AUTHOR'S GUIDELINES

for

GRANTS AND CONTRACTS FINAL REPORTS

CMS
CENTERS for MEDICARE & MEDICAID SERVICES

Centers for Medicare & Medicaid Services

May 2002

AUTHOR'S GUIDELINES
GRANTS AND CONTRACTS FINAL REPORTS

Contents

Attachments

NOTE: This document describes guidelines for preparation of a final report manuscript that meets the Centers for Medicare & Medicaid Services's (CMS's) standards for publication. Adherence to these guidelines will help assure that the final report is clear and readable and ready for publication by CMS or for reproduction by the National Technical Information Service.

Prepared by: Office of Research, Development, and Information, CMS

GENERAL INSTRUCTIONS

Dissemination--All grantee and contractor final reports are submitted to the National Technical Information Service (NTIS) to ensure continued availability to the public. A limited number of reports may also be selected each year for publication by the Centers for Medicare & Medicaid Services (CMS). These reports are usually chosen because of their relevance to current policy issues or because the information presented represents a significant contribution to the health care financing field. Although content is our major concern, we also consider the presentation, readability, and length of each report in making our final determination of which reports will be published.

Preparation -- Your report should be typed on 8 1/2 x 11-inch bond paper, one-side only, type font may be no smaller than Times New Roman 12 and all page margins must be at least 1 inch on the top and bottom, and 1 inch margins on the left and right sides. Use 5-space indents for paragraphs. Single space within paragraphs, footnotes, and references; double space between paragraphs, footnotes, and references. The original manuscript plus 1 clear photocopy must be submitted for the publications production process. The manuscript original must be clear, clean, and free of errors; it will be used as final camera copy for printing.

Length -- This will be determined by the subject matter covered; however, concise reports have a better chance for publication by CMS. In addition, because NTIS prices for copies of reports are based on the numbers of pages, concise reports are more affordable to the public. Be selective and focused about the material presented.

Style -- Despite its technical nature, your report should be readable and easy to understand. Aim for an economy of language and a simple style. Be precise, but keep jargon to a minimum. Be sure to define technical terms in a glossary of terms, usually included as an appendix. Concentrate on logical development of your thoughts, leading the reader from one concept to the next, and use appropriate transitions. Vary your sentence structure to keep the reader's interest. and use the active voice whenever possible. Avoid lengthy paragraphs; shorter ones allow for reader breaks. Have the report reviewed for correct grammar, capitalization, punctuation, and spelling. If at all possible, the GPO Style Manual should be consulted while preparing your report.

Copyright -- Written permissions must be obtained from copyright holders if any copyrighted material is used in your report. These permissions must be submitted with your final report. Also, keep copies on file in case any questions arise on permitted use.

Submission--A draft copy of the report should be submitted to the CMS project officer for review and comment. After CMS's comments have been received and any required revisions have been made to the report, the final report shall be delivered to the CMS project officer in the three formats (paper/electronic) as stated below and in the required "electronic" formats to the fnlrpts@cms.hhs.gov mailbox:

1) Paper, bound, in the number of copies specified by the CMS project officer;
2) Paper, unbound, suitable for use as camera-ready copy;
3) Electronic, as one file in Portable Document Format (PDF), as one file in HyperText Markup Language (HTML), and in Microsoft Word 2000 [for text] or Microsoft Excel [for tables]. Data tables must be in HTML and PDF formats as well. Charts and graphs must be in Graphical Interchange Format. Data files (spreadsheets, databases) must be made available primarily as comma-delimited or flat files, with proprietary file formats (Excel, Access) available as alternative downloads. Documents submitted in PDF must be prepared using Adobe Acrobat 5.0 (or subsequent versions) to assure compliance with the requirements of Section 508 (Rehabilitation Act) when placed on CMS's Web site. In addition, the grantee/contractor shall provide a 200-word abstract/summary of the final report suitable for submission to NTIS.

Also, please submit 1 photocopy of the final report to:

> CMS Grants Officer **OR** CMS Contracting Officer
> Acquisition and Grants Group
> Office of Internal Customer Support
> Mail Stop 2-21-15 Central Building
> 7500 Security Boulevard
> Baltimore, Maryland 21244-1850

FORMAT

Cover -- Type the title of your report in all capital letters and centered 3 inches down from the top of the first page of your manuscript. The title should accurately reflect the contents, but keep it short--10 words at most.

Title page -- A sample title page is provided in Attachment 1. The title page should repeat the title in the same format as on the cover page. Double space and center under the title the byline credit for preparation of the report with the names and titles of the project officer, principal investigator, and any other authors. Double space again and center the title and name of the Federal Project Officer, separated by a colon. Drop down 2 inches and center the name of your organization. Double space and center the project number/contract number. Double space and center the date (month and year of report preparation). Triple space and center the following disclaimer:

> "The statements contained in this report are solely those of the authors and do not necessarily reflect the views or policies of the Centers for Medicare & Medicaid Services. The awardee assumes responsibility for the accuracy and completeness of the information contained in this report."

Acknowledgments -- The word "Acknowledgments" should be typed in all capital letters and centered at the top of the third page of your manuscript. You should identify those people who have made a significant contribution to the preparation of your report. Be selective. Under no circumstances should the acknowledgments run more than a single manuscript page.

Contents -- Provide a table of contents that lists all the major components of your report, as well as the main headings in each section. Also include a list of figures, a list of tables, and a table symbols box, if you use one. A sample contents page is provided in Attachment 2.

Organization -- The organization of your report will ultimately depend on the material being presented. However, the following organizational approach, which is built on six basic report components, is strongly recommended as being suitable for most technical reports. Whether you follow this approach or modify it somewhat, each component head of your report should be typed in all capital letters and centered at the top of the first page of the section it covers. The recommended six components are as follows:

> Executive Summary -- All reports, regardless of subsequent organization, must begin with an executive summary. The length of the summary will be influenced by the material presented in the report, although short summaries are best (1-5 pages). Under no circumstances should the summary be more

than 25 pages in length. The format of the summary is flexible, but it usually should include: (1) the purpose and scope of the study or project covered in the report; (2) a description of the topic, area, and/or population covered; (3) any definitions or qualifications needed by the reader to understand the material presented in the summary; and (4) important findings expressed in summarized form (narrative or bulleted highlights). A sample Executive Summary is provided in Attachment 3.

Introduction -- Set the stage for the detailed presentation that follows. Begin by giving an overview of the project and any background information that is necessary to understand study approaches, methodologies employed, relevant caveats, and research results.

Discussion -- This is the place for the detailed description and analysis of study approaches and findings. The subjects discussed should be broken down into sections with main headings and subcategories, and may include tables and/or figures that support your text discussion. All tables and figures included must be specifically referenced in the text and numbered in the sequence in which they are mentioned.

Conclusion -- This section should provide a final wrap-up of study results, conclusions, and/or recommendations or implications, if any.

References -- This is a listing of the sources used in writing the report. All references listed must be specifically cited in the report. (For the correct format, see "References".)

Appendixes -- Extended technical discussions that are not necessary to understanding the basic message of the text would normally be placed in appendixes. In the text, only address those qualifications of the data that are essential to understanding the findings presented. You can refer your readers to the more detailed technical discussions in the back of the report (see Appendix A). Appendixes should be identified by capital letters in sequence (A, B, C, etc.) and may address a variety of technical considerations-- sources and limitations of data, study methodology, reliability of estimates, definition of terms, etc. Provide a table of contents for each appendix, with the number and title of the appendix, its major headings, and a list of appendix figures and tables, if any. Appendix figures and tables should be identified using alpha numerics (the capital letter of the appendix, followed by a period, followed by Arabic numerals in sequence, e.g., A.1, A.2, A.3, B.1, B.2, B.3). Figures and tables in each appendix are independent sequences from one another, i.e., it is possible to have Table A.1 and Figure A.1.

TEXT

<u>Numbering</u> -- The first, second, and third pages of your manuscript should be the cover, title page, and acknowledgments, respectively. These pages are not numbered, although the title page and acknowledgments are considered the first 2 pages of front matter. Beginning with the first page of the Contents, as "iii," number the remaining front matter of the report consecutively using small Roman numerals. The first page of the Executive Summary begins the actual report, and should be numbered "1 ". The rest of the report should be numbered consecutively using Arabic numerals, with one admonition. Each major component of the report must begin on an odd numbered page. If the previous component ends on an even numbered page, this presents no problem. However, if it ends on an odd numbered page, the following even numbered page must be left blank and then the next component begun on the following odd numbered page. All page numbers should be centered 1 inch up from the bottom of the page.

<u>Headings</u> -- Maintain consistency in category descriptions, headings, and labels throughout your report, keeping in mind that headings should be brief and to the point. Avoid using articles (the, a, an) at the beginning of headings. No more than three levels of subordination should be used for headings as follows:

Main heads should be centered, with the initial letter of each word (excluding prepositions and conjunctions) in capital letters.

TRENDS IN PARTICIPATION

Side heads should be flush left with the initial letter of each word, excluding prepositions and conjunctions, in capital letters.

USE OF HOSPITALS

Run-in headings rank third in importance and should be used sparingly. They are indented 5 spaces from the left margin, with only the initial letter of the first word capitalized, and followed by a dash.

    Discharge rates--

<u>Footnotes</u> -- Footnotes in the text should be kept to a minimum, and should be used only to clarify or explain the text discussion, not to cite reference materials (see "References"). Footnotes should be only 3-4 lines long. Any material longer than that should be considered important enough to be included in the text. Use superscript Arabic numerals to designate footnotes in the text, and place the footnote material under a l-inch rule at the bottom of the page where the footnote appears, with a corresponding superscript number. Number footnotes

consecutively throughout the report.

Sexism -- Do not use the generic form "he." Instead use plural nouns where possible and then plural pronouns to refer back. For example, instead of "a doctor and his patient" use "doctors and their patients."

Acronyms -- When using an acronym, type the entire phrase followed by the acronym in parentheses for the first reference. For subsequent references, use the acronym only. However, avoid using acronyms in the Executive Summary.

Listing -- Use bullets (rather than numbers or letters) for lists. They offer the reader an eye break and can highlight salient points. The bullet is a blackened circle the size of a lowercase "o". Always begin bulleted items with the first word capitalized and end bulleted items with a period. For example:

Some suggested explanations for the decline in heart disease mortality include:

- Decreased smoking.

- Improved management of hypertension.

- Decreased dietary intake of saturated fats.

If the order or sequence of items in a list is important or the individual items will subsequently be referred back to in the text, then a numbering system would be preferable to bullets. In such cases, use 1), 2), 3), etc.

Referencing -- Use the journal style of citation in the text (Norberg, Morinigo, and Barnes, 1962). For works with more than three authors, use the first author's name only followed by et al. (Zipursky et al., 1959). References to tables or figures are enclosed in parentheses and placed at the end of the sentences in which they are first mentioned (Table B).

Age -- when referring to age in the text, use the phrase "years of age." The hyphen is used to designate "through" when referring to age spans (17-64 years of age).

Data -- Whenever possible in the text, round to two effective digits. Two-digit numbers are a lot easier for the reader to grasp and retain. If rounding to two digits may confuse the reader, additional digits may be used. For example, when writing about the total civilian noninstitutional population of the United States, round to 217 million people. For tables, show sufficient detail to allow the reader to make meaningful comparisons.

Accuracy -- You are responsible for the accuracy of the data presented. Ensure that all information in the final manuscript has been verified as correct before submitting the report for publication.

Equations -- Mathematical equations and formulas should be typed on a separate line. They should be clear, with letters and symbols easily identified. Careful differentiation should be made between superscript and subscript numbers; the letter "1" and the numeral one; and the letter "o" and the numeral zero. Be consistent in capitalizing formula terms.

TABLES

Types -- Tables should be used for showing comparisons, emphasizing trends, or providing a display of data for large groups of variables. They must be titled and numbered in some consistent manner. Run-in tables (not numbered, lettered, or titled) are not to be used since they do not provide for easy reference by the reader. If your tables are incorporated throughout the text, they should be numbered consecutively in the order they are mentioned in the text, using Arabic numerals (Table 1, Table 2, etc.). If you have two types of tables--short text tables that are incorporated in your text and longer, detailed tables that are presented as a group in a back section of your report--then you will need separate numbering systems to distinguish the two. Use capital letters for the text tables (Table A, Table B, and so on through the alphabet, omitting I, in sequence). Then use consecutive Arabic numerals for the detailed tables (Table 1, Table 2, etc.) Both text and detailed tables must be specifically referenced in the text. The "List of Text Tables" should precede the "List of Detailed Tables" in the table of contents for the report.

Format -- For the general "look" of a table, check the sample table in Attachment 4. Keep the amount of data presented in each table manageable. Smaller tables with select data have more impact. All tables should be constructed to fit on a page allowing for proper margins all around. Some longer tables may have to be broken and continued over 2 or more pages. Tables may be typed on oversized sheets and reduced to the 8 1/2 x 11-inch size, allowing for margins; however, the reduced type size may be no smaller than 8 point typeset copy would be. Anything smaller would create eyestrain for readers. Specific rules for developing your tables follow:

Title

Content -- Table titles should be kept simple without sacrificing clarity. The key words in the subject of the table should be at the beginning of the title. Following the table number, the title of the table should include in the following order: the Subject of the table; the classification of the subject "by" the variables in the field boxhead (left to right) and then the stub (top to bottom); the

7

geographic area covered; and the time covered (i.e., the reference time for the data).

Placement -- The table number is centered above the table title. If the title of the table is a single line, it is also centered. If it takes two or more lines, all lines should run as close from the left to right margins as possible with the last line centered.

Punctuation -- There is no punctuation following the table number. In a title, the subject of the table is set off from the variables by a comma preceding the phrase "by." If there are more than two measurements in the subject or more than two variables in the boxhead and stub classifications, a comma is placed after each item in the series. A colon precedes the area covered and the time interval data, and a comma separates the two. Do not put a period at the end of the title. Capitalize "Table," the first word only of the title, and the first word following the colon.

<center>Boxhead</center>

Format -- The boxhead consists of all the column headings across the top of a table. These headings indicate the kinds of information entered in the stub and in the field below. The stub boxhead could list the variables of the stub in the order they are used. If the variables are too numerous to list, describe the stub in general terms, for example, "Characteristic." If the variables are too diverse to lump under a uniform heading, such as "Characteristic," use "item." Do not leave the stub boxhead blank. Capitalize the first letter of the first word only in captions for the boxhead, and center the captions horizontally in the space allocated. For vertical placement of multideck captions, the bottom line of the caption sits just above the boxhead rule.

Spanner Boxheads -- A multicolumn head should be used whenever several columns have something in common. This helps to shorten and to identify subordinate column headings. The spanner boxhead should be separated from subordinate column headings with a hairline rule that runs from the left edge of the first heading it modifies to the right edge of the last heading it modifies.

Series -- If a series of words or phrases are used in boxhead captions, especially the stub boxhead, put a comma after each item in the series. Use the singular form of words to describe variables in the boxhead (age, sex, race, and family income).

Modifiers -- When a column heading is modified by a unit of measurement, combine the two and use as a single phrase, e.g., "Population in thousands." Do not set off the measurement from the modified heading by enclosing it in parentheses. e.g., "Population (thousands)."

<center>8</center>

Stub

Format -- The stub consists of the labels at the left side of a table that describe each row of figures in the field. Plain headings that do not have data following them and totals should be placed at the left margin and separated from other stub headings by a double space. All other entries are placed at the left margin with indentations of two spaces for each further subcategory and single-spacing between all associated headings and subcategories. If the stub consists only of years (1975, 1976, 1977, etc.), the years are all placed at the left margin of the stub. Only capitalize the first letter of the first word of a caption in the stub.

Spans -- When you are showing a time, age, or income span in a stub entry, use a hyphen between the figures in the span (1965-70; 45-64 years; or $3,000-$4,000).

Series -- Whenever a series of words or phrases are used in a stub caption, put a comma after each item in the series (endocrine, nutritional, and metabolic disease).

Field

Format -- The field is that part of the table that contains the numerical data. Always use a comma in a whole number that has more than three digits (36,520). Units of measurement should not appear in the individual columns with the numerical data (use 116, not 116 visits--use 10, not 10%). The only allowable exception is with dollar signs, and then the sign only appears next to the first number in each column. In all other cases, the unit of measurement should either be included in the boxhead or used as a field spanner.

Field Spanners-- Field spanners are used to describe the type of measurement or unit of measurement that applies to two or more columns, such as "Percent distribution" or "Number in thousands." A field spanner is centered across the columns it applies to, above the data it modifies. Only the first letter of the first word of the field spanner is capitalized.

Qualifiers -- A superscript reference number may be used to refer to footnotes at the bottom of the table that qualify an item of data given or explain its absence. Superscript footnote numbers that qualify a data item in the field should be placed to the left of the field number (e.g., 1,306). Superscript footnote reference numbers that stand alone in an empty cell should be enclosed in parentheses (3).

Symbols -- A standard symbols key should be developed that is appropriate for all your tables, and then empty cells in tables should contain the appropriate symbol. The following example may be used as a standard symbols key, or you

may create your own as long as you are consistent in the use of selected symbols throughout the tables in your report. The symbols key should appear on the last page of your Contents, following the list of figures and list of tables.

Symbols

- - -   Data not available
●●●   Category not applicable
-      Quantity zero
0.0   Quantity more than 0 but less than 0.05
*   Figure does not meet standards of reliability or precision

---

Footnotes

Format -- Footnotes go at the bottom of a table or figure and include reference notes, general notes, and source notes in that order. For example:

[1]Includes income not stated.
[2]Relative standard error equal to or greater than 25 percent.

NOTE: Poor is defined as family income below $7,000 and nonpoor as family income of $7,000 or more.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.

Reference -- These notes refer to specific parts of the table and start with a superscript reference number (1, 2, 3, etc.) that corresponds to the superscript number of the item in the table that is being qualified. These are numbered in the order in which they occur, reading from left to right within each box level and from top to bottom within spanners. In the title, stub, and boxheads, the superscript reference number appears after the word or group of words to which it relates. In the field, however, the superscript reference number appears before the figure to which it relates.

General -- These notes relate to the whole table and start with the word "SOURCE:" (or "NOTES:") in all capital letters with a colon. General notes should always be complete sentences.

Source -- These notes explain the source of the data and start with the word "SOURCE:" (or "SOURCES:") in all capital letters with a colon. Source notes are cited in the same way as reference list entries; for proper format, see the

examples given in the References section. Multiple sources are separated by a

semicolon.

General Rules

Totals -- Total columns are placed to the left of the columns they aggregate. Total rows are placed across the top. To caption a total in the stub or boxhead, use "Total" if it can stand alone. Otherwise, use "All," such as "All incomes" or "All facilities." When referring to a total for men and women combined, use "Both sexes."

Age -- When referring to the age span of a group in the title, use the phrase "years of age" (children 1-6 years of age). However, when you refer to age in the boxhead and stub, just use "years" (17-65 years).

Open intervals -- When referring to open-ended spans, use "under" and "over" for age (under 17 years, 65 years or over); for all other numerical quantities, use "less" and "more" (less than $4,000, $20,000 or more).

Time -- In a time series (1976, 1977, 1978, etc.), list the earliest time period first and the latest time period last (either going from left to right in the boxhead or top to bottom in the stub).

Abbreviations -- They should be kept to an absolute minimum and, when used, they must be identified in a footnote. Never abbreviate "United States" unless it is used as an adjective, in which case you should abbreviate it (U.S. population).

Acronyms -- They should be kept to a minimum, as well. When used in the title or body of a table, they should be footnoted, and the spelled-out version provided in the footnote at the bottom of the table. No acronyms should be used in footnote material.

FIGURES

Title -- Charts and graphs should be kept simple and labeled Figure 1, Figure 2, etc. Following the figure number, the title of the figure should include in the following order: the subject of the chart or graph, followed by a comma; the classification of the subject "by" the variables, followed by a colon: the geographic area covered, followed by a comma; and the time covered (i.e., the reference time for the data). There is no punctuation following the figure number or at the end of the title. Capitalize "Figure" and the first letter only of the first word of the title.

Format -- The entire contents of the chart or graph, with the exception of the figure number and title, are enclosed in a box. The figure number and title are placed above the box that encloses the chart or graph. The figure number is

centered across the box and above the figure title. If the title is a single line, it is also centered across the box. For two or more lines, all lines should run as close from the left to right margins as possible with the last line centered. Both the scale and subject heading of the x-and y-axis should be identified. Also include a legend to clarify the components of your figure, if several patterns are used to distinguish elements. For scale and legend spanners, only the first letter of the first word or a proper noun is capitalized. A sample figure is provided in Attachment 5.

Footnotes -- The same rules that apply to tables apply to figures, except that all footnotes appear at the bottom of the chart or graph and are placed inside the box. The presentation, types, and order of footnotes are explained under the Tables section of the guidelines.

REFERENCES

Content -- It is imperative that complete information be provided on the references used in your report. In the main, all scholarly reference lists include the same information about a published work.

For a book, this information is: Name of the author or authors--List first three authors, then use et al. for the remaining authors. If individual authorship is not known, list the institution responsible for writing the book. In the case of Government agencies, the agency at the lowest level is always given the credit for authorship; Full title of the book, underlined, including the subtitle if there is one; Series (if any); Volume number; Edition, if not the original; City of publication; Publisher's name; Date of publication.

For an article in a periodical, this information is: Name of the author or authors--List first three authors, then use et al. for remaining authors; Title of the article; Name of the periodical (use appropriate abbreviations for journals as listed in the Index Medicus, put out by the National Library of Medicine); Volume number; Pages occupied by the article; Date of publication.

Format -- The reference list should be typed double-spaced between entries and single-spaced within entries and organized in alphabetical order by the last name of the principal author of each entry. If there are two or more entries by the same author, they should be arranged chronologically (earliest date first). If two or more entries have the same author and date, distinguish each entry from the others by using a lower case letter of the alphabet after the date in each entry (1975a, 1975b, 1975c, etc.).

<u>Order</u> -- Ensure that the information included in the reference list is complete, that it is presented in the correct order (see the following examples), and that it is verified.

Examples:

Book

Freedman, R., Whelpton, P.K., and Campbell, A.A.: <u>Family Planning, Sterility, and Population Growth</u>. New York. McGraw-Hill Book Co., 1978.

Article in Periodical

McCarthy, E., and Finkel, M.: Second opinion elective surgery programs. <u>Med. Care</u> 16(12):984-994, Dec. 1978.

Government Publications

Moss, A.J., and Scott, G.: Characteristics of persons with hypertension, United States, 1974. <u>Vital and Health Statistics</u>. Series 10-No. 121. DHEW Pub. No. (PHS) 79-1549. National Center for Health Statistics, Public Health Service. Washington. U.S. Government Printing Office, Dec. 1978.

Gibson, R.M.S.: National health expenditures, 1979. <u>Health Care Financing Review</u>. HCFA Pub. No. 03054. Office of Research, Demonstrations, and Statistics, Centers for Medicare & Medicaid Services. Washington. U.S. Government Printing Office, Summer 1980.

Rossiter, L.F., and Lawson, W.R.: Charges and sources of payment for dental visits with separate charges. <u>National Health Care Expenditures Study</u>. Data Preview 2. DHHS Pub. No. (PHS) 80-3275. Hyattsville, Md. National Center for Health Services Research, Public Health Service, 1980.

Contract Report

Mitchell, B., and Helps, C.: <u>Employer-Paid Group Health Insurance and the Costs of Mandated National Coverage</u>. Contract No. R-1509-HEW. Santa Monica, Calif. Rand Corporation, 1975.

Paper Presented

Sloan, F.A., and Steinwald, B.: <u>Effects of Regulation on Hospital Costs and Input Use</u>. Paper presented at the Annual Meeting of the American Economic Association. Chicago, Aug. 29, 1978.

Unpublished Material

Davis, K.: A Theory of Economic Behavior in Non-profit Private Hospitals. Unpublished doctoral dissertation. Rice University, 1971.

Informal Material

Blue Cross Association: Personal communication. Chicago, 1980.

Survey Data

Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey, 1978.

A COMPARISON OF HOSPITAL-BASED AND
FREE-STANDING NURSING HOMES

by John P. Doe, Project Director,
Ed A. Smith, Principal Investigator,
Mary B. Johnson, Alice Jones, and Mike H. Lee

Federal Project Officer: Susan K. Allen

Center for Health Services Research,
University of Florida Health Sciences Center

CMS Contract No. 500-00-1234

August 2001

CONTENTS

Symbols	
- - -	Data not available
•••	Category not applicable
-	Quantity zero
0.0	Quantity more than 0 but less than 0.05
*	Figure does not meet standards of reliability or precision

EXECUTIVE SUMMARY

This study addresses the issue of separate reimbursement limits for hospital-based and free-standing nursing homes through an assessment of nursing home cost, case mix, and quality of care. Data for the study pertain to 150 Florida nursing homes (130 free-standing and 20 hospital-based). Detailed data on case mix and quality of care were collected on a primary sample of 1,950 patients from 80 of these nursing homes (65 free-standing and 15 hospital-based).

The main findings of the study are:

- Overall costs per patient day are approximately $11 greater in hospital-based than in free-standing nursing homes. About $4 of this is attributable to differences in the nursing care costs (primarily the wages and salaries of nurses and aides).

- Case mix also differs between these two types of facilities in that hospital-based nursing homes tend to have relatively greater proportions of patients with medically-related problems, while free standing facilities have greater proportions of patients with psychosocial problems.

- The quality of care provided by the two types of facilities is similar across all patients, with hospital-based facilities providing slightly higher quality of care. However, differences emerge in terms of the type of problem treated. Hospital-based facilities achieve higher quality scores for long-term care problems which are of a medical nature, while free-standing facilities have higher scores in the treatment of psychosocial problems.

- The above differences in case mix and quality are associated with the cost differences between hospital-based and freestanding nursing homes. In general terms, approximately 40 percent of the difference in total costs and in nursing costs can be associated with case mix and quality differences.

Although these findings are based on a study utilizing data from one State, they strongly suggest that hospital-based and free-standing facilities treat different types of patients, and that these case-mix differences are associated with cost differences. Further, the two types of nursing homes differ in the types of long-term care problems they treat best. Thus, some degree of cost difference between the two types of facilities appears to be justified in view of these findings. More extensive national data are needed, however, to determine the precise extent to which case-mix and quality differences determine cost differences between free-standing and hospital-based facilities throughout the country.

17

Table 1
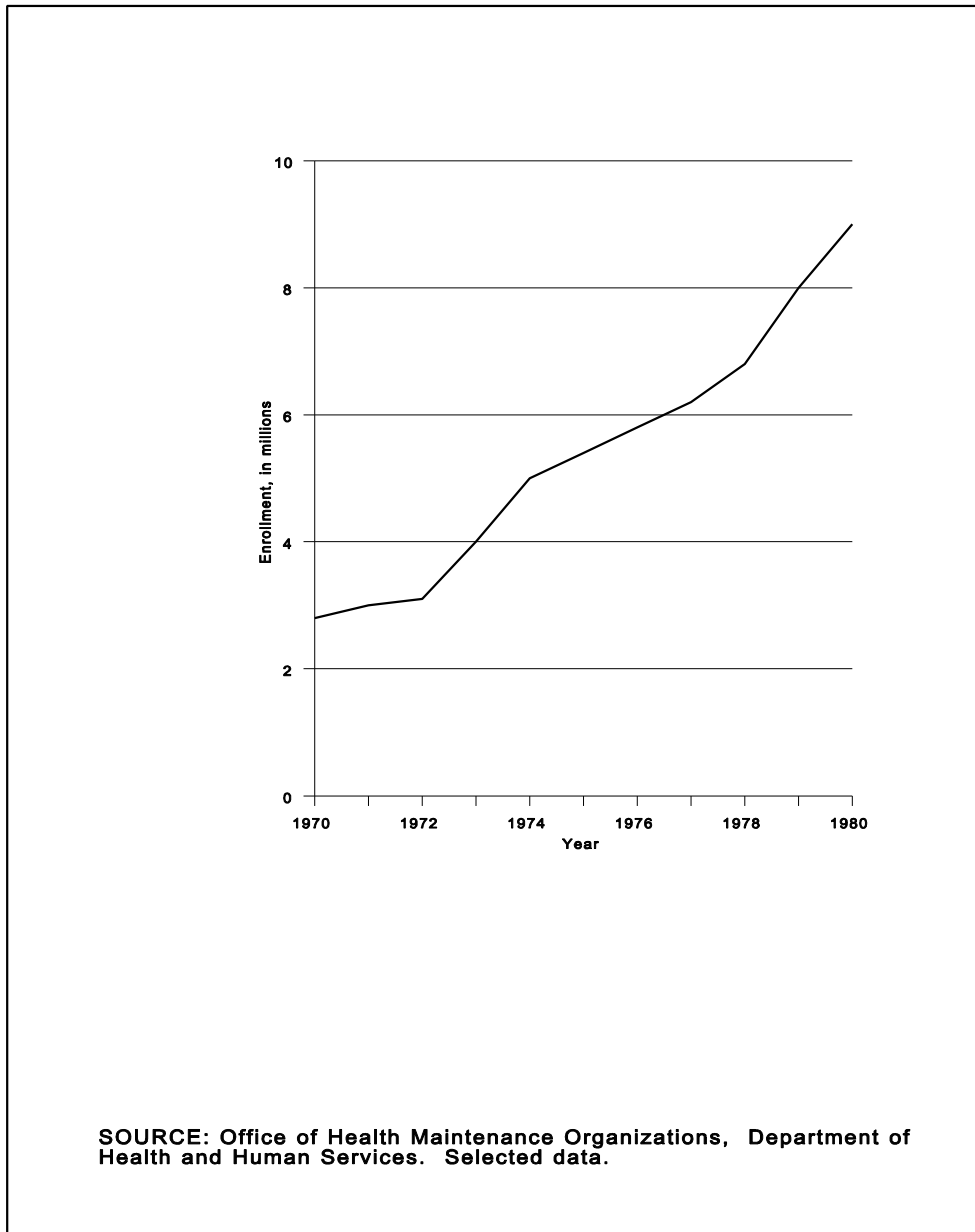Office visits to physicians, by selected characteristics: United States, 1975 and 1980

| Selected characteristic | Office Visit | | | | | |
| | Patient's first visit | | Visit lasted 10 minutes or less[1] | | Return visit scheduled | |
	1975	1980	1975	1980	1975	1980
			Percent of visits			
Total	15.6	15.3	50.9	47.3	56.4	58.0
Age						
Under 15 years	15.8	14.6	61.4	57.5	45.2	48.8
15-44 years	19.0	18.7	50.3	46.9	57.3	58.2
45-64 years	11.8	12.7	42.5	38.9	64.1	64.5
65 years or over	8.4	8.6	40.2	36.7	70.0	71.3
Sex						
Male	17.5	17.3	50.8	46.4	52.5	55.9
Female	14.7	14.4	50.8	47.7	58.6	58.9
Race						
White	15.2	14.8	50.3	47.3	56.4	57.8
All other	18.6	18.9	55.9	48.0	56.4	60.1

[1]Time spent in face-to-face contact between physician and patient.

NOTE: Rates are based on the civilian noninstitutionalized population, excluding Alaska and Hawaii.

SOURCE: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Ambulatory Medical Care Survey, 1976 and 1981.

Figure 2

SOURCE: Office of Health Maintenance Organizations, Department of
Health and Human Services. Selected data.

Health Maintenance Organization enrollment
United States, 1970-80