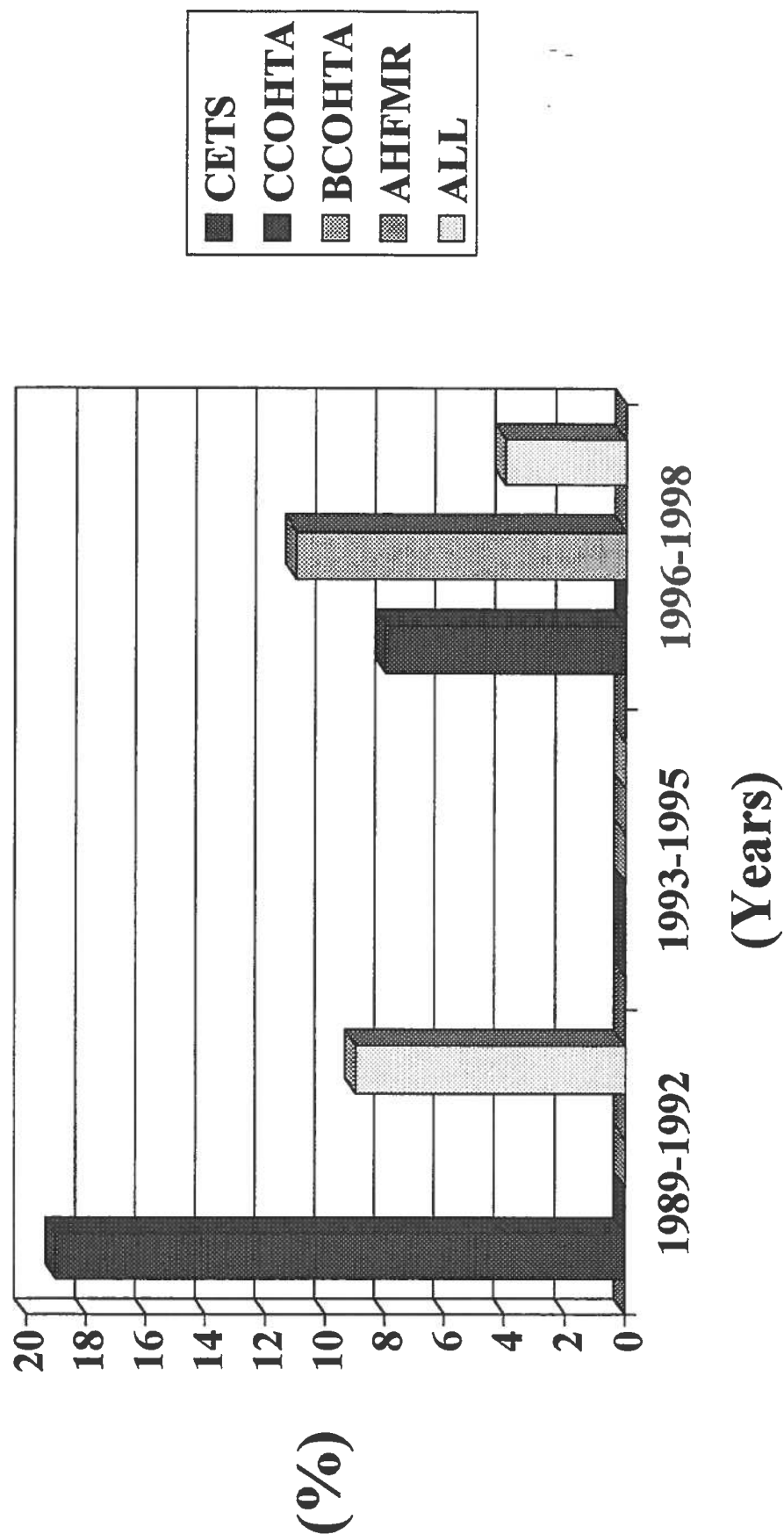


Figure 10. Effectiveness

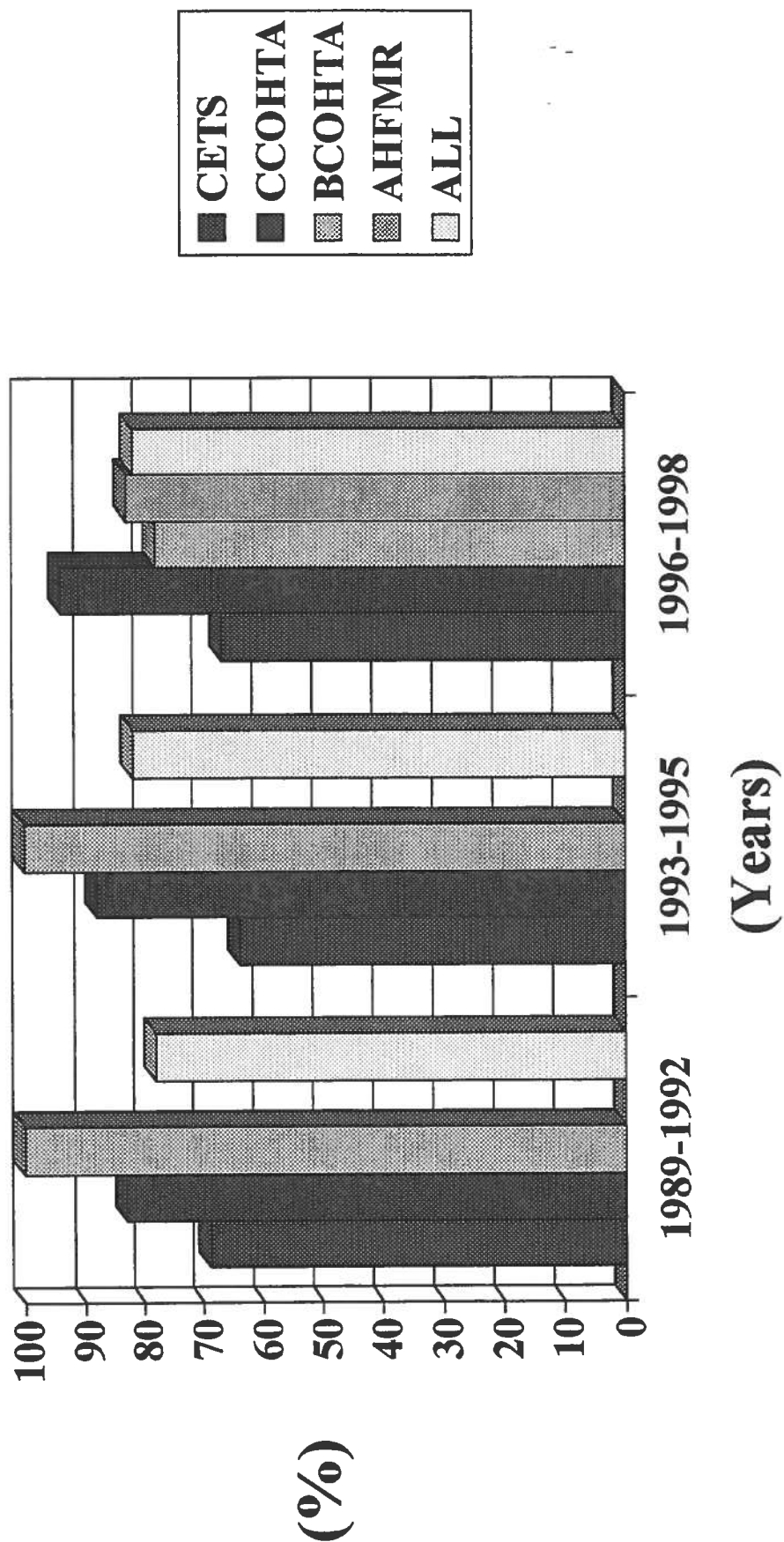


Figure 12. Ethics

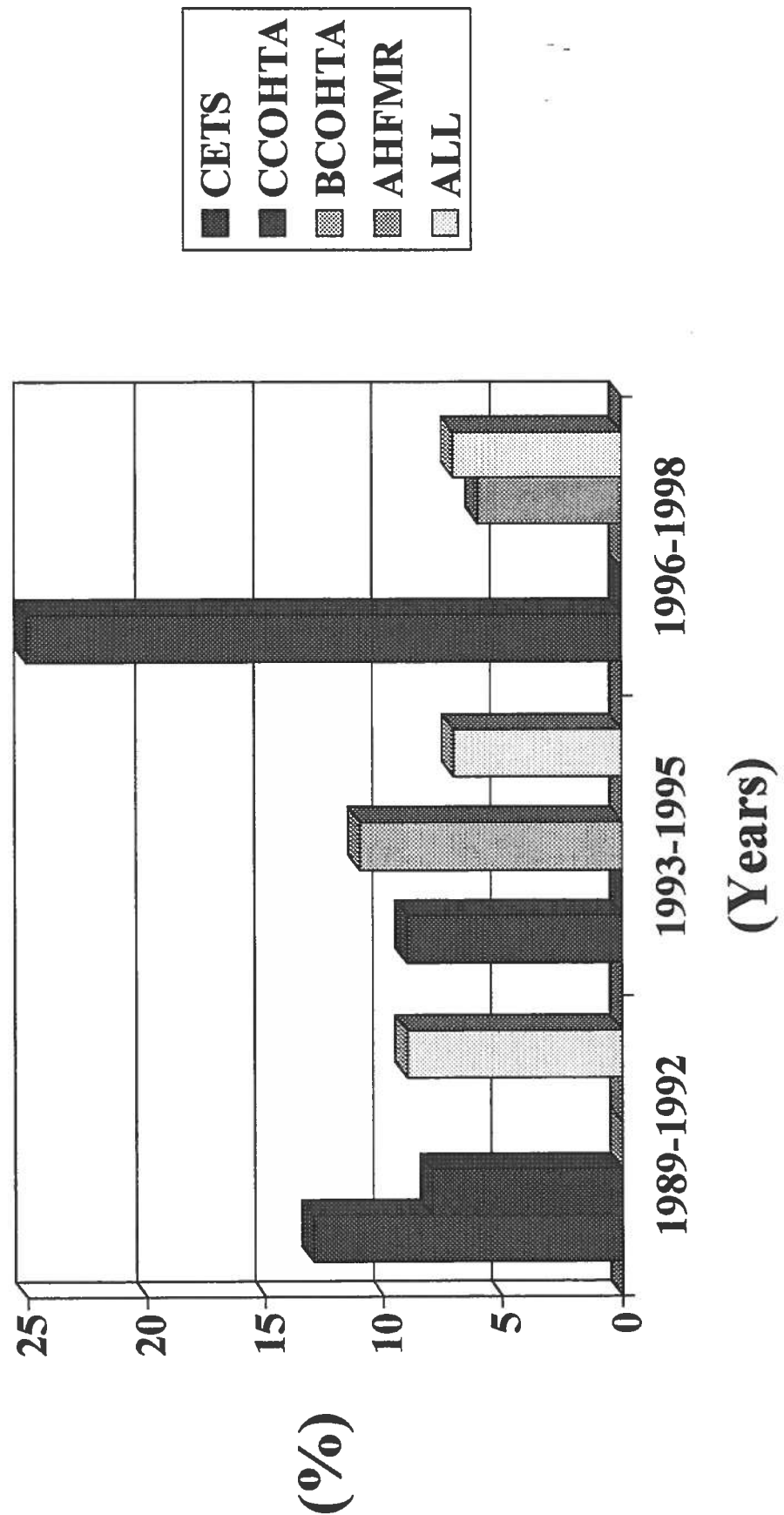


Figure 14. Other

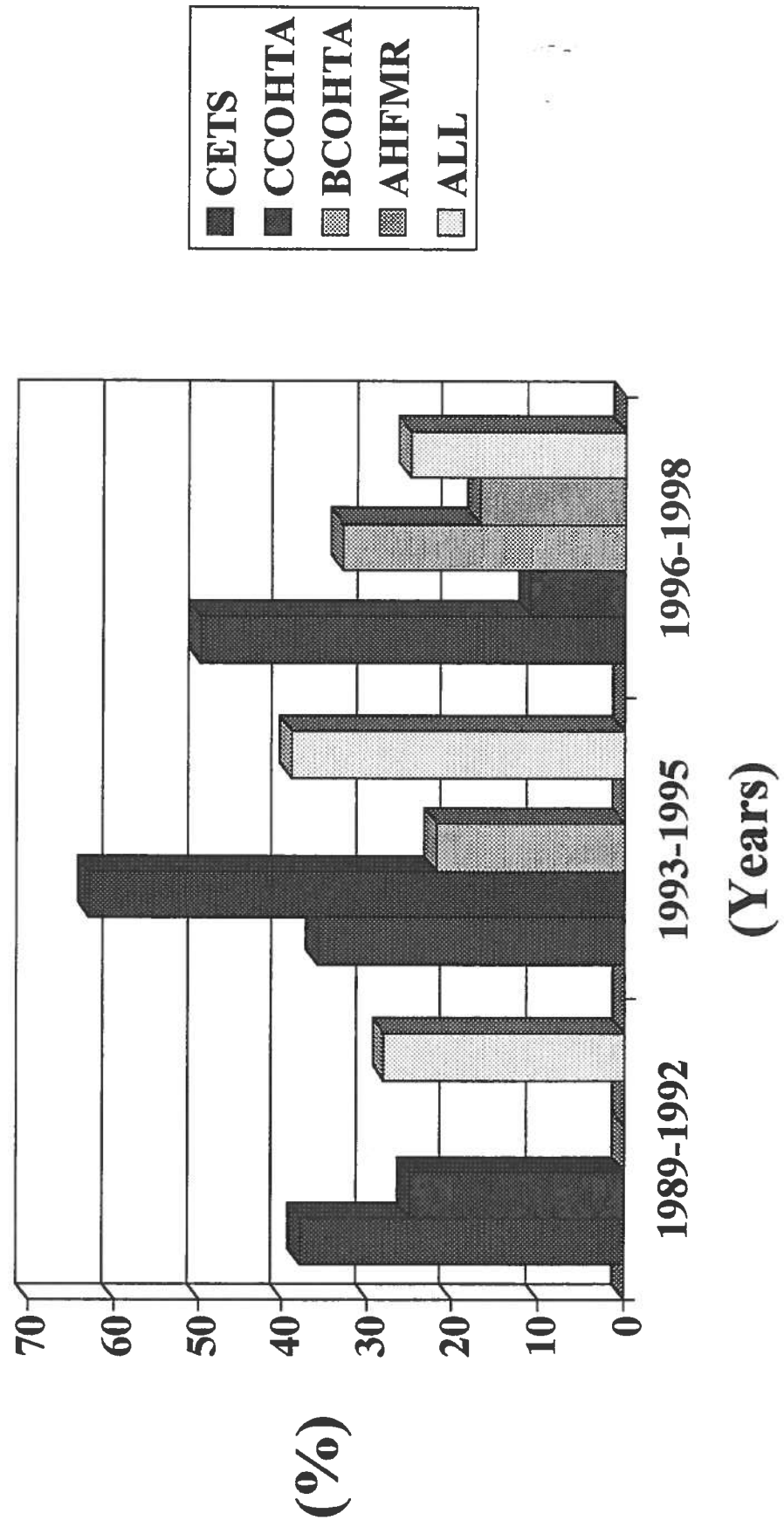


Figure 16. Decision Maker - Government

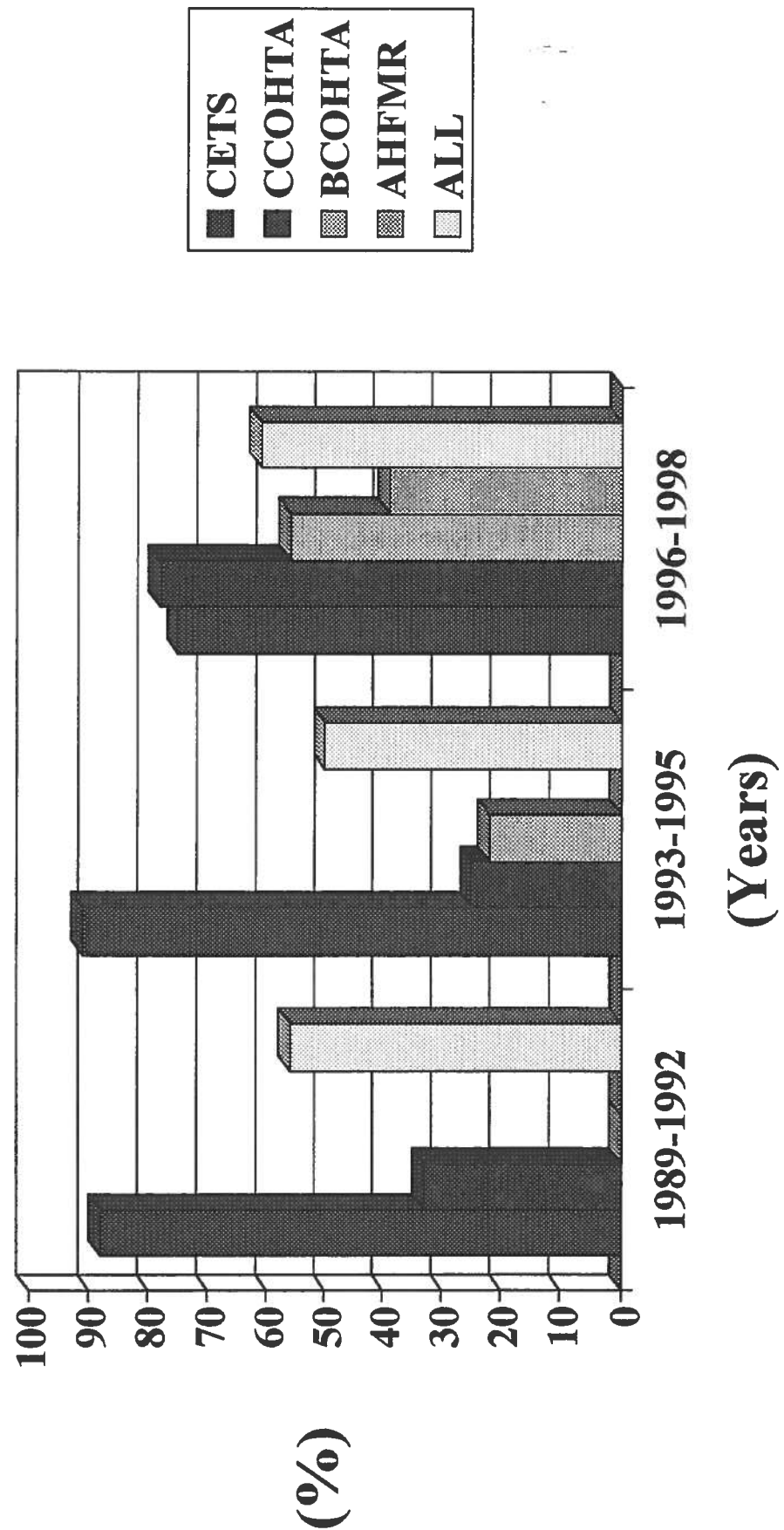


Figure 18. Decision Maker - Health Professional

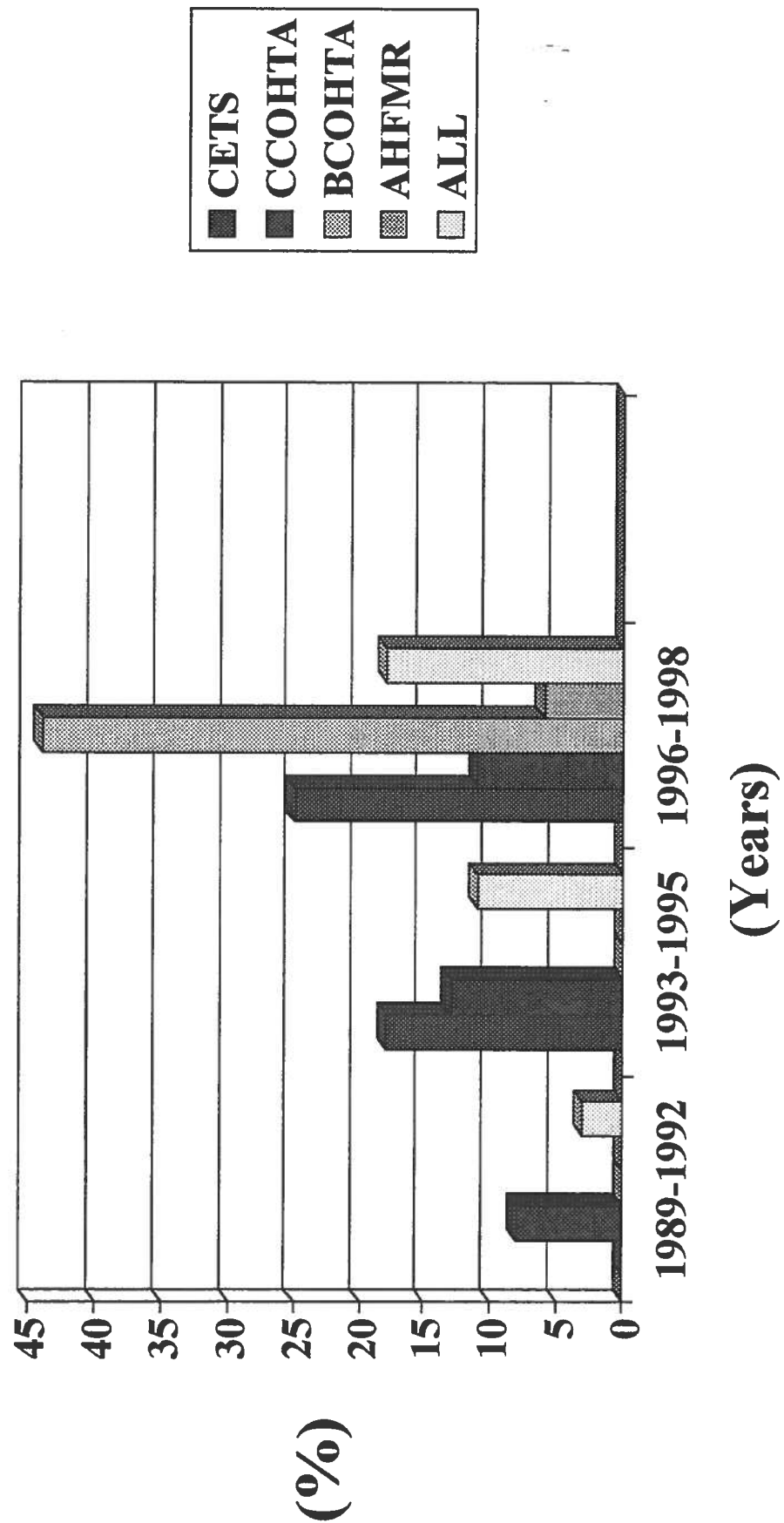


Figure 20. Decision Maker - Not Specified

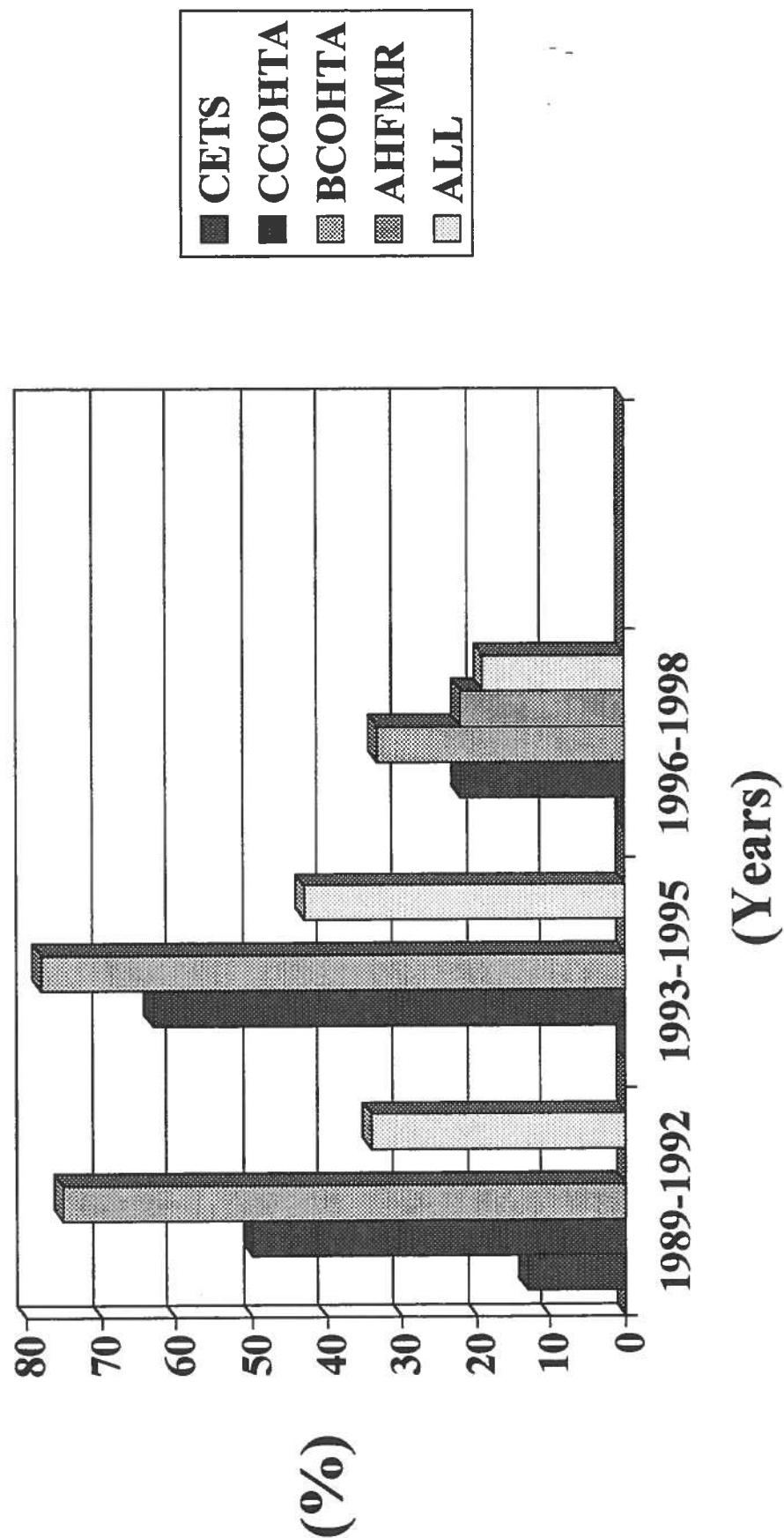


Figure 22. Methods (Meta-analyses)

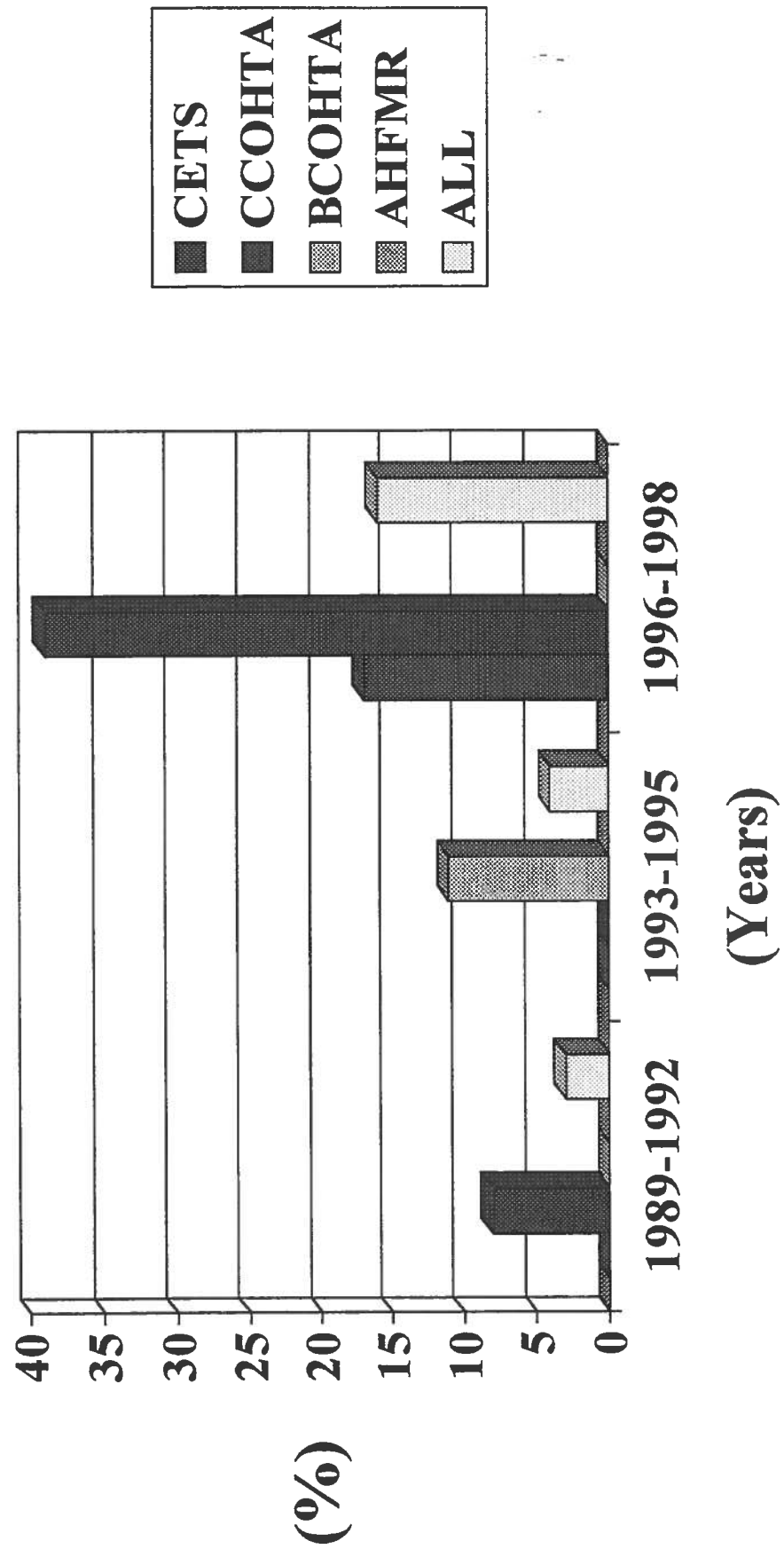


Figure 24. Methods (Economics/Costing)

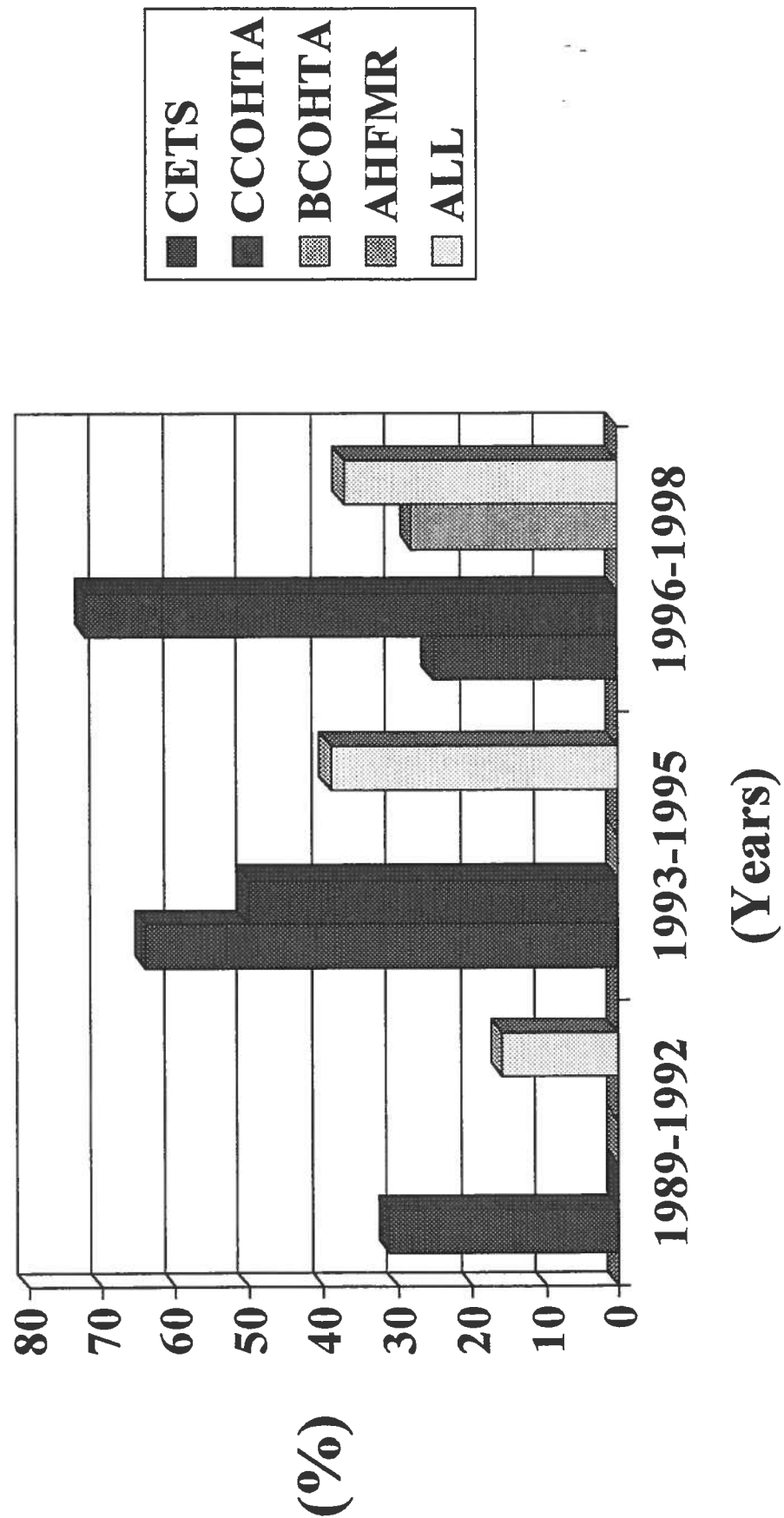


Figure 26. Search Strategy Clear

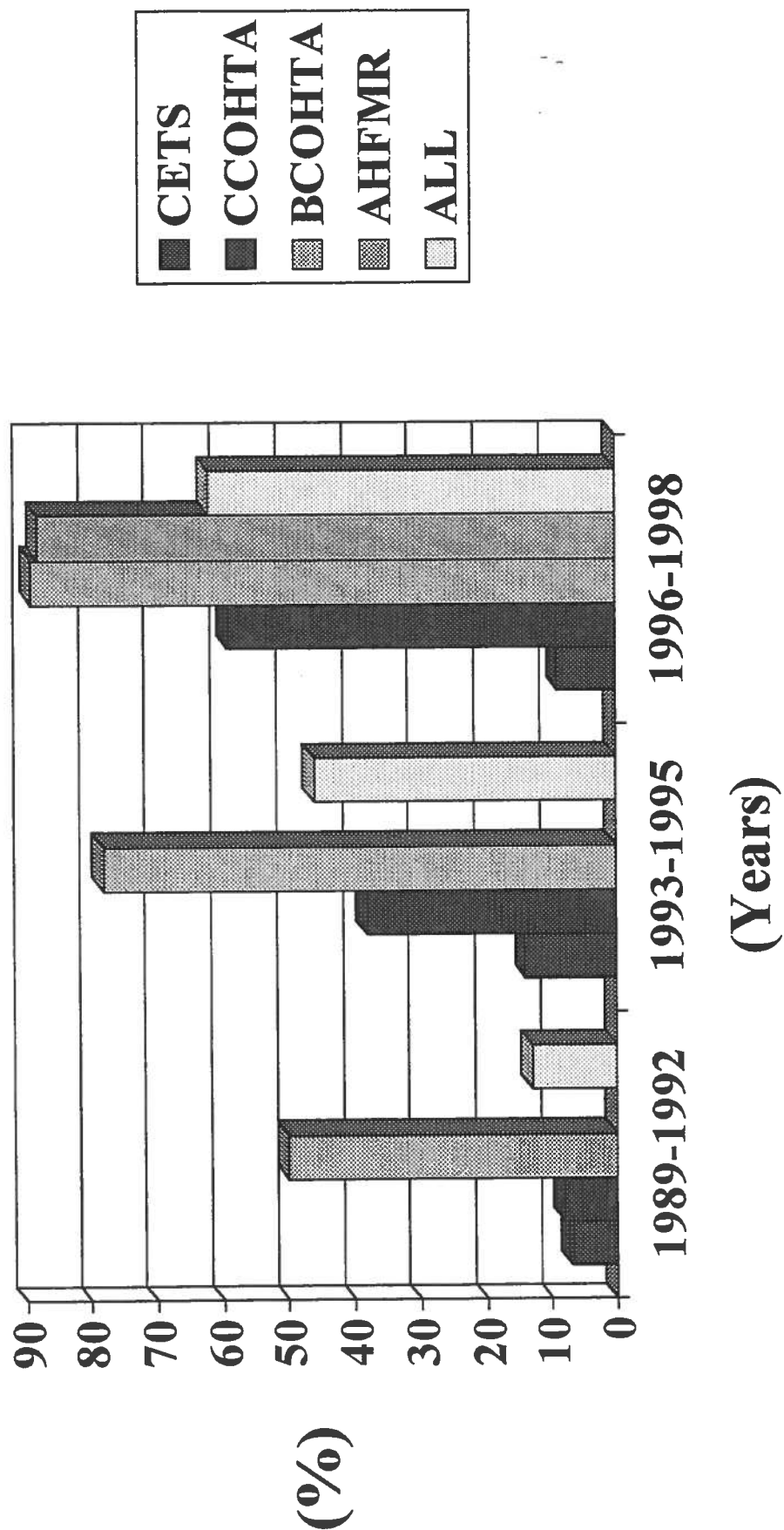


Figure 28. Included Summary/Abstract

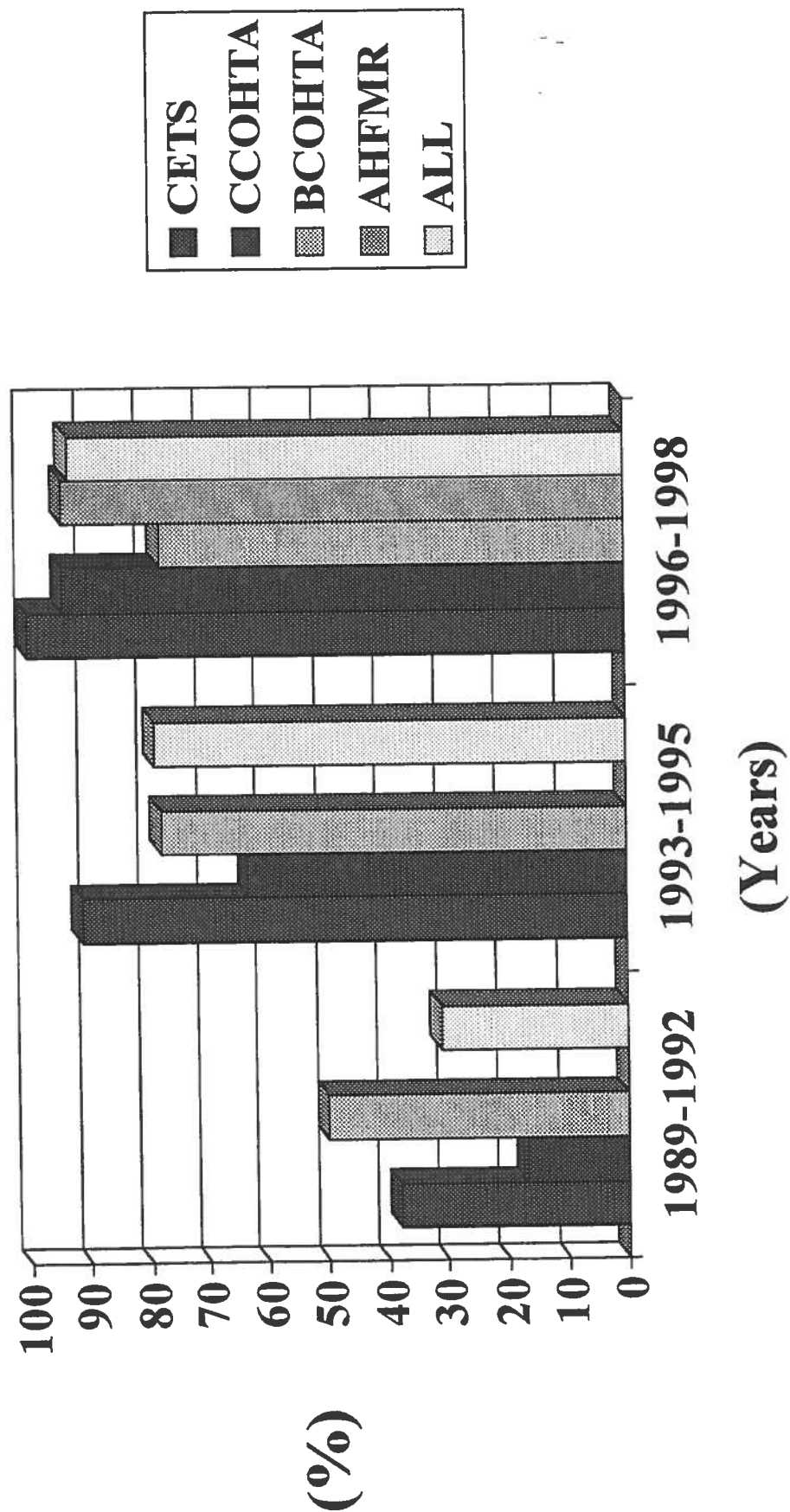
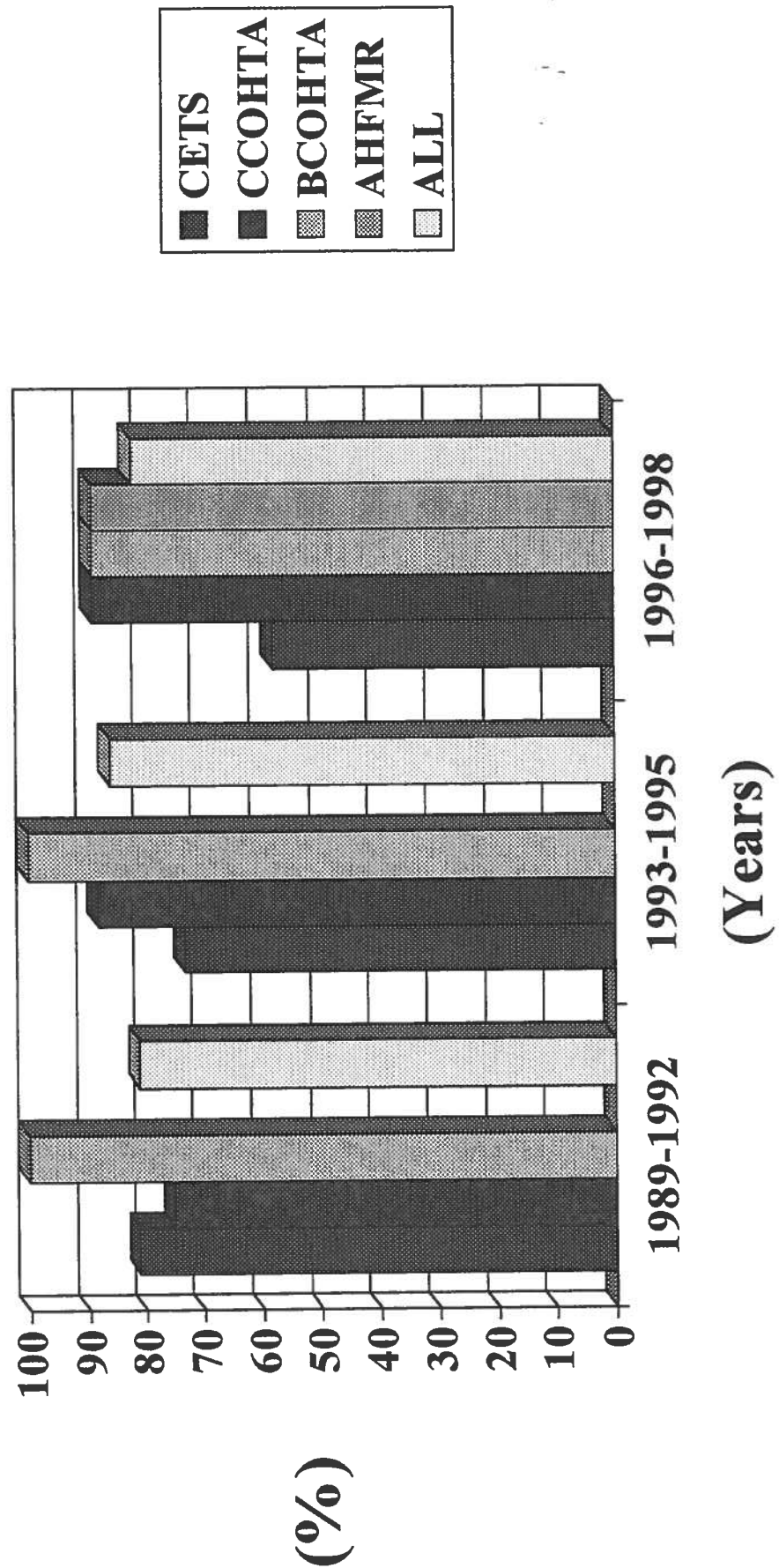


Figure 30. Conclusions Provided



APPENDIX 1

HTA Reports in Canada 1988-1998

| | | | |
|--------|----|---|------|
| CCOHTA | 1 | Gallstone therapies | 1991 |
| CCOHTA | 2 | Reuse of single use cardiac catheters | 1991 |
| CCOHTA | 3 | A survey of investigational new drug and emergency drug release policies | 1991 |
| CCOHTA | 4 | An annotated bibliography of the costs and benefits of prenatal screening programs | 1991 |
| CCOHTA | 5 | Exosurf neonatal for surfactant replacement therapy | 1991 |
| CCOHTA | 6 | Chiropractic treatment of neck and back disorders: a review of selected studies | 1992 |
| CCOHTA | 7 | Endovascular coronary stents | 1992 |
| CCOHTA | 8 | The excimer laser | 1992 |
| CCOHTA | 9 | Stereotactic radiosurgery: improved technologies for the treatment of brain lesions | 1992 |
| CCOHTA | 10 | Thrombolytic therapy: current status | 1992 |
| CCOHTA | 11 | Influence of educational interventions on the test ordering patterns of physicians | 1992 |
| CCOHTA | 12 | An overview of major breast screening studies and their findings | 1992 |
| CCOHTA | 13 | Chelation therapy and atherosclerotic coronary artery disease | 1993 |
| CCOHTA | 14 | Magnetic field strength issues in magnetic resonance imaging (MRI) | 1993 |
| CCOHTA | 15 | The introduction of laparoscopic cholecystectomy in Canada and Australia | 1994 |
| CCOHTA | 16 | Photodynamic therapy | 1994 |
| CCOHTA | 17 | The treatment of obstructive sleep apnea: an overview | 1995 |
| CCOHTA | 18 | Transcutaneous electrical nerve stimulation (TENS) and pain management | 1995 |
| CCOHTA | 19 | A comparison of fixed and mobile CT and MRI scanners | 1995 |
| CCOHTA | 20 | Cost-effectiveness and cost-utility analyses of finasteride therapy for the treatment of benign prostatic hyperplasia | 1995 |
| CCOHTA | 21 | Efficacy, effectiveness, and cost analysis of nitrate therapy for the prevention of angina pectoris | 1996 |
| CCOHTA | 22 | Meta-analysis and economic evaluation of sumatriptan for migraine | 1996 |

| | | | |
|-------|----|--|------|
| AHFMR | 7 | Computerized gait analysis in the rehabilitation of children with cerebral palsy and spina bifida | 1997 |
| AHFMR | 9 | In vitro fertilization and embryo transfer as a treatment for infertility | 1997 |
| AHFMR | 10 | Posteroventral pallidotomy in Parkinson's disease | 1997 |
| AHFMR | 11 | Percutaneous ethanol injection therapy as a treatment for hepatic cancer | 1997 |
| AHFMR | 12 | Aspirin in the primary prevention of cardiovascular disease and colon cancer | 1997 |
| AHFMR | 13 | Diagnostic tests for vaginosis / vaginitis | 1998 |
| AHFMR | 14 | Cord blood transplantation | 1998 |
| AHFMR | 15 | Bladder ultrasound scanning for the measurement of post-void residual urine volume | 1996 |
| AHFMR | 16 | Interface pressure measurement systems for management of pressure sores | 1996 |
| AHFMR | 17 | Alternative interventions survey | 1996 |
| AHFMR | 18 | Alternatives to ethylene oxide / chlorofluorcarbon sterilization | 1996 |
| AHFMR | 19 | Laboratory medicine and pathology services under fixed funding arrangements | 1998 |
| CETS | 1 | Distribution of cardiac catheterization laboratories in Quebec | 1989 |
| CETS | 2 | Evaluation of low vs high osmolar contrast media | 1990 |
| CETS | 3 | Extracorporeal shock wave lithotripsy (renal, biliary) | 1990 |
| CETS | 4 | Screening for breast cancer in Quebec: estimates of health effects and of costs | 1990 |
| CETS | 5 | Access to low osmolar contrast media: legal and ethical considerations | 1990 |
| CETS | 6 | Treatment of obstructive sleep apnea by nasal continuous positive airway pressure | 1990 |
| CETS | 7 | ECMO: efficacy and potential need in Quebec. 1) Report; 2) Resource document | 1990 |
| CETS | 8 | Domiciliary long-term oxygen therapy for chronic respiratory insufficiency | 1990 |
| CETS | 9 | Transplantation in Quebec: preliminary report on effectiveness, costs and organizational characteristics | 1991 |
| CETS | 10 | Hemodialyser reuse. Considerations of safety and costs | 1991 |
| CETS | 11 | The reuse of permanent cardiac pacemakers | 1991 |
| CETS | 12 | The use of chlorofluorohydrocarbons (freon, CFC) in certain sterilization procedures in Quebec hospitals | 1992 |

| | | | |
|--------|----|--|------|
| CETS | 36 | The reuse of single-use catheters and the risk of-transmission of Creutzfeldt-Jakob disease: update | 1997 |
| CETS | 37 | Excimer laser photorefractive keratectomy: the correction of myopia and astigmatism | 1997 |
| CETS | 38 | Evaluation of the risks and benefits of early postpartum discharge | 1997 |
| CETS | 39 | Family screening and molecular diagnosis of myotonic dystrophy | 1998 |
| BCOHTA | 1 | Collagen implant therapy for the treatment of stress incontinence | 1991 |
| BCOHTA | 2 | A review of research on the use of desk-top analysers for cholesterol screening | 1991 |
| BCOHTA | 3 | Home uterine activity monitoring: a review of the scientific evidence | 1992 |
| BCOHTA | 4 | The erythrocyte sedimentation rate: an examination of the evidence | 1993 |
| BCOHTA | 5 | Collagen implant therapy for the treatment of stress incontinence | 1993 |
| BCOHTA | 6 | Current controversies in screening for hypercholesteremia using desk-top analyzers | 1993 |
| BCOHTA | 7 | Percutaneous transluminal coronary angioplasty | 1993 |
| BCOHTA | 8 | The efficacy and effectiveness of sustained release oral nitroglycerin in comparison to regular delivery isosorbide dinitrate for the prophylactic treatment of stable angina pectoris | 1994 |
| BCOHTA | 9 | Current status of fetal tissue transplantation in Parkinson's disease | 1994 |
| BCOHTA | 10 | Vision screening for strabismus and amblyopia: a critical appraisal of the evidence | 1995 |
| BCOHTA | 11 | Anticoagulation for stroke prevention in chronic non-valvular atrial fibrillation | 1995 |
| BCOHTA | 12 | Routine ultrasound imaging in pregnancy: how evidence-based are the guidelines? | 1996 |
| BCOHTA | 13 | Coronary stents: an appraisal of controlled clinical studies | 1996 |
| BCOHTA | 14 | Bone mineral density testing: does the evidence support its selective use in well women? | 1997 |
| BCOHTA | 15 | Supporting clinical practice guidelines development: an appraisal of existing cholesterol testing guidelines | 1997 |
| BCOHTA | 16 | Does famciclovir cause post-herpetic neuralgia? | 1998 |

