National Centre for Classification in Health

PROFESSIONAL RELATIVITIES STUDY

RESOURCE MATERIAL R

NCCH mapping manual

Manual which describes the NCCH mapping process and the Microsoft Access database used to record the forward and backward mappings between MBS and CPT originally carried out by NCCH.

prepared for

Medicare Schedule Review Board
December 2000

NATIONAL CENTRE FOR CLASSIFICATION IN HEALTH

Proposal for Study to Determine Resource

Based Relative Values For Professional Work

Relating to Items in the Medicare Benefits Schedule

June 13 1997

CONTENTS **Page**

INTRODUCTION

This proposal follows a feasibility study carried out in 1996 and early 1997 by the National Centre for Classification in Health (NCCH) for the Medicare Schedule Review Board (MSRB) to examine the potential for mapping the professional components of services described in overseas schedules with the Medicare Benefits Schedule (MBS).

The overall aim of testing the mapping between the MBS and CPT was to see if the resource based relative value units developed in the United States during the 1980s and applied to the American Medical Association's Current Procedural Terminology (CPT) could be applied to mapped MBS items.

Only the Therapeutic Procedures in Category 3 of MBS were in scope for the feasibility study. That study demonstrated that it is possible to map between MBS and CPT and to gain consensus from expert clinicians on relative intraservice work (time and intensity) for items in the MBS. However, the maps are not sufficiently robust on their own to determine the relative values of the mapped MBS items.

The proposal for the definitive study which follows includes Australian clinician input to decide on a representative group of procedures within each specialty for which resource based relative values will be determined using a range of data including Australian intraservice times, estimates of intensity and maps between MBS and CPT. The relative value units determined for these core items will be used to establish relative values for all items within a specialty and to establish link items between specialties. The definitive study covers 26 specialties (Appendix 1) and the following categories of MBS:

Category 1 - Professional attendances
Category 2 - Diagnostic Procedures and Investigations
Category 3 - Therapeutic Procedures
Category 4 - Oral and Maxillofacial Services

The study will require a complex organisational effort to bring together specialty groups of clinicians and technical advisers in a series of meetings which are interrelated and which will result in advice and reporting to the MSRB at regular intervals.

STUDY PHASES

The proposed study is divided into four phases. At the end of each phase, results will be reported to the MSRB so that subsequent phases can be reconsidered and redirected if necessary.

Phase 1. Three months (July - September 1997)

Step 1.
Professional Relativities Technical Committee (PRTC) to recommend definitions, rules and criteria for application throughout study.

Step 2.
NCCH Project Officers to map all items in MBS Categories 1 - 4 (3031 items as of May 1997). Evaluate quality of maps using criteria established by PRTC. Present results to second meeting of PRTC.

Step 3.
First meeting of APPRMS to review definitions, rules and criteria.

First Interim Report to MSRB. - Board to approve definitions, rules and criteria.

Phase 2. Five months (October- February 1997)

Step 4.
NCCH clinical consultants (CCs) to identify core items (20 for each specialty covering a representative range of activities based on quality maps with CPT, volume, the cost of services and attendance items) on which inter and intra professional relativities will be established.

Step 5.
NCCH to assemble additional data including HCFA frequencies for CPT mapped items, actual theatre times from hospital operating theatre systems, information from DHFS operating theatre service weight study, anaesthesia times for MBS items and MBS relativities using existing fees.

Step 6.
NCCH meetings with clinician consultants (CCs) to establish RVUs for core items. 26 CC meetings would be held for procedural items and the Consensus Group (CG) on attendance items would hold its first meeting at this stage.

Step 7.
NCCH to distribute and present results of CC core RVUs to Consensus Groups (CGs) for confirmation of RVUs. The CG for attendance items would meet for a second time to determine attendance item RVUs and provide those RVUs to MSRB for consideration with relativities of therapeutic items.

Second Interim Report to MSRB. - Board to approve work to date

Phase 3. Three months (March - May 1998)
Step 8.
NCCH to draft RVUs for remainder of items using RVUs from core items and data on maps, times, weights for remaining items.

Step 9.
Second meeting of APPRMS to advise members of outcome of CG meetings, RVUs for core and remainder items and to ratify link items.

Third Interim Report to MSRB. - Board to approve work to date.

Phase 4. One month (June 1998)
Step 10.
Assemble results and prepare final report.

Final Report to MSRB.

MEETINGS	**ATTENDEES & ROLE**
2 meetings of PRTC (18 people * 2 meetings = 36)	NCCH director, project manager, 2 project officers, statistician, 3 facilitators, 6 clinicians, 1 MSRB, 3 MSRTF
1 meeting of each CC (4 people * 27 meetings + 5 = 113)	2 NCCH staff (project manager & project officer), 2 clinicians (includes CG for attendance items)
1 meeting of each CG (9 people * 27 meetings = 243)	2 NCCH staff (facilitator + 1 other), 2 CC clinicians, 4 CG reps, 1 MSRTF
2 meetings of APPRMS (39 people * 2 meetings = 78)	3 NCCH staff, 27 craft group reps, 3 MSRTF, MSRB
Total meetings = 58	
Total people meetings = 470	

GROUP ROLES AND MEMBERSHIP

1. **Professional Relativities Technical Committee (PRTC)** composed of six clinicians, NCCH director, project manager, project officers, statistician, meeting facilitators and a representative of the MSRB and the Medicare Schedule Review Task Force (MSRTF). This committee will be formed by the MSRTF. It will meet twice early in the life of the project to recommend definitions, rules and criteria for application throughout the study.

2. **Clinical Consultants (CCs)**. From each of 26 specialty groups, two clinicians who routinely advise the NCCH on classification development will be nominated by NCCH. These consultants will be paid and meeting arrangements made by NCCH. Their role will be to identify and make recommendations to the Consensus Groups on core items, times, intensity, RVUs and link items. There will be one face to face meeting of each CC group with additional work done by mail, fax and teleconference.

3. **Consensus Groups (CGs).** There will be **26 consensus groups on procedural items** comprised of 4 representatives of each specialty to be nominated by Colleges and Associations together with the two NCCH clinical consultants, 2 NCCH staff and 1 representative from the MSRTF. In addition, there will be **1 consensus group on attendance items** made up of 6 clinicians, 2 NCCH staff and 1 representative from the MSRTF. All consensus groups will be formed by MSRTF. The role of the procedural consensus groups is to confirm recommendations from the CCs on RVUs and link items for core and remainder items. The role of the consensus group on attendance items is slightly different in that there is no CC for attendance items so that the attendance item CG will develop its own recommendations for consideration by the APPRMS.

4. **Advisory Panel on Professional Relativities for Medical Services (APPRMS)** made up of 26 clinicians (one from each of 26 craft groups), NCCH director, 2 NCCH staff, statistician, MSRTF staff and members of the MSRB. This cross specialty panel will meet twice during the course of the twelve month study to confirm the maps, the RVUs recommended for core and remainder items and inter specialty link items. Nominees would represent the interests of specialty and professional groups and would provide communication to and from the specialty clinical organisations. To be formed by MSRTF.

Details of the roles and membership of these committees is shown in the following table:

PROFESSIONAL RELATIVITY STUDY MEETINGS

	MEMBERS	**ROLE**
Professional Relativities Technical Committee **2 meetings** **Phase 1**	6 clinicians: 1 GP rural (obstetrics) 1 GP metropolitan 1 general surgeon 1 specialist surgeon (?Plastics, ENT) 1 general physician or paediatrician 1 specialist physician (cardiology or GE) NCCH Director NCCH Project Manager NCCH Project Officers (4) Statistician Meeting Facilitators (5) MSRTF (3) MSRB (1)	Recommend definition of time - total service time, intra, pre and post Recommend definition of direct/indirect time & effect on MBS relativities Recommend effect of using existing MBS item relativities for RVUs Recommend formula for calculating time and intensity to establish RVUs Recommend methods for RVUs for consults, therapeutic & anaesthesia items Recommend criteria for choosing core & link items Recommend method for translating RVUs from core to remaining items Recommend criteria for accepting a good map
Clinician Consultants **27 meetings** **Phase 2**	2 representatives of 26 specialties + Attendance item Consensus Group NCCH facilitator NCCH project officer	Decide 20 core items in specialty Review data on core items Establish times & intensity for core items Establish link items Make recommendations to Consensus Groups

PROFESSIONAL RELATIVITY STUDY MEETINGS (continued)

	MEMBERS	ROLE
Consensus Groups **27 meetings** **Phase 2**	**Consensus Groups on Procedural Items:** 26 groups representing procedural specialty groups 4 representatives of each specialty nominated by Colleges & Societies 2 clinician consultants NCCH Meeting Facilitator NCCH Project Officer 1 MSRTF representative **Consensus Group on Attendance Items:** 2 General Practitioners General Surgeon Specialist Surgeon General Physician or Paediatrician Specialist Physician (Cardiologist or GE) NCCH Meeting Facilitator NCCH Project Officer 1 MSRTF Representative	Agree RVUs for core items and confirm link items
Advisory Panel on Professional Relativities in Medical Services **2 meetings** **Phase 1** **Phase 3**	26 clinicians, 1 from each craft group NCCH director NCCH project manager Statistician MSRTF staff MSRB members	Note and comment on PRTC rules, definitions, crtieria, formulae Confirm RVUs for core and remaining items from CCs and CGs Confirm link items Provide communication to and from craft groups
Medicare Schedule Review Board		Approve definitions, rules and criteria to apply to the study as recommended by PRTC Attend meetings of APPRMS - chair to come from AMA representative Review project at conclusion of each phase

NCCH STAFF ROLES

The NCCH will be responsible for the day to day management of the project.

NCCH Director
Attend meetings with MSRTF and MSRB
Assist with preparation of reports to MSRB
Liaise with members of MSRTF

Project Manager:
Become familiar with criteria, rules and definitions for development of RVUs
Oversee the day to day management of the project for the NCCH.
Communicate with MSRTF concerning organisation of meetings, preparation of data and reports to project groups and MSRTF
Supervise NCCH project officers
Ensure time lines are followed
Prepare interim and final reports for MSRB
Manage NCCH project budget
Attend meetings of PRTC, APPRMS, CCs and CGs when possible

Meeting facilitators
Become familiar with criteria, rules and definitions for development of RVUs
Assist in preparation of material for CG meetings
Run CG meetings
Assist in preparation of reports from CG meetings

Project Officers:
Become familiar with criteria, rules and definitions for development of RVUs
Carry out mappings between MBS and CPT
Retrieve and assemble data on actual theatre times for Australian procedures, MBS relativities, CPT mapped item relativities and frequencies, anaesthesia times (in conjunction with MSRTF).
Attend meetings of PRTC, APPRMS, CCs and CGs
Keep minutes and prepare reports of meetings

Statistician (OR Systems Pty Ltd.):
Play a major role in PRTC in assisting with decisions on:

- definition of time - total service time, intra, pre and post
- definition of direct/indirect time & effect on MBS relativities
- effect of using existing MBS item relativities for RVUs
- formula for calculating time and intensity to establish RVUs
- methods for RVUs for consults, therapeutic and anaesthesia items
- criteria for choosing core and link items
- method for translating RVUs from core to remaining items
- criteria for accepting a good map

Test PRTC decisions on above definitions and criteria
Supervise database manager
Attend meetings of PRTC, APPRMS
Liaise with NCCH and MSRTF

Database Manager (OR Systems Pty Ltd.):
Prepare and maintain mapping data bases and reports
Prepare data bases with additional data on theatre & anaesthesia times, frequencies, MBS relativities
Enter results from CC and CG meetings on time and intensity estimates
Establish e-mail links with other project staff.

Administrative Assistant:
Arrange meetings, travel.
Disseminate material to meeting participants
Prepare reports.
Liaise with interstate staff
Prepare and maintain data bases of group membership, contact addresses, phones, faxes, email
Liaise with MSRTF re meeting organisation

INDIVIDUAL CONSULTANTS

Associate Professor Rosemary Roberts, Director, National Centre for Classification in Health, University of Sydney (also Meeting Facilitator). Involved in Feasibility Study.

Ms Lauren Jones, Project Manager, NCCH, University of Sydney (also Meeting Facilitator). Involved in proposal for Feasibility Study. Consultant to NCCH on code development, adverse events, clinical indicators, data quality projects.

Ms Jennifer Shepheard, Project Officer, Melbourne. Involved in Feasibility Study, Urology mapping.

Ms Joy Smith, Project Officer, Brisbane. Involved in Feasibility Study, Urology mapping.

Ms Andrea Groom, Project Officer, Melbourne. Involved in Feasibility Study, Neurosurgery mapping.

Ms Paula Hallang, Project Officer, Melbourne. Involved in Feasibility Study. Neurosurgery mapping.

Ms Barbara Anderson, Meeting Facilitator, Sydney. Senior Health Information Manager in consultant practice with wide experience in hospitals health information systems, hospital accreditation, education and quality assurance.

Mrs Sue Walker, Associate Director, NCCH, Queensland University of Technology (also Meeting Facilitator). Involved in Feasibility Study.

Ms Kerry Innes, Associate Director, NCCH, University of Sydney (also Meeting Facilitator). Involved in Feasibility Study.

Mr George Rennie, OR Systems Pty Ltd, Medical Statistician, Melbourne. Involved in projects for MSRTF including Diagnostic Imaging Review, Relative Value Study with KPMG, Practice Costs with Deloitte & Touche Consulting.

Mr Andrew Brion, Database Manager, OR Systems Pty Ltd., Melbourne

Ms Florence Crowther, Administrative Assistant, Sydney

PROFESSIONAL RELATIVITY STUDY WORK PLAN

Phase	Wk Commencing	Function
Phase 1	30 June 1997	Select PRTC members. Seek CC, CG & APPRMS members. Brief statistician
	7 July 97	Arrange PRTC meeting. Develop data bases. Get frequency data
	14 July 97	Start mapping. Draft rules, defns, criteria for PRTC
	21 July 97	PRTC development continued. Mapping
	28 July 97	PRTC 1st meeting - rules, defns, criteria for item selection & RVU. Mapping
	4 August 97	Test rules, crtieria (statistician). Mapping
	11 August 97	Rule testing continued. Mapping. Organise CC meetings
	18 August 97	Rule testing continued. Mapping
	25 August 97	Rule testing continued. Mapping
	1 September 97	Rule testing continued. Mapping
	8 September 97	Rule testing continued. Mapping
	15 September 97	PRTC 2nd meeting to confirm rules, definitions, criteria
	22 September 97	First meeting APPRMS
	29 September 97	**First interim report to MSRB**
Phase 2	6 October 97	PRTC rules, definitions etc to CCs
	13 October 97	NCCH CCs identify 20 core items for ea specialty based on map quality & vol
	20 October 97	NCCH assemble data on core items (HCFA vols, theatre times, OR wts, RVUs)
	27 October 97	NCCH assemble data continued
	3 November 97	NCCH assemble data continued
	10 November 97	NCCH assemble data & send to CCs. Arrange CG meetings.
	17 November 97	Meetings 26 CCs and attendance CG to decide RVUs & links for 600 items
	24 November 97	CC group meetings continued. Results of CC meetings to CGs
	1 December 97	CC group meetings continued. Results of CC meetings to CGs
	8 December 97	CC group meetings continued. Mtgs 27 CGs to review 600 core + links
	15 December 97	CC & CG group meetings continued
	22 December 97	CC & CG group meetings continued
	29 Dec - 16 Jan	THREE WEEK BREAK
	19 January 98	Preparation for CG meetings
	26 January 98	CG meetings continued
	2 February 98	CG meetings continued
	9 February 98	CG meetings continued
	16 February 98	CG meetings continued
	23 February 98	**Second interim report to MSRB**
Phase 3	2 March 98	NCCH to draft RVUs for remainder items
	9 March 98	NCCH to draft RVUs for remainder items
	16 March 98	NCCH to draft RVUs for remainder items
	23 March 98	NCCH consult with CCs re remainder items. Arrange second meeting APPRMS.
	30 March 98	NCCH consult with CCs re remainder items
	6 April 98	NCCH consult with CCs re remainder items
	13 April 98	EASTER
	20 April 98	NCCH prepare all items for APPRMS
	27 April 98	Results of all items to APPRMS
	4 May 98	Meeting preparation
	11 May 98	Second meeting of APPRMS
	18 May 98	Prepare third report
	25 May 98	**Third interim report to MSRB**
Phase 4	1 June 98	Report preparation
	8 June 98	Report preparation
	15 June 98	Report preparation
	22 June 98	**Final Report to MSRB**

The foregoing work plan outlines the framework for the project. In developing the work plan the NCCH recognises that the Board is anxious that the project progress as expeditiously as possible. Whenever it can, the NCCH will bring forward any components, particularly in house components, which will facilitate progress.

PROJECT DELIVERABLES

Phase 1. Three months. July - September 1997.
Recommendations from PRTC on:

- definitions of time - total service time, intra, pre and post service time
- definitions of direct/indirect time and effect on MBS relativities
- effect of using existing MBS item relativities for RVUs
- formula for calculating time and intensity to establish RVUs
- methods for RVUs for consultations, therapeutic and anaesthesia items
- criteria for choosing core and link items
- method for translating RVUs from core to remaining items
- criteria for accepting a good map, including consideration of a weighted average

Results of mappings for all items in Categories 1, 2, 3 and 4 of MBS to CPT
Results of first meeting of APPRMS
***** First interim report to MSRB - Board to approve definitions, rules and criteria

Phase 2. Five months. October - February 1998
Results of meetings with clinician consultants for 26 specialties and first meeting of consensus group on professional attendance items
Twenty core items for each of 26 specialties and professional attendance items in Category 1.
Frequencies and work RVUs for mapped CPT items
Link items between specialties
MBS relativities based on existing fees for the 27*20 items (540 items)
Actual theatre times, DHFS theatre times, Anaesthesia times for 540 items
Results of meetings of 27 Consensus Groups
***** Second interim report to MSRB - Board to approve work to date

Phase 3. Three months. March - May 1998.
Work relative value units for all MBS items
Results of second meeting of APPRMS
***** Third interim report to MSRB - Board to approve work to date

Phase 4. One month. June 1998.
***** Final report to MSRB

***** Reports to the Board to take the form of a presentation and formal report to a meeting of the Board briefly describing the status of the project and identifying issues of concern or matters for discussion and decision by the Board.

APPENDIX 1

CATEGORIES OF MEDICAL PRACTITIONER APPROVED BY THE MEDICARE SCHEDULE REVIEW BOARD FOR PURPOSES OF THE PROFESSIONAL RELATIVITITY AND PRACTICE COSTS STUDIES

1. Other Medical Practice
2. General Practice (vocationally registered)
3. Obstetrics and Gynaecology
4. General Surgery
5. Cardio-thoracic Surgery
6. Neurosurgery
7. Orthopaedic Surgery
8. Paediatric Surgery
9. Plastic Surgery
10. Urology
11. Vascular Surgery
12. Ophthalmology
13. ENT/Facio-maxillary Surgery (? Dental Surgery)
14. Anaesthesia (Specialist, Intensive Care, Resuscitation)
15. Dermatology
16. Psychiatry
17. General Medicine (Infectious Diseases, Geriatrics, Immunology, Endocrinology)
18. Cardiology
19. Renal Medicine
20. Gastroenterology
21. Neurology
22. Paediatric Medicine
23. Rehabilitation Medicine
24. Rheumatology
25. Thoracic Medicine
26. Emergency Medicine

Professional Relativities Study

MBS-CPT Mapping Procedures

July, 1997

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C O N T E N T S

1. OVERVIEW

1.1 This document

This documentation relates to the Access database called MBS-CPT and describes the procedure for mapping between the Medicare Benefits Schedule (MBS) items and the American Medical Associations' Physicians Current Procedural Terminology (CPT). The MBS-CPT database is used to record and report on the "forward" coding or mapping of MBS codes in terms of one or more CPT codes.

Note: This documentation also applies in general terms to "backward" mapping of CPT codes to one or more MBS codes. The backward database is called CPT-MBS

The database name will be tailored to the Project Officer using it so that the last three letters of the database name become the first three letters of their forename (e.g. MBS-JOY for Ms. Joy Smith; CPT-JOY for the backward database).

This documentation assumes a basic level of knowledge about Access. Please note that while every effort has been made to ensure this documentation is up to date, the database is being continuously developed. There may, for example, be some small differences between some of the screen pictures shown in this document and precisely what you see on your computer screen. However all differences, if there are any at all, should be very minor.

1.2 The mapping process

1.2.1 Data items and resources required for mapping

The following data items and resources are required for the mapping process:

Software:	***Data and resources:***
Windows 1995 or Windows 3.1	MBS (1 November 1996)
Microsoft Access V2.0	Supplement to MBS (1 May 1997)
Winzip	AMA Physicians CPT (1997)
Email address	CPT relative values (paper version)
	CPT short descriptions
	ICD-10-AM MBS-E

1.2.2 The core process

The process of mapping for purposes of the Professional Relativities Study (PRS) requires that every MBS code is defined in terms of one or more CPT codes. Often there are several ways to define an MBS code in terms of CPT codes. It is important to distinguish between CPT codes which must **all** occur in order to adequately map an MBS code, and CPT codes which can interchangeably map to an MBS code.

It will be necessary to use the CPT index and all other data resources mentioned in 1.2 to achieve the best possible map. Note:

- each concept (in medical terms) of the MBS item should be considered when mapping to the CPT.
- it is not necessary to map the aim or setting of the procedure.
- do not use CPT codes referred to as 'unlisted' (in the forward mapping)

In data entry and mapping terms, CPT codes which must **all** occur in order to map an MBS code are said to logically "AND" together. They are always entered on the same row of the data entry screen.

CPT codes which can interchangeably map to an MBS code are said to logically "OR" together. They are always entered on separate rows of the data entry screen.

The above may give rise to a series of codes which must be ANDed together, and others which need to be ORed. An example is probably useful here.

MBS code 36506 (*Renal transplant, performed by vascular surgeon and urologist operating together - vascular anastomosis, including after-care*) maps to the following combination of CPT codes.

	50360
OR	50365
OR	(50380 AND 50234)
OR	(50380 AND 50220)

The above combination of codes is referred to as a ***Primary Map***.

An ***Additional Map*** section has been provided for use when there are CPT codes or combinations of codes which should occur (in other words be ANDed) with all of the primary maps. This section has been created to expedite data entry.

An additional map cannot be used on its own and it will have an AND relationship with each primary map.

These additional mapping's could, of course have been logically combined with the *Primary Mapping* but this would have made for much more data entry. MBS code 36506 is an example of this, and the additional code(s) which must be used in conjunction with each of the *Primary Maps* are shown below:

MBS Code:		36506
Primary maps (CPT codes):		50360
	OR	50365
	OR	(50380 AND 50234)
	OR	(50380 AND 50220)

Additional map (CPT code): *09962*

The final mapping would be as follows when this *Additional map* is ANDed with the *Primary maps*:

	(50360 AND *09962*)
OR	(50365 AND *09962*)
OR	(50380 AND 50234 AND *09962*)
OR	(50380 AND 50220 AND *09962*)

Note: In the above example, all of the primary maps must be ANDed with the additional map(s) and will never appear on their own as a primary map. Where there is more than one additional map (i.e. Option 1 and Option 2) these will each be ANDed in turn with the Primary Maps.

MBS code:		36506
Primary maps (CPT codes):		50360
	OR	50365
	OR	(50380 AND 50234)
	OR	(50380 AND 50220)

Additional maps (CPT codes):		*09962*
	OR	*12345 AND 23456* (hypothetical numbers)

The final mapping would be as follows when these *Additional maps* are ANDed with the *Primary maps*:

(50360 AND *09962*)
OR (50365 AND *09962*)
OR (50380 AND 50234 AND *09962*)
OR (50380 AND 50220 AND *09962*)

OR (50360 AND *12345 AND 23456*)
OR (50365 AND *12345 AND 23456*)
OR (50380 AND 50234 AND *12345 AND 23456*)
OR (50380 AND 50220 AND *12345 AND 23456*)

1.2.3 Other processes

Some maps are better than others and therefore for every map three additional pieces of information are entered onto the computer.

- *Terminology* (MBS vs. CPT) is assessed on a four point scale where:
  3 = Exact match (including synonym match)
  2 = Partial match (some parts match but not all)
  1 = Partial match/ poor
  0 = No match

This is a mandatory field. Please see definitions for assessing terminology in Section '5'.

- *Comments* are entered which specifically describe any problems or difficulties in reconciling the MBS codes with CPT equivalents and to make general comments about why maps were chosen. This is not a mandatory field.

- *Query* is used (i.e. entered as 'Yes') where *comments* or maps need review or flagging for the CC meetings.

**** N.B. IMPORTANT ****

1.3 Repeat Codes

It's sometimes the case that codes used can repeat. For example a repeating code might represent each additional thirty minutes spent on a particular procedure. A repeating code can repeat zero or more times.

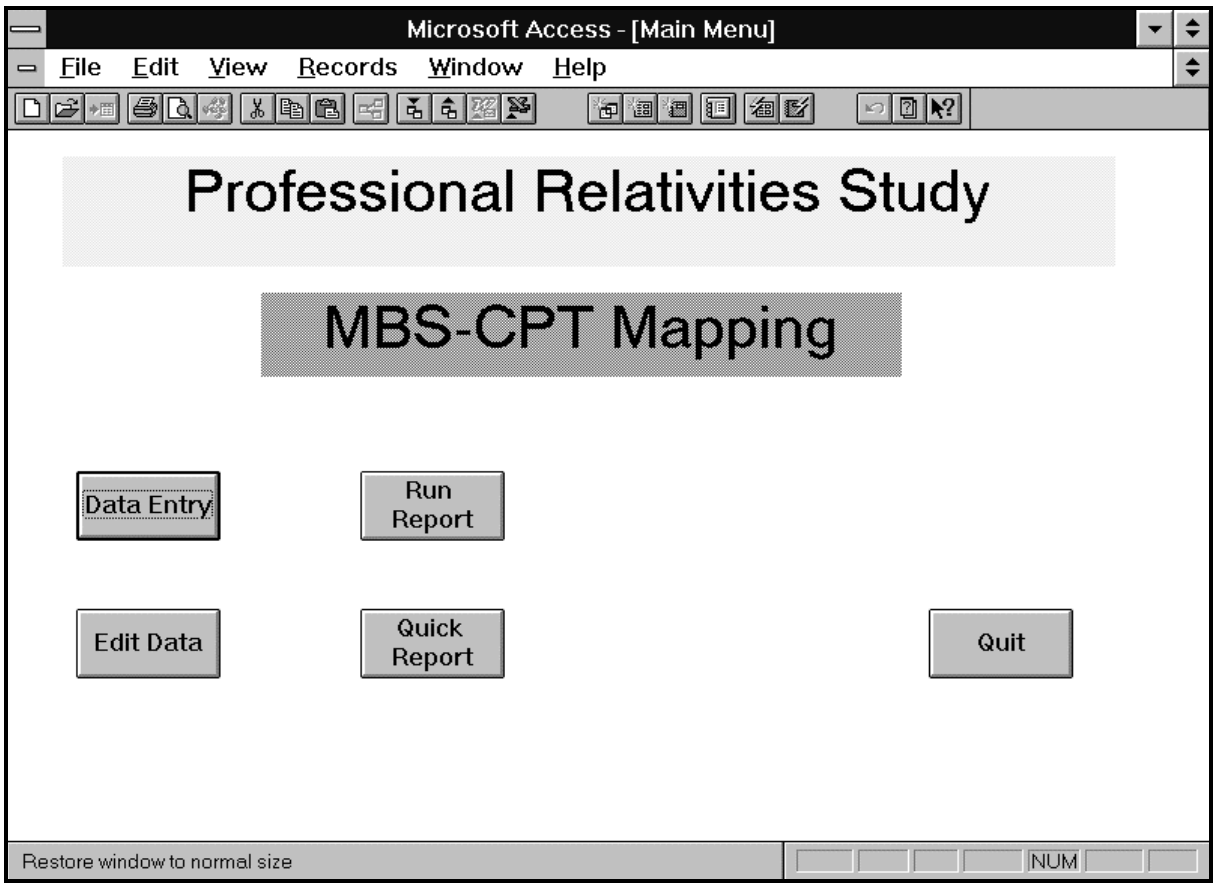
MBS code 30359 *(Breast, radical or modified radical mastectomy with or without frozen section biopsy*) has an *Additional Map* which requires CPT codes 88329 (*pathology consultation during surgery*) and 88331 (*single specimen frozen section(s)*) to always occur. The repeater code for 88331 is CPT Code 88332 (*additional tissue block with frozen section(s)*). However CPT Code 88332 can occur zero or more times (i.e. it does not have to occur). We represent the above as a **single** additional map, like this:

88329 88331 88332 99999

The "99999" code indicates that the code prior to it (88332) is a repeating code which can occur zero or more times.

2. THE MAIN SCREEN: GETTING READY TO USE THE DATABASE

To get working, start up Access and open your personal database called MBS-nam (where "nam" is the first three letters of your forename). You should be brought to a screen similar to the one below.



There are only five things you can do from here, and there is a button for each.

"Data Entry" and **"Edit Data"** are very similar: both allow you to enter mapping information onto the database. We will consider these together.

- "Data Entry" only permits you to add new information and not to make modifications to existing database records.

- "Edit Data" permits you to both add new information and to amend database information entered previously.

"Run Report" and **"Quick Report"** are also closely related and we will consider these together. Both produce a report with the same structure.

- "Run Report" takes time to run.
  - ⇒ **Do not be concerned if a report takes several minutes to run.**
  - ⇒ **Do not switch off your computer whilst "Run Report" is in progress or you may corrupt the database.**
  - ⇒ **Be careful not to double click on the report button or attempt to carry out other functions within the database until the report is run.**

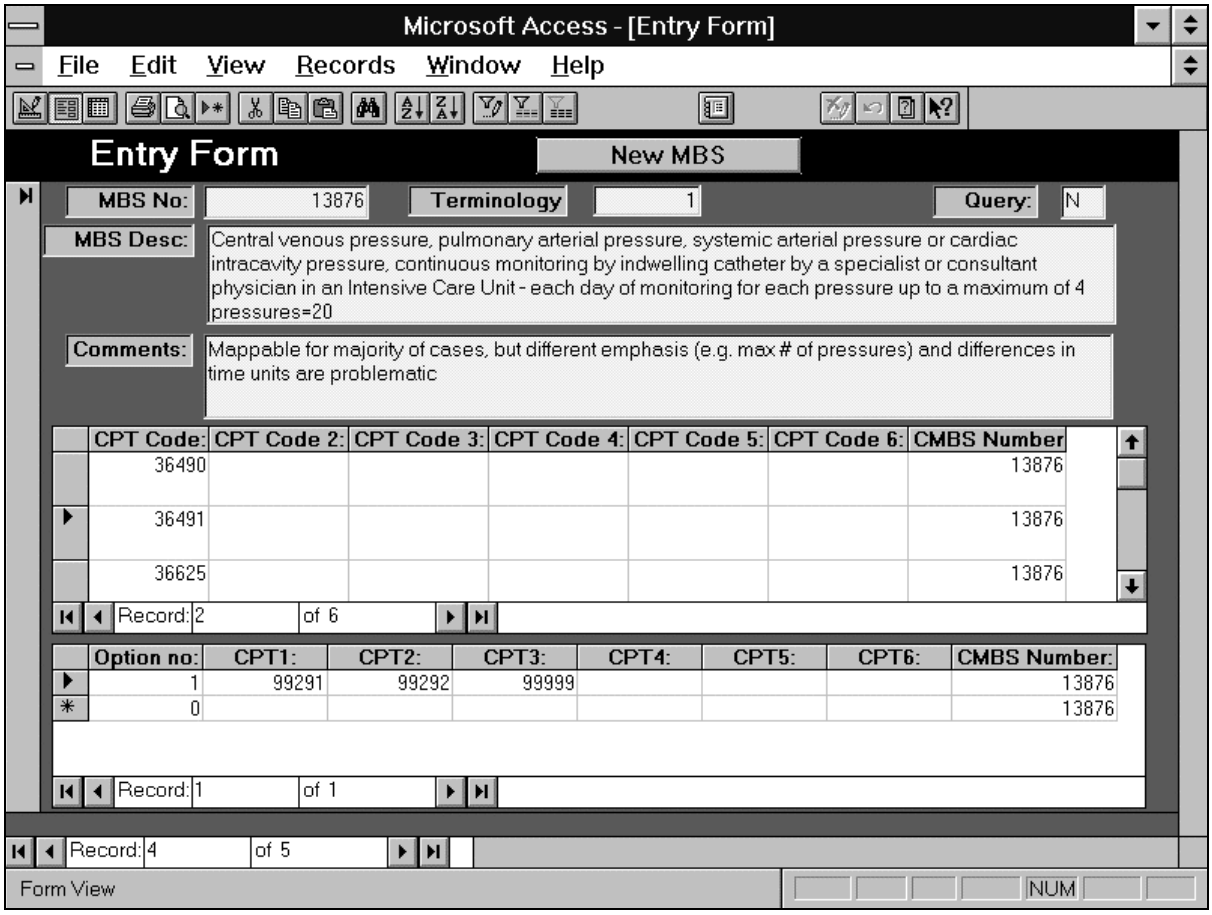
- "Quick Report" runs much more quickly than "Run Report". However it only processes database information that has already been analysed by "Run Report". It is most useful if you want to re-run a report one or more times on various subsets of codes.

"Quit" takes you from the Main Screen into the standard Access user interface. In general, it is recommended that you work from the Main Menu rather than from the Access user interface.

3. ENTERING AND MODIFYING DATABASE INFORMATION

Once you have mapped a group of MBS codes you will be ready to enter the information into the database.

Click on the "Data Entry" button and a screen display similar to the one below will appear. The only difference will be that there will be no mapping information entered on your screen when you start i.e. all the yellow and white fields will be empty.



There is quite a lot of information on this screen but it divides neatly into three sections. The yellow portion is information about the map, the box below that is for the *Primary Maps*, and the bottom box is for any *Additional Maps*.

3.1 The yellow section

The cursor will be in the box labelled "MBS No." Enter the MBS number that you are mapping and then hit either ENTER or TAB. This will do two things:

- A description of the MBS code will appear in the box labelled "MBS Desc". **If this description does not appear, then you have probably entered an incorrect code.**

- The cursor will move to the "Primary Maps" section.

When you have completed the "Primary Maps" section described below, type CTL-TAB (control and TAB at the same time) and the cursor will move to the "Terminology" box. The default value of 99 will be highlighted; just type the correct value (between "0" and "3") and ENTER/TAB to continue.

You can now continue entering "Query" and "Comments" in the same way, hitting either ENTER or TAB each time to move to the next field. "Query" is used to indicate where the map requires further examination. "N" indicates no further examination is required. "Y" indicates that further examination is required.

When you hit ENTER or TAB from the "Comments" field, then the cursor will move into the *Primary Maps* section.

3.2 The Primary Maps section

Because you will not need to enter information into most of the boxes in the *Primary Maps* section, you may find it easier to move around this section either by using the arrow keys, or by clicking in the cell where you want to enter information with the mouse. However you can still navigate by using ENTER/TAB if you prefer to.

The MBS number that you entered at the top of the page will automatically appear in the right hand column each time you enter a new record. You cannot enter any data into this field.

The database will also verify that you:

- enter all the information from left to right and that you don't leave any gaps
- enter valid CPT codes.

Note that if you enter a lot of *Primary Maps*, that you can navigate up and down by using the scroll bars on the right hand edge of the box.

Double clicking over any cell containing a CPT number will display the full CPT description on the computer screen.

3.3 The *Additional Map* section

Many MBS codes will not have *Additional Maps*. If there are no *Additional Maps* you do not need to concern yourself with the bottom box on the screen at all. Because of this, you cannot just ENTER/TAB to reach this section. You need to point and click the mouse into the section in order to enter data into it. Once there, you can once again navigate around the box by using arrow keys or ENTER/TAB.

Entering data here is exactly the same as entering information into the *Primary Maps* section. The only difference is that there is an extra column at the left hand side headed "Option no". You cannot enter information into this field and you will find that it simply increments from one upwards.

The same validations that are carried out in the *Primary Maps* section are also carried out here. Thus the program checks that you

- enter all the information from left to right and that you don't leave any gaps
- enter valid CPT codes.

Double clicking over any cell containing a CPT number will display the full CPT description on the computer screen.

3.4 Entering the next MBS map

Once you have entered all the information for one map, quickly review what you have keyed. If anything needs to be amended just point and click with the mouse into the cell which requires modification.

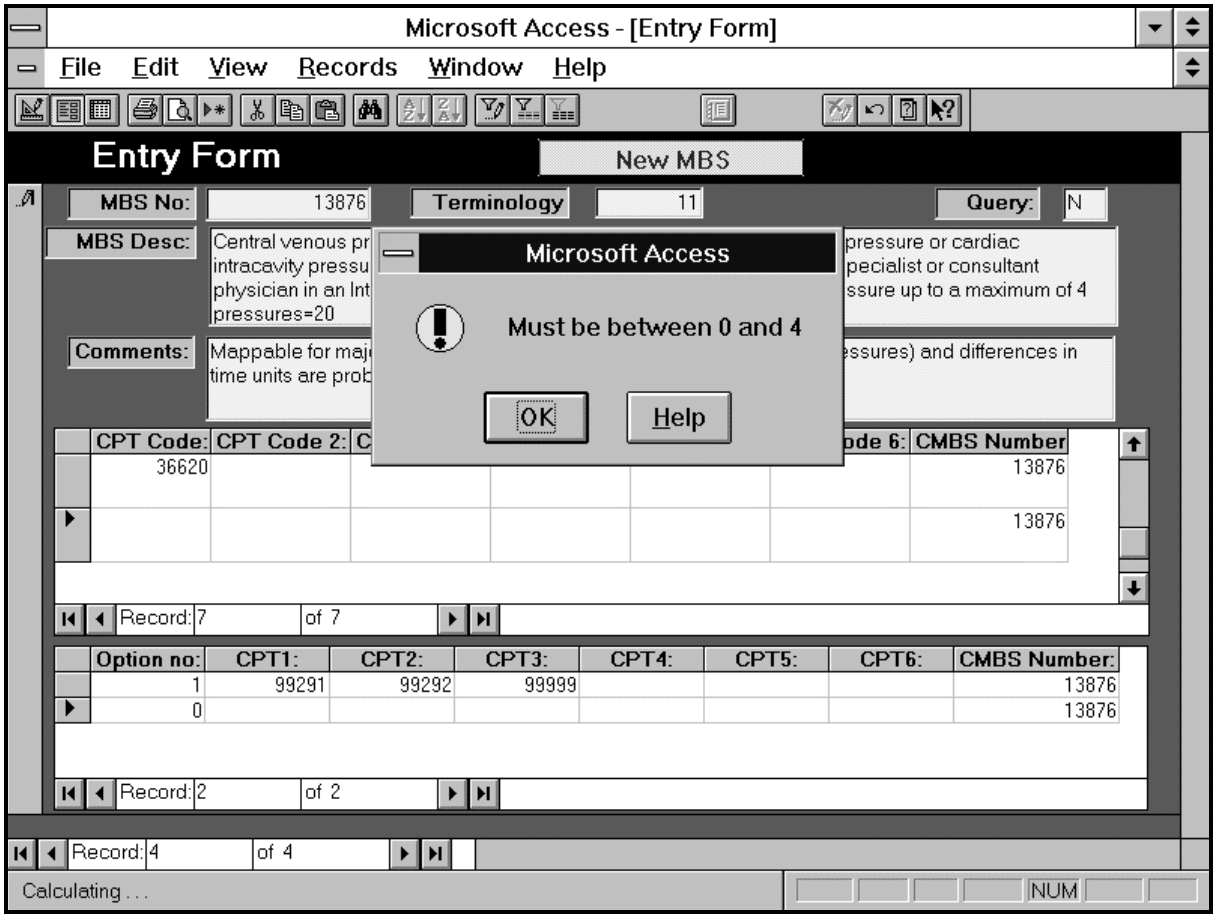
Once you are satisfied with everything click on the button at the top of the screen headed "New MBS" and proceed to enter the next MBS code in the same way as the last.

3.5 Stopping entering data

When you have finished entering information for the time being, just close the data entry window by double clicking at the top left. This will return you to the Main Menu.

3.6 Data Entry error messages

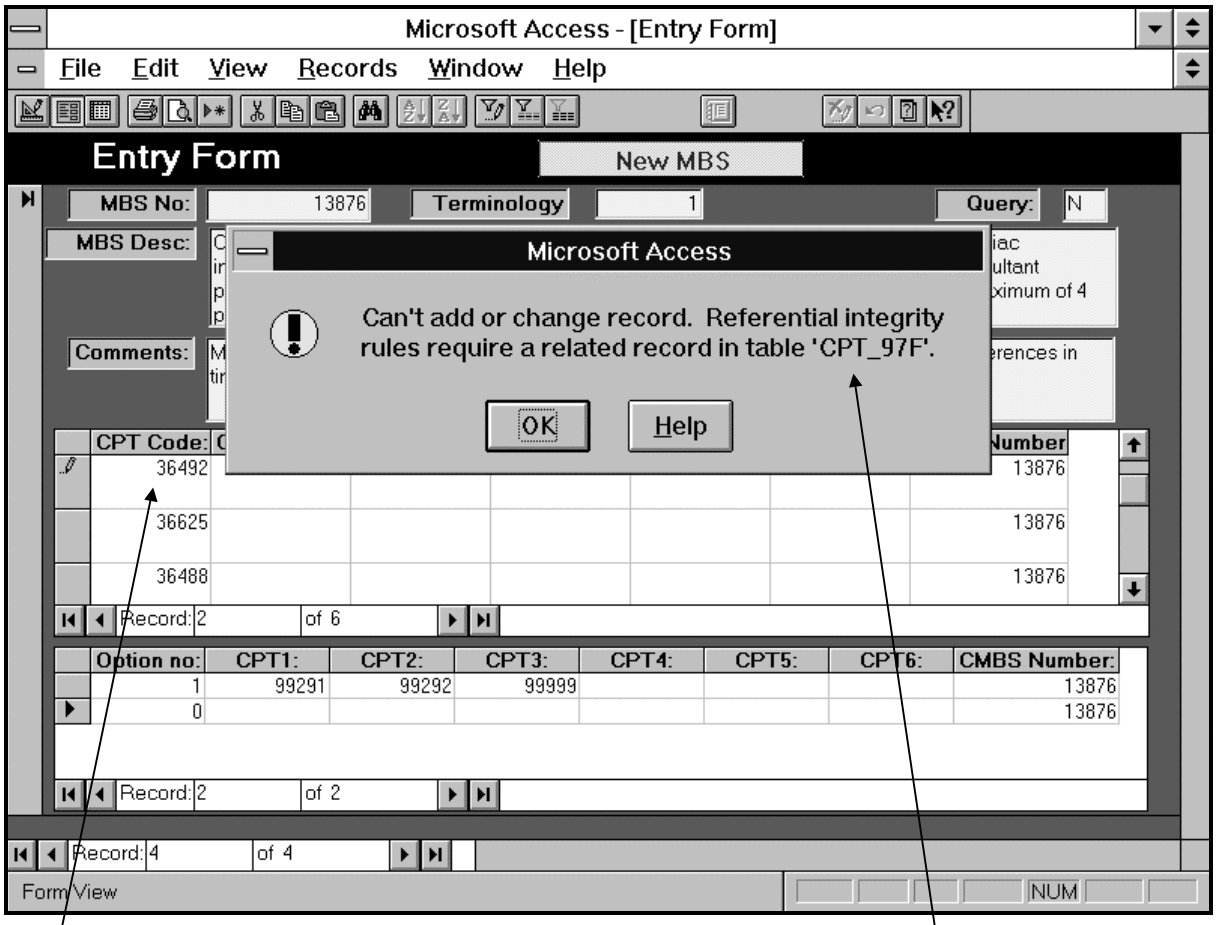
If you make a key-entry error then you will usually get an error message like the one shown below.



In the example above the user has accidentally hit the "1" key twice and entered eleven into the "Terminology" box. Immediately, the database flags that the data is out of range. Just click on "OK" and go back and correct the information.

The message that you get when you enter an illegal MBS or CPT code (see overpage) is slightly more cryptic but you can handle it in exactly the same way by clicking on "OK" and correcting the erroneous information.

In this example, the user has entered an illegal CPT code on the line marked as active in the *Primary Map* section. The pen at the left hand end of the record indicates the active record.



This is the illegal CPT code

This is where the message indicates that it is the CPT code (rather than the MBS code) which is failing "referential integrity"

Once an error occurs, then you must correct it or you will not be able to continue entering more information.

If you ever need to delete a whole record in the *Primary Map* or *Additional Map* sections, then this can be achieved by:

- clicking on the grey square at the left hand end of the record. This will highlight the row.
- hit the DEL key
- the computer will ask you to confirm the deletion

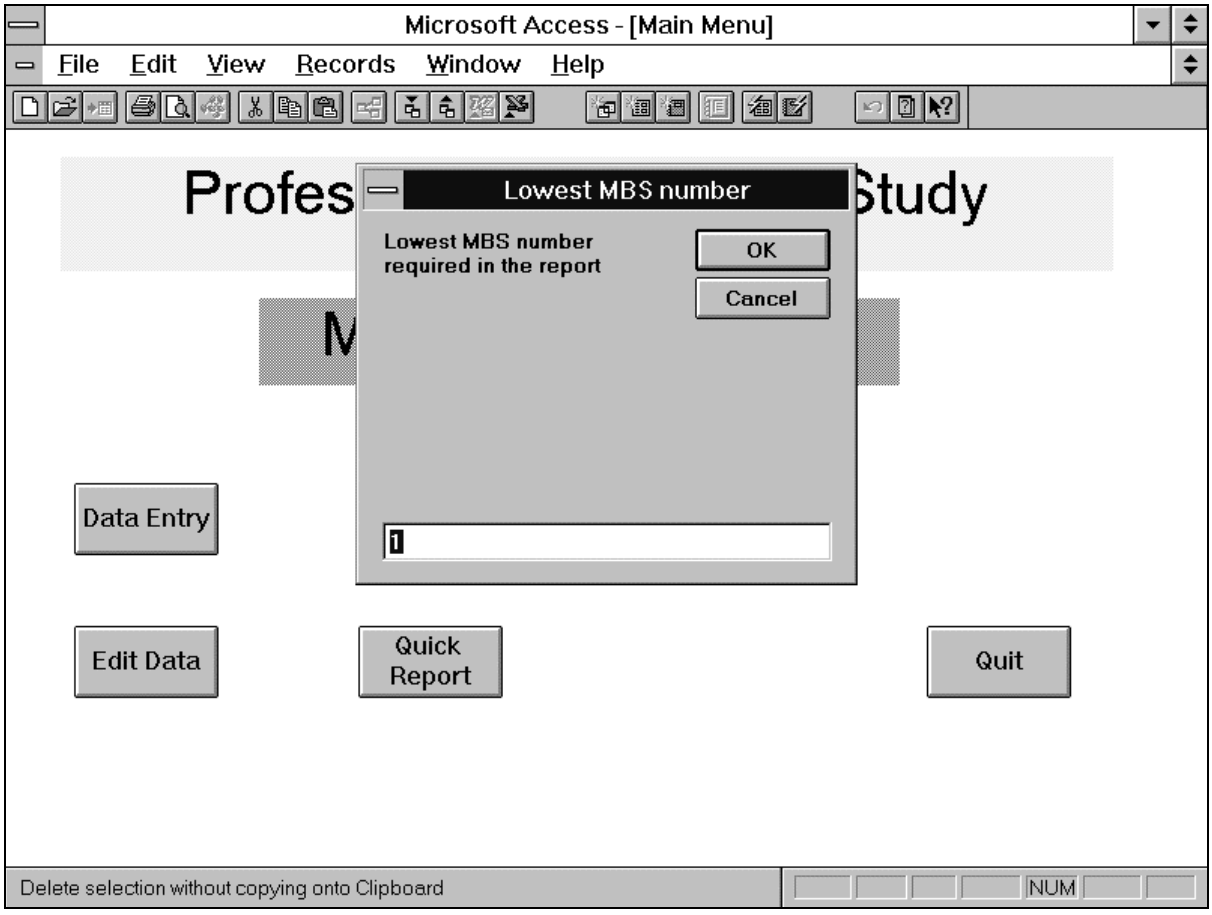
4. REPORTING

As with Data Entry, you need to be at the Main Screen to Report.

The first time you run a report you must do it by clicking the "Run Report" button. Before you do this remember that running a report will tie up your computer for several minutes.

You will be able to tell that the Report is being produced because the cursor will appear as an hourglass.

At the end of a few minutes you will be prompted to enter the lower and upper bound of the MBS numbers that you want reported. This enables you to "zone in" on a particular set of codes, perhaps from a specific Group or Sub-Group rather than having all codes reported in one go. You can run out separate reports for different Groups/Sub-Groups by using the "Quick Report" button.

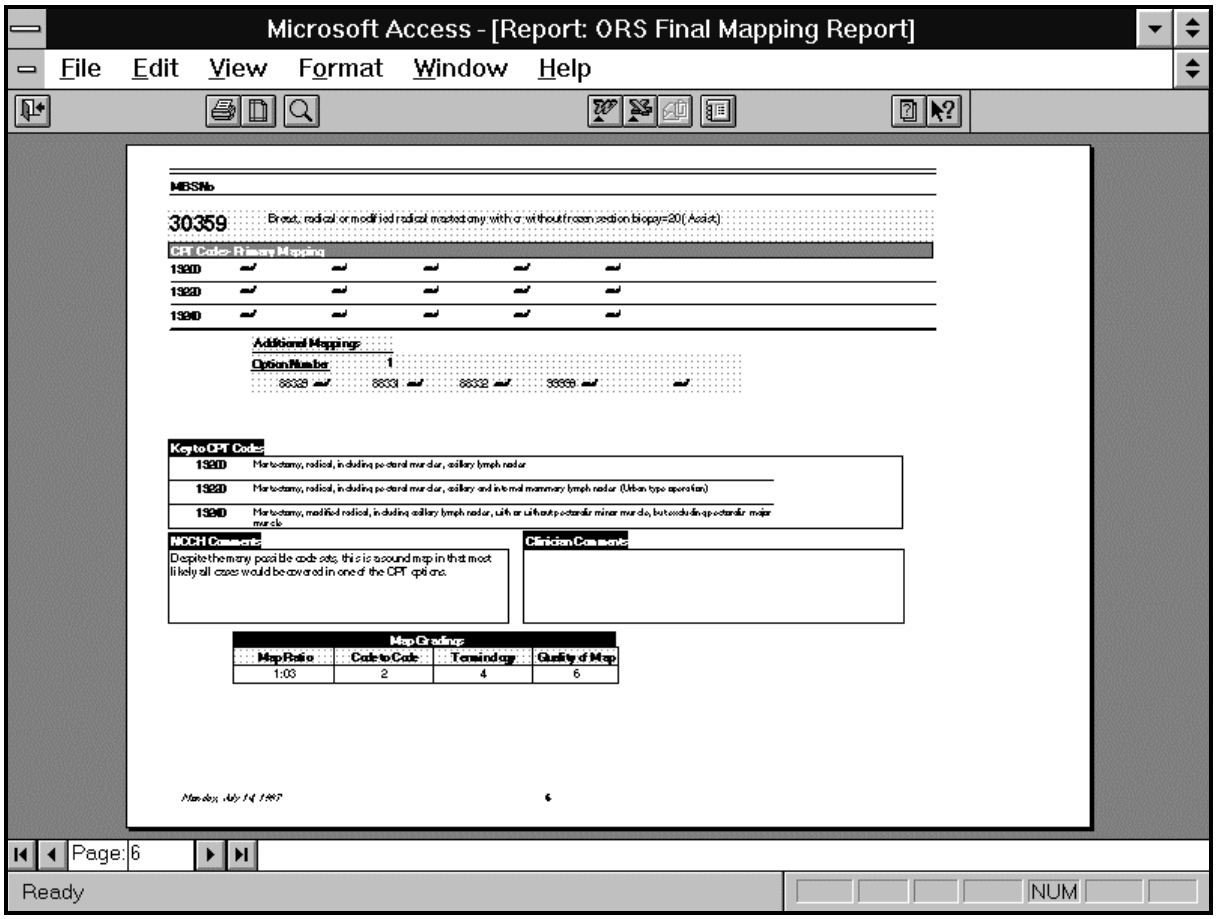


Note how the lower bound defaults to MBS code "1" if you just click "OK"

A similar screen prompts you for the upper bound and, from there, the report will be produced fairly quickly.

The report can be printed by selecting “File” on the menu bar, and then “Print...” from the sub-menu.

On the screen, the report should look something like this:



You should be able to recognise all the information you have entered. “Report” also creates two additional pieces of information:

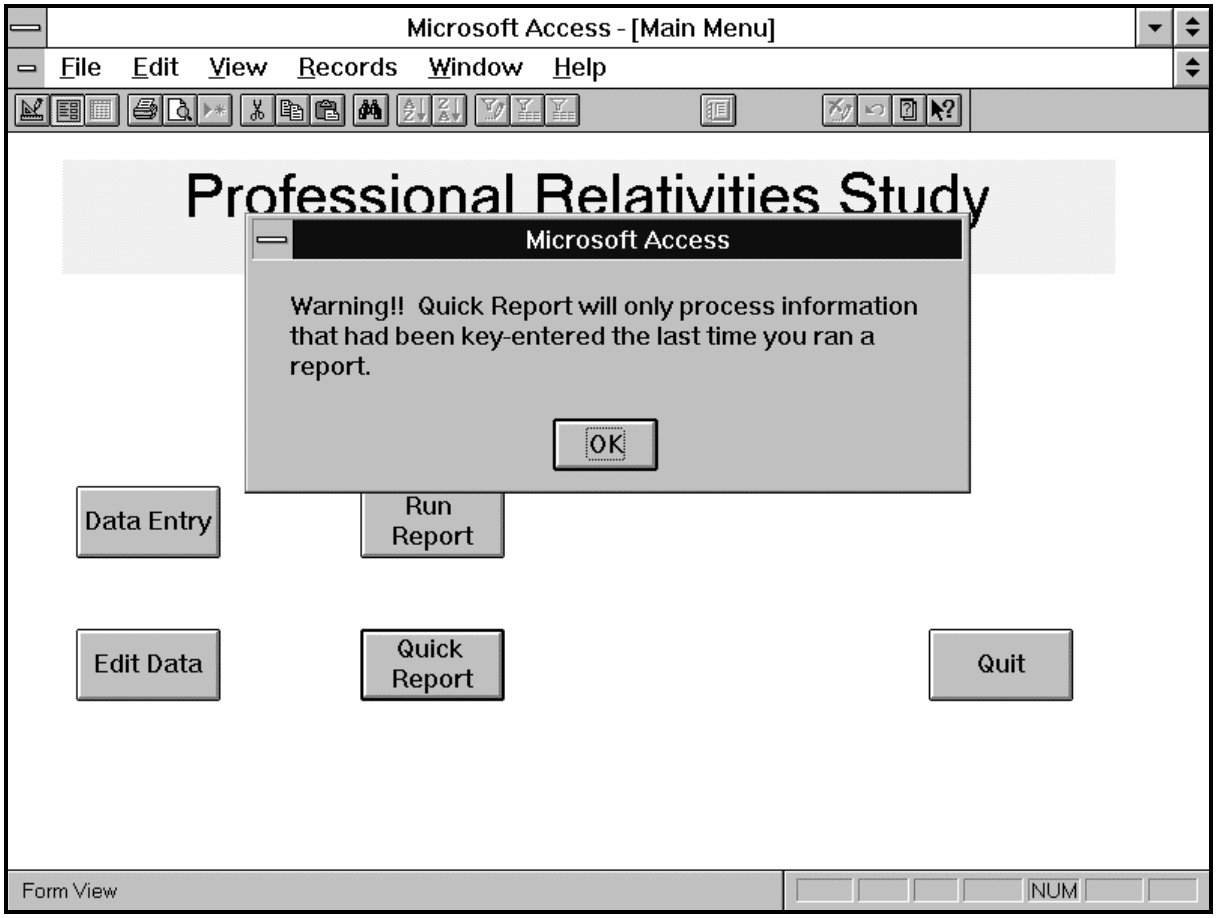
- “Map Ratio” represents the number of CPT codes used in the mapping.

- “Code to Code” indicates the complexity of the map, ranging from Code 4 indicating a “one-to-one” map, to Code 1 which is a complex map involving both ANDs and ORs.

4.1 "Quick Report"

"Quick Report" is provided so that you can produce another report based on different upper and lower MBS item numbers. It runs much more quickly than "Run Report".

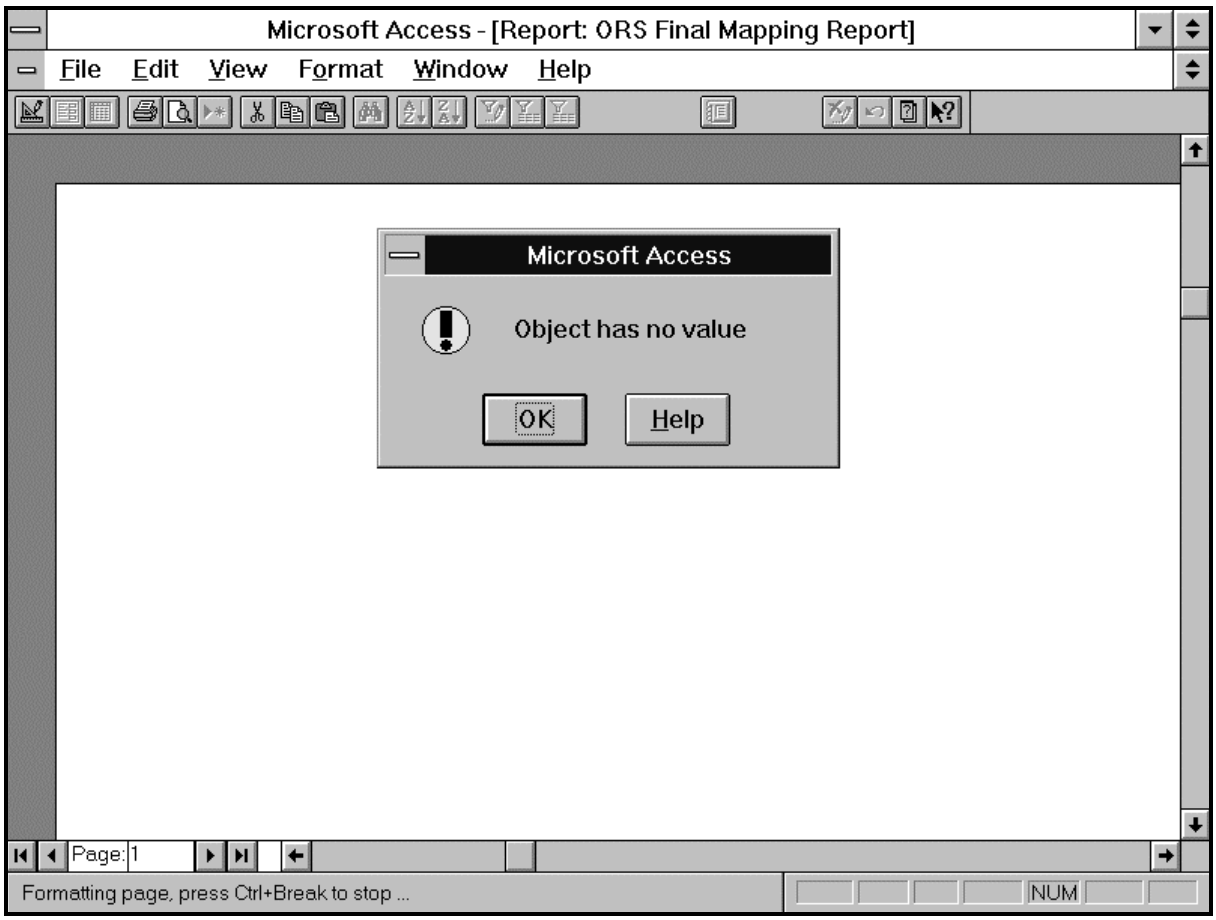
However note that "Quick Report" only includes information that had been key-entered on the last occasion that you used "Run Report". **If you want to include newly entered information in your report, then you must use "Run Report".** Whenever you use "Quick Report" it reminds you of this fact by displaying the following message.



Just click on "OK" to continue ... but you have been warned!

4.2 Report error messages

The error that is most likely to occur when running reports is selecting upper and lower bounds that exclude all MBS codes. If you accidentally do this, you will receive a message similar to the one shown below just before the report is produced.



Once again, just click on “OK” to continue. Your report, however will be blank.

This is actually quite a good way to produce a blank report if you need one to, for instance, draft some mapping onto paper.

5. MAP RATING DEFINITIONS

5.1 Terminology rating

The rating of terminology is difficult as there is considerable judgement required on behalf of the project officer to determine the overall concept of terms used in the MBS with those used in CPT. It is important to select terminology criteria in terms of whether the descriptions of items in MBS are equivalent (or not) in CPT. Concepts such as the aim of the procedure and the setting do not need to be considered when matching terminology.

The following ratings have been devised for terminology ratings:

3 = Exact match - where the terminology used to describe the MBS item number and CPT code is exactly the same or synonymous.

2 = Partial match - where the concepts (in terms of terminology) of MBS items match with CPT codes but there are not the same. Includes when some elements of the item may be missed in the CPT code(s) selected or some extraneous elements may be included by assignment of the CPT code.

1 = Partial match/poor - this is the same as criteria '2", however, should be used where the quality of the partial match is really poor. *Note: this has been included to try and separate some of the really poor partial matches (i.e. several terminology concepts do not match) from "2". Where it is difficult to differentiate whether partial matches are "good" or "poor" always assign a "2'.*

0 = No match

NOTE:

a) The aim of procedure and setting should not be considered when determining terminology ratings

b) It is important that all elements in the MBS item (or CPT code if backward mapping) are considered when assigning the above criteria.

5.2 Code to code rating

This item is automatically calculated by the database. The ratings are as follows:

4 = 1:1 map	(i.e. on MBS item number is completely described by one CPT code)
3 = 1:.1 map	(i.e. one MBS item number requires one set of CPT codes to completely describe it, but the codes within the set are all joined by 'and' meaning all the CPT codes combined will completely describe the MBS number)
2 = 1:>1 map	(i.e. elements of one MBS item may be described by a number of CPT codes - e.g. if the item number includes a "with or without" - so there are a number of single CPT codes each of which could, under certain circumstances, match the item number; there will only be one CPT code on a line, indicating that the relationship between them are all "or")
1 = 1:>1 map	(i.e. elements of one MBS item may be described by more than one set of CPT codes, so there will be a combination of "and" and "or" relationships ("and" between the codes of each set, and "or" between the sets)
0 = no match	(i.e. it is impossible to locate a CPT code or codes that describe the item number at all)

5.3 Quality of map

This item is automatically calculated by the database. The quality of map is simply the addition of both the terminology rating and the code to code rating.

5.4 Map ratio

The map ratio is automatically calculated by the database. This ratio assess the number of CPT codes that have been mapped from the MBS code.

For example, MBS code 36506 (*Renal transplant, performed by vascular surgeon and urologist operating together - vascular anastomosis, including after-care*) maps to the following combination of CPT codes.

	50360
OR	50365
OR	(50380 AND 50234)
OR	(50380 AND 50220)

The map ratio would be 1:5 as there are 5 distinct CPT codes to which the MBS code maps. Note: if the same CPT code is repeated, this is only counted once in the map ratio.

6. GENERAL PROCEDURES

As stated, each Project Officer will receive a separate database for mapping MBS items and CPT codes. The database name will be tailored to the Project Officer using it so that the last three letters of the database name become the first three letters of their forename (e.g. MBS-JOY for Ms. Joy Smith; CPT-JOY for the backward database). This will be the Master Database for the specialty items mapped.

a) Once each specialty has been forward and backward mapped, the following steps should be taken:

- Winzip the Access database(s)
- Email to the NCCH with attached 'zipped' file - send all copies to the project Managers Email address (i.e. NCC_Jones@cchs.usyd.edu.au)
- The NCCH will review the database and check any queries that you have flagged. If any changes (edits) need to be made these will be faxed or emailed (or posted) to the Project Officer(s) so that changes are made on the Master Database only. The NCCH will not be undertaking any edits on their copy of the database whilst the mapping is being carried out. This step is very important in order to avoid problems when updating the database.

b) Once the forward and backward mapping is completed Email the entry database to the NCCH.

- Winzip the Access database(s)
- Email to the NCCH with attached 'zipped' file

Back up

Please backup the database each day to a floppy disk. You will need to zip the file before copying to the floppy disk.