

NCCH 8th Biennial Conference



Happy Heart is the mascot of the National Heart Foundation of Australia. During the conference, \$167.55 was raised from a raffle to help support the Heart Foundation (Victoria Division's) work.

The NCCH 8th Biennial Conference held between 26–28 March 2003 at the Hilton on the Park in Melbourne has been a great success. The conference theme *Coder connect: Linking concepts in health* was taken up literally by most participants. Analysis of participants' evaluations indicate that the

event was highly regarded in terms of information presented, education received, and opportunities to get together with people of similar interests. Participants felt the event was as stimulating as it was provocative and entertaining.



NCCH 8TH BIENNIAL CONFERENCE

The conference explored the relationship between clinical coding and health care planning, clinical coding and research, health data and communication between health care sectors, terminologies and vocabularies, data quality, health information, and classification technology issues.

Tutorial day

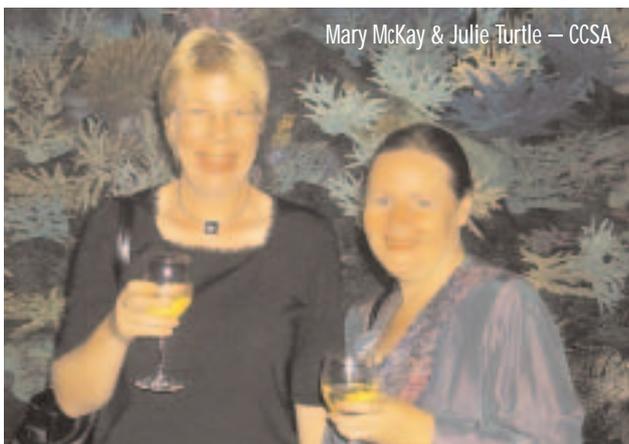
NCCH (Brisbane) Project Officer, Dr Peter Scott, led 60 participants through several health terminology applications in the introduction to health terminologies tutorial. Concepts such as interface, reference and aggregate health terminologies (classifications) were enthusiastically embraced by participants in the hands-on tutorial.

Over 100 coders took part in the ICD-10-AM Third Edition coding tutorial developed by the NCCH and the Clinical Coders' Society of Australia (CCSA) and presented by NCCH Project Officers Megan Cumerlato and Andrea Groom. Participants arrived ready to tackle case studies that presented contentious and problematic coding issues including diabetes, arterial disease, sepsis, non-invasive ventilation, anaesthesia, same day endoscopy and drug-resistant micro-organisms.

Conference program

Dr Louise Morauta, First Assistant Secretary, Acute Care Division, Department of Health and Ageing officially opened the conference and established an up beat tone about the role, work and significance of clinical coding in the health system that was maintained throughout the conference.

Keynote speakers, Associate Professor Stephen Bolsin and Christine Sweeting, were also 'linked'. Associate Professor Bolsin, Director of the Division of Perioperative Medicine, Anaesthesia and Pain Management, Geelong Hospital, Victoria spoke of his involvement as a whistle-blower in what became the



Bristol Royal Infirmary Inquiry. He conveyed with some passion the importance of good quality coded data on procedures and outcomes. Christine Sweeting, Data Quality and Classifications Advisor, National Health Service Information Authority, UK, continued the Bristol story by relating her involvement in the Inquiry from a coding and data quality perspective.

The program included clinical updates on infections and vascular access devices. Several papers were presented on the importance of good quality coding processes and systems. Future roles for health information managers and clinical coders were also explored. Indications were that these roles are likely to evolve to include a greater emphasis on data analysis and data quality management as automated hospital systems begin to incorporate the coding function. Sweden's Dr Olafr Steinum, assisted by his 12-year-old daughter Hanna, entertained the audience with the ICD-10 version of Little Red Riding Hood.

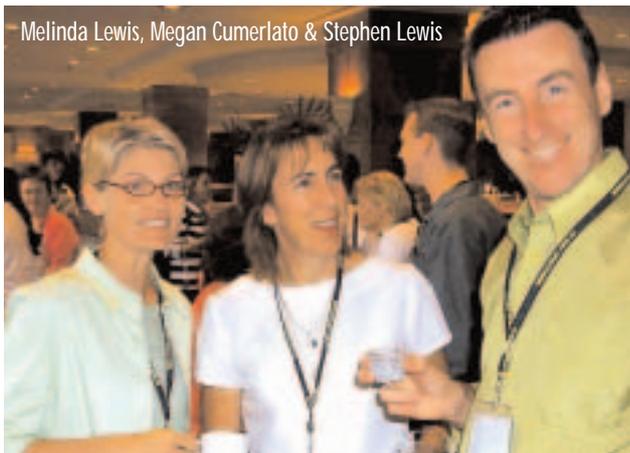
Professor Stephen Duckett, Dean, Faculty of Health Sciences and Professor of Health Policy at La Trobe University closed the conference by discussing the use of administrative datasets to measure quality of care.

eBook demonstrations

Delegates were invited to test drive the NCCH eBook – an electronic version of the ICD-10-AM Third Edition manuals. ICD-10-AM eBook has a number of features, such as a user's notes field and electronic links to 10-AM Commandments information from *Coding Matters*.

Social program

The welcome reception provided an opportunity for delegates to catch up and enjoy fine wines and food whilst being entertained by the fabulous roving duo *Ruby and Ginger*.



Melinda Lewis, Megan Cumerlato & Stephen Lewis

Melbourne Aquarium's Function Cove, on the banks of the Yarra River, was the venue for this year's conference dinner. Around 200 delegates and guests attended the conference dinner enjoying drinks by the coral atoll and dinner overlooking Southbank. Many were inspired by one of Melbourne's premier bands, *Kream*, to dance the night away.

Exhibitors

The NCCH was pleased to welcome a number of commercial and non-commercial partners to the conference's trade exhibit:

- 3M Health Information Systems
- iSOFT
- Clinical Coders' Society of Australia (CCSA)
- Health Informatics Society of Australia (HISA)
- Health Information Management Association of Australia (HIMAA) Ltd
- Australian Institute of Health and Welfare (AIHW)

Delegates' satchels were enhanced with contributions from a number of organisations, including:

- Rolls Manufacturing
- Civic Industries
- Open Training and Education Network (OTEN).

The support of 3M and the Department of Human Services, Victoria, who both sponsored afternoon teas,



Natalie Sawczak, Media & Marketing Officer, AIHW



Andrea Besenyei & Kirsten McKenzie – NCCH (Brisbane)

is also gratefully acknowledged. The NCCH also thanks Mount Gisborne Wines for providing invited speakers' gifts and raffle prize contribution.

PowerPoint presentations on the Web

Conference PowerPoint presentations can now be accessed from www.fhs.usyd.edu.au/ncch (follow the link to 'Conference 2003').

9th NCCH Biennial Conference

The 9th NCCH Biennial Conference will be held in Western Australia in early 2005.



Michael Fahey at the 3M stand

IN THIS EDITION:

10-AM Commandments	4
Latest coding advice on disease and procedure classification	
How stuff works – kidneys	6
Explains the kidneys and their functions	
Coding Matters index	12
Index of coding advice volume 9 numbers 1 to 4	
Coder workforce survey 2002	14
Coders' responses	

The 10-AM Commandments

Complex regional pain syndrome (CRPS)

Complex regional pain syndrome type I (reflex sympathetic dystrophy – RSD) has been described as a disproportionate consequence of an insult, affecting the limbs, but without nerve injury. The types of insults that may lead to CRPS type I include trauma (sprain, dislocations, fractures, surgery), neurologic disorder, herpes zoster infection, myocardial infarction, musculoskeletal disorder, malignancy or it may be idiopathic. Clinical manifestations include regional pain, sensory changes, allodynia, abnormalities of temperature, abnormal sudomotor activity, oedema and an abnormal skin colour.

Complex regional pain syndrome type II includes the previously mentioned clinical manifestations with the addition of a peripheral nerve lesion and results from injury to a nerve. CRPS type II has been reported subsequent to the performance of some procedures, such as automated laser discectomy and cervical epidural injection.

Complex regional pain syndrome types I and II usually affect the upper or lower extremities, but may also affect other areas of the body.

Classification

Changes to ICD-10-AM classification of CRPS types I and II have been made for the Fourth Edition. In the interim, these conditions should be classified as follows:

- M89.0– *Algoneurodystrophy* should be assigned for documentation of **CRPS type I**
- G56.4 *Causalgia* should be assigned for documentation of **CRPS type II** of the upper limb
- G57.8 *Other mononeuropathies of lower limb* should be assigned for documentation of **CRPS type II** of the lower limb
- G58.9 *Mononeuropathy, unspecified* should be assigned for documentation of **CRPS type II** without further specification.

Assign sequelae codes as additional diagnoses where there is documentation of a previous injury with a causal link to the current condition.

Barrett's oesophagus

The term Barrett's oesophagus refers to abnormal columnar mucosa replacing the normal stratified squamous epithelium in the distal oesophagus. Barrett's ulcer/syndrome refers to a clinically different condition.

Classification

Barrett's oesophagus should be assigned code K22.8 Other specified diseases of oesophagus. Barrett's ulcer/syndrome is coded to K22.1 *Ulcer of oesophagus*.

Essure permanent birth control sterilisation procedure

An Essure procedure involves insertion of a soft, flexible micro-insert into each fallopian tube, via hysteroscopy, for the purpose of sterilisation.

Classification

Essure procedure should be classified as 35688-01 [1257] *Sterilisation via vaginal approach*. It is not necessary to separately code the hysteroscopy, as it is inherent in the code title (ie, via vaginal approach).

The NCCH is currently revising ACHI in line with the MBS updates for ICD-10-AM Fourth Edition, which will include Essure procedure.

Administration of Intragam

Currently, ACS 0214 *Intragam* deals with injection of gamma globulin, however, gamma globulin is most commonly given to patients by infusion.

Classification

ACS 0214 *Intragam* has been amended to include 'infusion' in Errata 4, June 2003.

Documentation of:

- **transfusion and infusion** of intragam should be coded to 13706-05 [1893] *Transfusion of gamma globulin*.
- **injection of Intragam** should be coded to 92181-00 [1885] *Injection of gamma globulin*.

In the absence of further evidence, such as an IV chart, documentation of '**Intragam given**' should be assigned 92181-00 [1885] *Injection of gamma globulin*.

This advice is effective for all separations from 1 July 2003 and is also included in Errata 4, June 2003.

Local anaesthesia

The NCCH introduced the coding of local anaesthesia (in certain circumstances) in ICD-10-AM Third Edition, implemented in July 2002. Since that time, the Third Edition education process and coding queries have highlighted the following issues:

- the definition of a 'specialised form' in the medical record
- inconsistencies in the documentation of local anaesthesia, both within and between institutions, resulting in inconsistent coding
- the inclusion of retrograde perfusion of limb (Bier's block) in the code for local anaesthesia.

Following correspondence with members of both the Anaesthesia Clinical Classification and Coding Group (CCCCG) and the Coding Standards Advisory Committee (CSAC), it was decided that coding of all forms of local anaesthesia (except retrograde perfusion of limb) should not be coded.

Until a new code is created in ICD-10-AM Fourth Edition, 92513-xx [1909] *Infiltration of local anaesthesia* should be assigned for retrograde perfusion of limb (Bier's block) where there are no other anaesthetic procedures from block [1909] *Conduction anaesthesia* documented for the same operative procedure. This procedure should be coded if performed; it does not have to be documented on a 'specialised form'.

All forms of local anaesthesia (except retrograde perfusion of limb) should not be coded.

This advice is effective for all separations from 1 July 2003 and is also included in Errata 4, June 2003.

Regional block anaesthesia

ACS 0031 *Anaesthesia* states "The codes for regional blocks are divided on the general anatomical area of the administration of the block, ie the actual nerve involved is not required for assignment of the correct code". That is, when selecting a code for regional anaesthesia, the code must describe the field of anaesthesia (the effect of the anaesthesia), not the point of administration.

Classification

The following codes should be used for documentation of regional block:

92509-XX [1909] *Regional block, nerve of head or neck*

92510-XX [1909] *Regional block, nerve of trunk*

92511-XX [1909] *Regional block, nerve of upper limb*

92512-XX [1909] *Regional block, nerve of lower limb*

where the anatomical area adjacent to 'nerve of...' describes the area being anaesthetised.

Occipital neuralgia

Occipital neuralgia is considered to be an ill-defined condition which is not associated with the cranial nerves. It is a type of headache that arises from irritation of the occipital nerve (arising from the cervical spine).

Classification

Documentation of occipital neuralgia should be classified to R51 *Headache* by searching the alphabetic index of diseases under 'Neuralgia, occipital'.

Elmslie-Trillat procedure

Elmslie-Trillat procedure is a type of tibial tubercleplasty. A tibial tubercleplasty (aka tibial tubercle transfer, tibial tubercle advancement, tibial tubercle osteotomy) is a procedure involving displacement (elevation) of the tibial tubercle (tuberosity) with or without insertion of a bony block. The tibial tuberosity may be displaced either anteriorly, medially, obliquely or anteromedially. The purpose of the procedure is to decrease the force on the patella as it passes over the femoral condyles and to change the weight-bearing position of the patella. Arthroscopy often precedes the procedure.

Classification

Elmslie-Trillat procedure (tibial tubercleplasty) should be classified as 49503-01[1520] *Patellofemoral stabilisation*. 49557-00[1501] *Arthroscopy of knee* should be assigned as an additional procedure when performed.

NCCH will add 'Elmslie-Trillat procedure' as an inclusion term under 49503-01[1520] *Patellofemoral stabilisation* in ICD-10-AM Fourth Edition.

Phobias

There are more phobias than many of us realise. A few unusual ones are:

Abibliophobia – a fear of running out of reading material

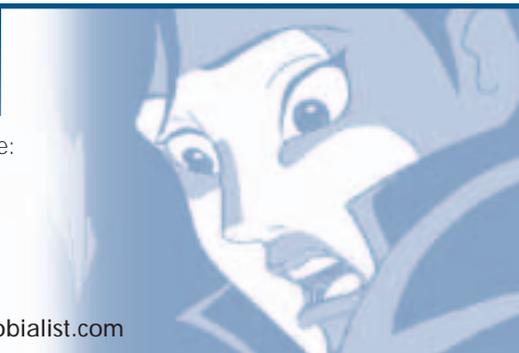
Epistemophobia – a fear of places of learning

Hippopotomonstrosesquipedaliophobia – fear of long words

Paraskavedekatriaphobia – fear of Friday the thirteenth

Panophobia – fear of everything

These and many more are described in an indexed phobia list www.phobialist.com



How stuff works – KIDNEYS

Functions

The primary functions of the kidneys are:

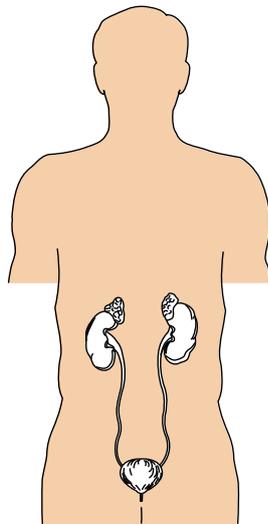
- regulating blood volume and composition
- assisting the regulation of blood pressure
- maintaining calcium levels.

Regulation of blood volume and composition

The regulation of blood volume and composition is achieved by:

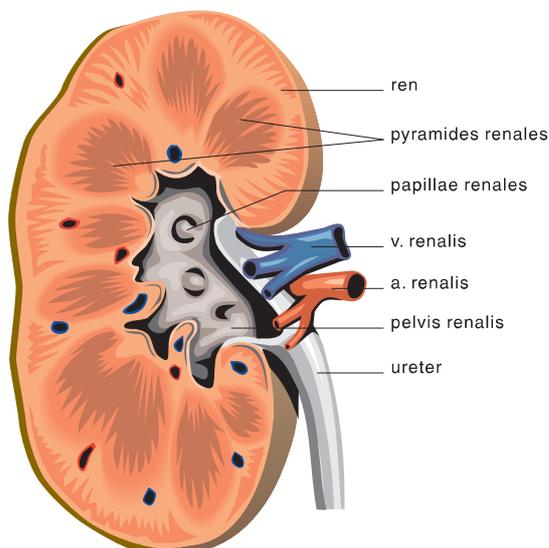
- maintaining the concentration of ions and other substances at a constant level
- ensuring there is a constant volume of water in the body
- filtering wastes – urea, ammonia, drugs and toxic substances – from the body
- maintaining a constant pH concentration.

A combination of three processes – filtration, reabsorption and secretion – is necessary to regulate blood composition. These processes are performed by nephrons.



Nephrons

Across the cortex and medulla are tiny, tubular structures known as nephrons. Nephrons carry out the major work of the urinary system, other parts of the system mostly serve as passageways and storage areas. Each kidney contains approximately one million



Kidney anatomy

nephrons. The number of nephrons present in a kidney at birth remains the same throughout a person's life. New nephrons cannot be produced to replace ones damaged by trauma or infection. Kidneys increase in size due to the growth of individual nephrons. One kidney usually increases in size when the other has been surgically removed. After a period of time, the remaining kidney is often capable of filtering blood at 80% of the rate of two normal kidneys.

A unique feature of the kidney is that it is the only organ that has two capillary beds, in series, connecting arteries with veins. This arrangement of capillary beds is important for maintaining a constant blood flow through and around the nephron despite systemic blood pressure fluctuations.

Filtration

The filtration process involves blood pressure forcing fluids and dissolved substances through the glomerular capillary walls into the Bowman's capsule. Filtered fluid is called filtrate and consists of water, ions (potassium, sodium and chloride), glucose and small proteins. In a healthy person, all materials present in the blood, except formed elements and proteins that are too large to pass through the capsular membrane, end up in the filtrate. In normal conditions red blood cells do not get filtered and therefore should not appear in urine. This is why the presence of blood in urine may be an indication of kidney problems.

The amount of filtrate that forms per minute is referred to as the glomerular filtration rate (GFR). On average, the GFR is about 125ml per minute, which adds up to 180 litres of filtrate each day. This also indicates that,

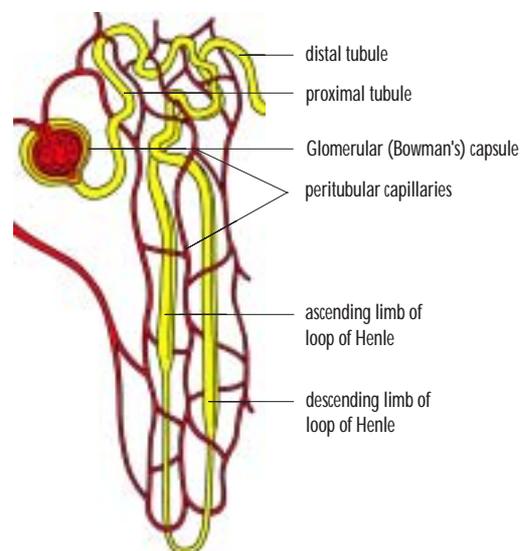
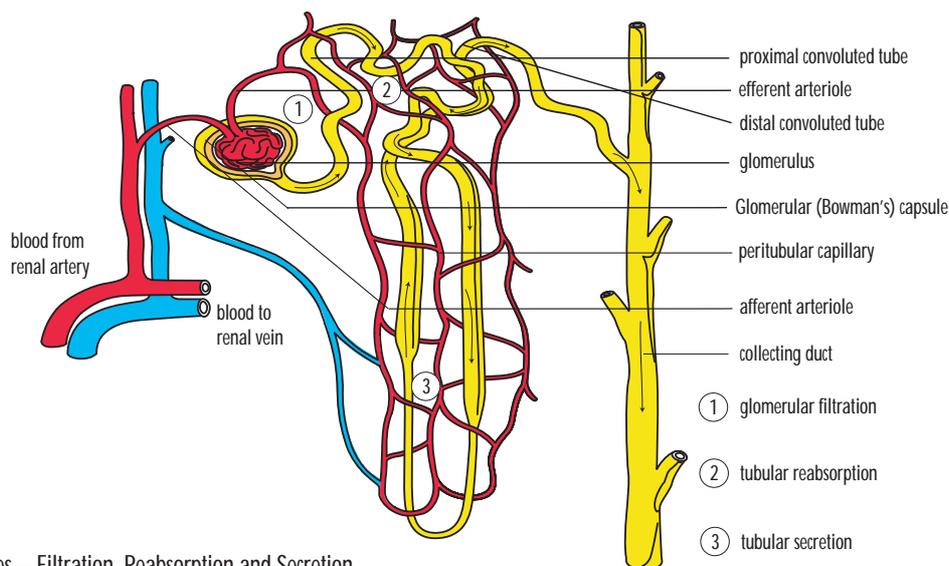


Diagram of nephron



Summary of processes – Filtration, Reabsorption and Secretion

in general, a person's entire blood volume (about 7–8 litres) is filtered around 20–25 times per day.

After entering the Bowman's capsule, the filtrate flows through the lumen of the nephron into the proximal tubule. This is where the reabsorption process begins.

Reabsorption

Reabsorption is the process of returning water and molecules in the filtrate back to the blood. Approximately 99% of filtrate is reabsorbed as it flows through the renal tubule. The remaining 1% of the filtrate is removed from the body through urine.

Secretion

Secretion is the process whereby materials are removed from the blood and added to the filtrate. Substances such as ammonia, potassium, creatinine and particular drugs are secreted from blood plasma by nephron cells. Not only is secretion a means of eliminating certain substances, but it also assists in the control of acid:base (pH) concentrations.

Maintaining water volume

The kidneys control the rate at which the body loses water with the assistance of the Loop of Henle and antidiuretic hormone (ADH).

The Loop of Henle's structure and transport properties make the reabsorption of water from the collecting ducts possible. While ADH secretion allows water to pass through the collecting ducts. ADH also known as vasopressin controls the water permeability of the collecting duct walls. Presence of ADH makes the walls permeable, allowing more water to be reabsorbed into the blood. Absence of ADH makes the walls impermeable, inhibiting the reabsorption of water into the blood.

Acid:base (pH) balance

The blood maintains a correct pH level through a constant ratio of hydrogen ions and sodium bicarbonate. Hydrogen ions contribute to the blood's acidity, while sodium bicarbonate contribute to the blood's alkalinity. Alteration in pH may be caused by:

- diet – a diet high in meat produces more acid, while a diet high in fruit and vegetables produces more alkaline
- exercise – muscles produce lactic acid during exercise
- breathing – rapid breathing provides more oxygen to cells resulting in more alkaline in the blood. In lung disease the blood becomes more acidic due to oxygen being blocked.

The kidneys help control the pH level of the blood by eliminating either excess hydrogen ions or bicarbonates from the blood.

Assisting the regulation of blood pressure

The kidneys also play an important role in maintaining blood pressure. Blood pressure is affected by:

- heart contraction
- artery and arteriole constriction
- blood volume.

The kidneys assist the regulation of blood pressure by making the arteries and arterioles constrict and by increasing blood volume. The kidneys do this by secreting an enzyme called renin. Renin converts a protein called angiotensinogen to angiotensin I, that is in turn converted to angiotensin II by angiotensin converting enzyme (ACE). ACE is formed in small quantities in the lungs, proximal tubule and other tissues. Angiotensin II causes vessels to constrict and the blood pressure to increase.

Angiotensin II also stimulates the adrenal gland to secrete aldosterone. Aldosterone is a hormone that ►►►

stimulates sodium reabsorption in the distal tubule so that urine output is decreased and blood pressure is increased. Increased blood pressure causes the heart muscle to stretch generating more pressure.

When traumatic injury occurs, the role of the kidneys in regulating blood pressure is of particular importance to maintain blood pressure and conserve fluids.

Diuretics, prescribed for hypertension, work by reducing sodium and water reabsorption so that both are lost in the urine and the urine output is increased. Decreased sodium and water reabsorption also reduces blood volume resulting in decreased blood pressure.

Maintaining calcium levels

Not only is calcium stored in bones, but it is also maintained at a constant level in the blood. When calcium levels decrease parathyroid hormone is released from the parathyroid glands. Parathyroid hormone promotes:

- increased calcium reabsorption
- release of calcium from bones and
- increased calcium absorption through the intestine.

Calcium absorption from the kidney and intestine is also stimulated by vitamin D. Vitamin D is derived from milk and from the conversion of cholecalciferol which is produced by the skin and processed by the liver. The final conversion of cholecalciferol takes place in the proximal tubule and the intestine. Activation of vitamin D triggers calcium absorption in the proximal tubule so that calcium levels increase. The maintenance of calcium by the kidney also assists normal bone formation.

Summary

The kidneys perform several important functions necessary for the body to function at an optimal level. The kidneys maintain good health by regulating water and nutrients required by the body and eliminating toxins and wastes. They assist the regulation of blood pressure, pH levels, maintain calcium levels and produce hormones including erythropoietin, which stimulates the production of red blood cells. Survival is not possible without at least one properly functioning kidney. Dialysis and transplantation are the two major options available if the kidneys fail to function.

References:

Australian Institute of Health and Welfare (2002) *Australia's Health 2002*. Canberra: AIHW

Australian Kidney Foundation (2002) Kidney disease: are you at risk? Accessed March 2003: http://www.kidney.org.au/awareness_week.asp

Better Health Channel, disability online (2002) Kidney Failure. Fact sheet. Accessed April 2003: http://www.disability.vic.gov.au/dsonline/dsarticles.nsf/pages/Kidney_ailure?OpenDocument

Freudenrich Craig C. How your kidneys work. Accessed March 2003: <http://science.howstuffworks.com/kidney.htm>

Kimball's Biology pages (2003) The Kidney. Accessed March 2003: <http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/K/Kidney.html>

Stewart P (1998) Physiology of the kidney. *Update in Anaesthesia* (9) Accessed March 2003: http://www.nda.ox.ac.uk/wfsa/html/u09/u09_016.htm

Tortora GJ & Grabowski SR (1993) *Principles of anatomy and physiology*. New York USA: HarperCollins.

How stuff works... stand by for lungs in the September edition

WORDSCOPY

Find the words in the puzzle. Words run vertically, horizontally and in oblique lines. Look at the leftover letters to reveal the hidden meaning of why many of us love word puzzles. Solution published in this edition on page 23.

Y R A N O M L U P S I S O M O T S A N A
P P T B E R T I E L L I A S I S H C E E
N O I S U F B C R P A I P O T C E R O C
C L L E W H U S H Y S T E R O S C O P E
E Y L E T A R E D O M Y S T E N T P L C
A P R L F V N P R A L U C S A V O H A N
R C A T P E S T E A R A E H N E P O S A
S E Y E M E N I E R E S C D I F I B T N
H C T A P F A C E E T I S M R A C I I O
C A L C I F Y A E E R N I A R B T A C S
E S A E S I D E R P O U C H U I P R A E
D A C T R C T N E M H S I R U O N N I R
O T C Y E A I I D I S A S T E R O G X C
C H I L D C I T E C A A L N E M U L Y I
U L S C H I Z O P H R E N I A I D S H T
M E G A L O B L A S T I C L T L T U P E
E T N L E U K A E M I A Y I T I I I S N
N E I L I S P H A R Y N G I T I S T A G
T S T U S K U L L E B I L I A R Y C U A
S I S S U T E C A T D Y S T R O P H Y M

REPORT

The Good Clinical Documentation Guide

The NCCH has received funding from the Clinical Casemix Committee of Australia (CCCA) to redesign the Casemix, DRGs and clinical coding specialty books to produce a new electronic product designed specifically for clinicians. As its name suggests, the *Good Clinical Documentation Guide* is intended to improve clinical documentation standards and demonstrate the benefits of good documentation in terms of improved patient care, improved coded statistics and information for research.

The *Guide* will include general documentation guidelines for clinicians, description of clinical coding, ICD-10-AM and data uses, explanation of the AR-DRG classification system and specialty sections.

The specialty sections will include:

- a range of clinical topics
- documentation pointers for each topic
- AR-DRG v5.0 information where relevant for each topic, including clinical profiles, top five principal diagnoses, procedures and complications and comorbidities (*ICD-10-AM Third Edition*) when applicable
- Examples of the impact on DRG assignment where this illustrates DRG variances for the topic.

The *Guide* is being designed in an electronic format and features links between related information that is presented.

The project is being co-ordinated by NCCH Melbourne. A subcommittee of the CCCA is overseeing the project. Members of the appropriate Clinical Classification and Coding Groups (CCCG) are also reviewing the content.

Expected release date is July 2003.

PICQ 2002

***incorporating PICQ for
ICD-10-AM Third Edition
is out now***

Performance Indicators for Coding Quality (PICQ) is a set of predetermined performance indicators which identify records in data sets that may be incorrectly coded, based on Australian Coding Standards and coding conventions.

PICQ 2002 contains a number of enhancements:

- PICQ for ICD-10-AM Third Edition has 13 new indicators



- Upgraded internal data specifications for some indicators in PICQ for ICD-10-AM First and Second editions
- New and improved PICQ user guide

An order form is enclosed with this edition of *Coding Matters*

For further information:

NCCH Melbourne

phone: + 61 3 9479 1811

e-mail: qed@latrobe.edu.au

InterNATIONAL

Medical terminology and ICD-10 mortality coding workshop for participants from the Hashemite Kingdom of Jordan



Jordan training project – visit to Mount Cootha. L to R – Mrs Fatima Ali Hammad, Mrs Wafa 'Juma' Herzallah, Dr Henry Walke, Dr Mohammad Ratib Surour, Mr Loie Fahad Al-Shyab, Dr Faris Ayed Dababneh, Dr Bassam Hijawi, Dr Majad Said As'ad, Dr Fawaz Shehab (absent Ms Sahar Jreisat).

The US Centers for Disease Control and Prevention (CDC) has been conducting the Jordan Surveillance Project for the Jordan Ministry of Health and Health Care. The project's goal is to provide the Ministry with the necessary health information and capacity to make policy decisions, allocate resources, and make programmed improvements to increase the effectiveness and efficiency of public health programs in Jordan.

(<http://www.cdc.gov/epo/dih/jordan.html> accessed 14/3/03)

Part of this work identified the need for improvements in vital registrations systems, especially death notification and reporting processes. It was also recognised that there was a need to train relevant staff to enable complete and accurate causes of death coding.

The National Centre for Classification in Health (NCCH) Brisbane has conducted many coder training programs for international participants and was delighted when it was selected to conduct a two week medical terminology and ICD-10 coding training workshop on mortality coding for representatives from the Ministry of Health and the Civil Register Office in Jordan. The workshop was conducted at the NCCH offices at the Queensland University of Technology 17–28 February 2003.

The workshop's participants represented the Ministry of Health, the Civil Registration Office and included the CDC's Resident Adviser.

Workshop program

The program included:

- medical terminology
- general ICD-10 coding practice
- documentation practices
- completion of the medical certificate of cause of death
- rules for selection of the underlying cause of death.

Participants quickly grasped the principles and rules for selection and agreed that training medical staff in the correct completion of the death certificate would minimise coder workload and provide high quality data.

Course work included practical exercises. Participants were required to present an example exercise to the group identifying the correct underlying cause of death from an example death certificate and demonstrating the correct application of the rules for selection of the underlying cause of death and the application of relevant modification rules.

Specific issues for the Jordanian health system

There is some concern about the accuracy and specificity of reporting mortality in Jordan. It became clear that short lists of diseases, printed on the reverse of death certificates, were being used to select causes of death. The short lists are also held in computer applications used for managing death data and are

used to select the code for death causes where it is reported in narrative. This practice raises concerns regarding the accuracy and specificity of reporting of mortality. The ability to report on specific causes of death is inhibited by using short lists for input coding, rather than for reporting purposes.

The language of medicine in Jordan is English. However, the participants, particularly those with non-medical backgrounds, expressed interest for a translation of the ICD-10 into Arabic. An incomplete Arabic version is presently available. Participants were very interested in the potential uses of the ICD-10 coded data. However, there may be a need for either follow up training or support from the NCCH.



Jordan training project – boat trip on Brisbane River. L-R Dr Fawaz Ahmad Shehab, Dr Henry Walke, Dr Faris Ayed

This was the first visit to Australia for most participants, and they had come prepared for some rest and relaxation. The group organised their own shopping excursions and trips to the Gold and Sunshine Coasts as well as taking in the sights of Brisbane. The group enjoyed a Brisbane River cruise and visit to the Lone Pine Koala Sanctuary. A great day was had by all boomerang throwing and shaping up to kangaroos.

Recommendations

As a result of general discussion a number of recommendations have been made to the CDC and Jordan's Ministry of Health:

- the group should provide the Ministry of Health with feedback on proposed data collection items from the point of view of those who will either report or use mortality data, so that difficulties can be addressed

and minimised, and ownership of the data and its quality is promoted

- the group should give its views regarding required functionality, such as regular reports and research tools, to the Ministry of Health for consideration
- trained coders who are equipped with the full version of ICD-10 should perform the task of coding
- given the relatively small number of deaths in Jordan annually, and the decision to code the underlying cause of death only, use of the coding books is preferable to the implementation of coding software
- aggregation of causes of death, using the short lists published by WHO, can be used for reporting purposes
- consideration is given to translating ICD-10 into Arabic
- consideration is given to the need for follow-up training once the new mortality coding process has been implemented and specific local problems have been identified
- the Ministry of Health consider the development of a coding quality program, possibly through the use of on site auditing of coded data
- consideration is given to the establishment of a steering group, that includes representatives from the Directorate of Information, the Directorate of Disease Control, the Civil Register Office, the Jordan Cancer Registry and other relevant Ministry of Health departments, to guide the use of the ICD-10 in Jordan and to be responsible for making decisions regarding coding queries

Conclusion

The two week training program was a success. Although there remains a significant amount of work in order to effect a meaningful transition to ICD-10 and to realise improvements in the death certification process, the effort to achieve both plans has begun. It is hoped that the recommendations will assist in determining the next steps in improving health information systems in Jordan.

Garry Waller
Senior Classification Officer
NCCH (Brisbane)

...and the winners are

Congratulations to the winners of the eBook competition and the raffle to benefit the Heart Foundation conducted at the NCCH 8th Biennial Conference in March.

Jill Sands from Warringal Private Hospital, at Heidelberg, Victoria, won a copy of the ICD-10-AM eBook and Southern Health's (Victoria) **Sue Doyle** was the lucky winner of the Healthy Heart Hamper.

INDEX OF CODING ADVICE CODING MATTERS VOLUME 9, NUMBERS 1 TO 4

A

Abuse	
- adult	Vol.9 No.2 p.8
- child	Vol.9 No.2 p.8
Acute coronary syndrome	Vol.9 No.4 p.7
Acute respiratory distress syndrome (ARDS)	Vol.9 No.4 p.8
Adult and child abuse	Vol.9 No.2 p.8
Advanced Breast Biopsy Instrumentation (ABBI)	Vol.9 No.4 p.9
Amputation status	
- ACS	Vol.9 No.2 p.8
- in diabetes	Vol.9 No.3 p.11
Anaesthesia	Vol.9 No.2 p.8
	Vol.9 No.3 p.8
- ASA scores	Vol.9 No.2 p.8-9
	Vol.9 No.3 p.8-9
- Bier's block	Vol.9 No.3 p.8
- documentation (of)	Vol.9 No.3 p.8-9
- local	Vol.9 No.3 p.9
- Pudendal block	Vol.9 No.3 p.9
Analgesia, postoperative / postprocedural	Vol.9 No.2 p.9
	Vol.9 No.4 p.8
Application (of)	
- external fixateur (Ilizarov frame)	Vol.9 No.2 p.15
Argon plasma coagulation (APC)	Vol.9 No.3 p.9
Arterial disease	Vol.9 No.2 p.9
- cerebral and precerebral arteries	Vol.9 No.2 p.9
- intermittent claudication	Vol.9 No.3 p.9
- stenosis <50%	Vol.9 No.3 p.9
ASA scores	Vol.9 No.2 p.8-9

B

Bier's block	Vol.9 No.3 p.8
Bronchiolitis	Vol.9 No.3 p.10

C

Clinical update	
- functional endoscopic sinus surgery (FESS)	Vol.9 No.4 p.10
Complications	
- associated with neoplasms	Vol.9 No.2 p.16
- postoperative / postprocedural	Vol.9 No.2 p.17
CPAP, in sleep study	Vol.9 No.3 p.13

D

Debridement (of)	
- amputation	Vol.9 No.2 p.10
- fracture site	Vol.9 No.2 p.10
- soft tissue	Vol.9 No.2 p.10
- - involving bone or cartilage	Vol.9 No.2 p.10
Diabetes mellitus	
- BSL monitoring	Vol.9 No.3 p.10
- classification box in ACS 040	Vol.9 No.2 p.11-12
- counselling	Vol.9 No.2 p.12-13
- education	Vol.9 No.2 p.12-13
- eradicated conditions	Vol.9 No.1 p.7
	Vol.9 No.2 p.11
- in	
- - ACS 0002	Vol.9 No.2 p.13
- - pregnancy	Vol.9 No.2 p.13
- maturity onset of the young (MODY)	Vol.9 No.3 p.10-11
- multi-day admissions	Vol.9 No.2 p.12
- multiple microvascular complications	Vol.9 No.2 p.10
- same day admissions	Vol.9 No.2 p.12
	Vol.9 No.3 p.10

- with	
- - arthropathy	Vol.9 No.2 p.11
- - arteriosclerosis	Vol.9 No.2 p.12
- - artherosclerosis	Vol.9 No.2 p.12
- - BKA status for foot ulcer	Vol.9 No.3 p.11
- - dyslipidaemia	Vol.9 No.2 p.11-12
	Vol.9 No.3 p.10-11
- cataracts	Vol.9 No.3 p.11
- cellulitis	Vol.9 No.2 p.10
- - multiple microvascular complications	Vol.9 No.2 p.10
- - features of insulin resistance	Vol.9 No.2 p.11
- - foot ulcer	Vol.9 No.3 p.11
- - with	
- - - BKA status	Vol.9 No.3 p.11
- - - toe amputation	Vol.9 No.3 p.11
- - hyperlipidaemia	Vol.9 No.2 p.11-12
- - hypertension	Vol.9 No.3 p.11
- - lipid disturbances	Vol.9 No.2 p.11-12
- - peripheral angiopathy	Vol.9 No.2 p.12-13
- - peripheral vascular disease (PVD)	Vol.9 No.2 p.11
- - visceral fat deposition	Vol.9 No.3 p.10
Diagnosis selection in same day endoscopy	Vol.9 No.3 p.12
Duration of pregnancy	
- 37 completed weeks	Vol.9 No.2 p.13
- prematurity	Vol.9 No.2 p.13
- range of abortion codes, applicable to	Vol.9 No.3 p.13

E

Endoscopy, same day	
- diagnosis selection	Vol.9 No.3 p.12
- incidental findings	Vol.9 No.2 p.14
Enteral infusion	Vol.9 No.2 p.13
Episiotomy extended by laceration	Vol.9 No.3 p.13
	Vol.9 No.4 p.7
Eradicated conditions in diabetes	Vol.9 No.1 p.7
Vol.9 No.2 p.11	
External causes	
- activity	
- - overlap between work and sport	Vol.9 No.2 p.14
- - sequencing of code	Vol.9 No.2 p.14
- fall involving scooter (non motored)	Vol.9 No.4 p.8
- injury involving motorised	
- - - scooter	Vol.9 No.2 p.14
- - - wheelchair	Vol.9 No.2 p.14
- place of occurrence	
- - sequencing of code	Vol.9 No.2 p.14
- - sporting grounds, indoor / outdoor	Vol.9 No.2 p.14

F

Fall involving scooter (non motored)	Vol.9 No.4 p.8
FAQs	
- adult and child abuse	Vol.9 No.2 p.8
- amputation status	Vol.9 No.2 p.8
- anaesthesia	Vol.9 No.2 p.8
	Vol.9 No.3 p.8
- argon plasma coagulation (APC)	Vol.9 No.3 p.9
- arterial disease	Vol.9 No.2 p.9
	Vol.9 No.3 p.9
- bronchiolitis	Vol.9 No.3 p.10
- debridement	Vol.9 No.2 p.10
- diabetes	Vol.9 No.2 p.10-13
	Vol.9 No.3 p.10-12

- diagnosis selection in same day endoscopy	Vol.9 No.3 p.12
- duration of pregnancy	Vol.9 No.2 p.13
- enteral infusion	Vol.9 No.2 p.13
- external causes	Vol.9 No.2 p.14
- hospital in the home (HITH)	Vol.9 No.3 p.12
- incidental findings at endoscopy	Vol.9 No.2 p.14
- infection with drug resistant microorganisms	Vol.9 No.2 p.14
- lavage of joint	Vol.9 No.2 p.15
- limb lengthening	Vol.9 No.2 p.15
- malignant neoplasm of jaw	Vol.9 No.3 p.12
- multiple/bilateral procedures	Vol.9 No.2 p.15
- old AMI	Vol.9 No.2 p.16
- neonatal sepsis	Vol.9 No.3 p.12
- neoplasms and morphology/ICD-O-3	Vol.9 No.2 p.16
- non-invasive ventilation	Vol.9 No.3 p.13
- obstetrics	Vol.9 No.3 p.13
- pacemakers	Vol.9 No.2 p.17
- postnatal blues	Vol.9 No.2 p.17
- postprocedural complications	Vol.9 No.2 p.17
- reopening of operative site	Vol.9 No.2 p.17
- sepsis and septicaemia	Vol.9 No.2 p.17
- stroke	Vol.9 No.2 p.17
- suspected conditions	Vol.9 No.2 p.18
- trial of void	Vol.9 No.2 p.18
- ultrasound	Vol.9 No.3 p.13
- urinary tract infection	Vol.9 No.2 p.18
- ventilation	Vol.9 No.2 p.18
Fatty liver	Vol.9 No.3 p.10
Functional endoscopic sinus surgery (FESS)	Vol.9 No.4 p.10

H

HIV/AIDS coding	
- helpful reminders	Vol.9 No.1 p.9
Hospital in the home (HITH)	Vol.9 No.3 p.12

I

ICD-O-3	
- new entries	Vol.9 No.2 p.16
Incidental findings at endoscopy	Vol.9 No.2 p.14
Infection with drug resistant microorganisms	
- documentation (of)	Vol.9 No.2 p.15
- non-multi resistant	Vol.9 No.2 p.14
Infusion, enteral	Vol.9 No.2 p.13
Intestinal metaplasia	Vol.9 No.4 p.7

L

Laceration extended by episiotomy	Vol.9 No.4 p.7
Lavage of knee joint	Vol.9 No.2 p.15
Limb lengthening	Vol.9 No.2 p.15

M

Malignant neoplasm of jaw	Vol.9 No.3 p.12
Maturity onset diabetes of the young (MODY)	Vol.9 No.3 p.10-11
Morphology code assignment	Vol.9 No.2 p.16

Multiple/bilateral procedures		O		Sequencing codes	
- excision of		Obstetrics		- activity	Vol.9 No.2 p.14
- - endometriosis	Vol.9 No.2 p.15	- duration of pregnancy	Vol.9 No.2 p.13	- place of occurrence	Vol.9 No.2 p.14
- - lesions	Vol.9 No.2 p.15		Vol.9 No.3 p.13	Spinal cord injury	Vol.9 No.1 p.8
- fusion of metatarsal joints	Vol.9 No.2 p.15	- perineal laceration/tear with episiotomy	Vol.9 No.3 p.13	ST elevation myocardial infarction (STEMI)	Vol.9 No.4 p.7
- stenting, ureteric	Vol.9 No.2 p.16		Vol.9 No.4 p.7	Stroke	
Methicillin Resistant Staphylococcus Aureus (MRSA)	Vol.9 No.2 p.14-15	- transfer in labour	Vol.9 No.4 p.8	- old CVA	Vol.9 No.2 p.18
- non-multi resistant	Vol.9 No.2 p.14	Old AMI	Vol.9 No.2 p.16	- residual deficits	Vol.9 No.2 p.17
		Osteomyelitis		Suspected conditions Syndrome	Vol.9 No.2 p.18
		- as the cause of sequelae	Vol.9 No.2 p.15	- acute coronary	Vol.9 No.4 p.7
N				- acute respiratory distress	Vol.9 No.4 p.8
Neonatal sepsis	Vol.9 No.3 p.12	P		- adult respiratory distress	Vol.9 No.4 p.8
Neoplasms and morphology/ICD-O-3		Pacemaker status code	Vol.9 No.2 p.17		
- complications associated with neoplasms	Vol.9 No.2 p.16	Perineal laceration/tear with episiotomy	Vol.9 No.4 p.7	T	
- morphology code assignment	Vol.9 No.2 p.16	Postnatal blues, documentation of	Vol.9 No.2 p.17	Traumatic spinal cord injury	Vol.9 No.1 p.8
- new entries	Vol.9 No.2 p.16	Postprocedural/postoperative		Transfer in labour	Vol.9 No.4 p.8
Non-invasive ventilation (NIV)	Vol.9 No.1 p.8	- analgesia	Vol.9 No.2 p.9	Trial of void (TOV)	Vol.9 No.2 p.18
- CPAP in sleep studies	Vol.9 No.3 p.13	- complications	Vol.9 No.2 p.17		
- two or more types (calculation of hours)	Vol.9 No.4 p.8	R		U	
Non ST elevation myocardial infarction (NSTEMI)	Vol.9 No.4 p.7	Reopening of operative site	Vol.9 No.2 p.17	Ultrasound	Vol.9 No.3 p.13
Non-traumatic spinal cord injury	Vol.9 No.1 p.8	Resuscitation at birth	Vol.9 No.3 p.13	Urinary tract infection (UTI)	Vol.9 No.2 p.18
				V	
		S		Ventilation, calculation of cumulative hours	Vol.9 No.2 p.18
		Sepsis and septicaemia	Vol.9 No.2 p.17		
		- neonatal	Vol.9 No.3 p.12		

The cumulative index for volumes 1–9 is now available on line www.fhs.usyd.edu.au

New to ICD-10-AM eBook and Browser — Drag and drop

The latest versions of the eBook and Browser not only incorporate errata 1, 2 and 3 but also feature the drag and drop function. By using standard Windows procedures for moving, copying and attaching (linking) material, text can be moved into the search or notes or from the publication by dragging and dropping from document to document.

How does it work?

To drag an object, first select it and then hold the left mouse button on it and move the mouse while holding the left button down. Release the button where you want to drop the object.

You can drag text in the **Search String** box, text, graphics and note symbols from the right frame and list box items. You can drop these objects onto various places on the toolbar, onto the left and right frames and onto other applications. During a drag, the action that will result from dropping the object is indicated at the bottom of the window. The default action is chosen from copy, move, attach and search to be the most intuitive one. To select a different action, **Shift**, **Ctrl**, or **Alt** are pressed during the drop. Pressing **Ctrl** will force the object to be copied. Pressing **Alt** will toggle between searching and not searching.

Pressing **Ctrl-Shift** forces files and notes to be attached rather than copied.

Most applications recognise when material is being dragged from another application and make the default action copy rather than move. *Be careful to press Ctrl when dropping note text or note symbols from Microsoft Word to avoid deleting the selected material.*

Alternatively, text can be selected in the Browser or eBook using the same procedure but in reverse. Select the text, drag it with the left mouse button pressed down and release it in the application of your choice.

The eBook and Browser updates are available free to registered users or can be purchased using the NCCH order form.

The Australian coder workforce survey 2002

Coders' responses

This report provides the findings of the 2002 Australian clinical coder survey and follows information published in *Coding Matters* 9(4):1–6, March 2003, which focused on responses from coding service managers. This report provides information from the coders' component of the survey and highlights the major findings from this part of the survey.

Characteristics of respondents

Over a thousand survey responses were received from coders (n=1031). The majority (90.4%) came from coders in hospitals. More responses were received from coders in public (64.8%) than private facilities. Nearly 70% of the coders who responded worked in metropolitan facilities, about 29% were from rural areas, and the remainder from remote locations. Most (n=728) reported that they coded in a single facility, while many (n=291) work at multiple sites.

Respondents' position titles were categorised into 8 types, including an 'other' category for uncommon titles. Figure 1 illustrates that 'clinical coder' is the job title of 55% of respondents.

Coder workforce

Coders were asked whether they were employed on a full time, part time (with fixed working hours) or casual basis, and whether they had other tasks to do besides coding. Of the 1,021 responses to this question, 33.7% work full time, 28.9% had other tasks besides coding, 28.7% were employed part time (with fixed working hours), and 8.7% indicated that they worked on a casual basis (variable working hours).

Coders were also asked to state the number of hours they worked per week if they were not employed full

time at the facility. Of the 576 responses to this question, 22.7% indicated they worked less than 8 hours per week, 25.2% said they worked between 8–16 hours per week, and 19.4% replied that they worked between 17–24 hours per week.

Coder industrial conditions and salaries

Coders were asked to indicate whether they were employed under an industrial award, and if so, whether it was a state or a federal award. The majority (76.4%) indicated that they were employed under a state award, 7.4% stated that they were employed under a federal award, while 16.2% were not employed under an award.

Coders were asked to indicate their annual salary within designated ranges. Part time and casual coders were asked to calculate a gross full time equivalent salary. The average salary of coders overall was in the range \$35,000–\$39,999. The minimum salary was less than \$20,000pa and the maximum salary in excess of \$65,000pa. Of the 990 coders who answered this question, 26.9% are paid between \$35,000–\$39,999 followed by 15.9% who reported salaries in the range \$30,000–\$34,999 and 15.1% who stated that they were paid \$40,000–\$45,999. The average salary range was consistent Australia-wide, except for Victoria. Here the average gross annual salary of coders in public metropolitan facilities was between \$45,000–\$49,999, approximately \$10,000 more than the average salary of coders in other states in Australia.

Coder work environment

Coders were asked to provide the title of the department to which they report. Of the 9 department title categories, health information service/clinical coding department ranked highest (75.7%).

The survey asked coders about their satisfaction with their current work location. Of the 1,000 respondents who answered this question, the most satisfied coders (97.5%) were those who worked in a coding office located on a ward. However, only 3.9% reported that they worked in this environment. The next most satisfied group (88.64%) were coders who have their own offices of a total of 4.3% who reported that they had their own office. The most common work environment (38%) was open-plan space in the health information service/medical record department (HIS/MRD). This location ranked fifth for satisfaction. A third of coders indicated that they were not satisfied working in open-plan spaces because it was too noisy and distracting, too cramped and lighting was inadequate. Figure 2 shows coders' satisfaction about work environment.

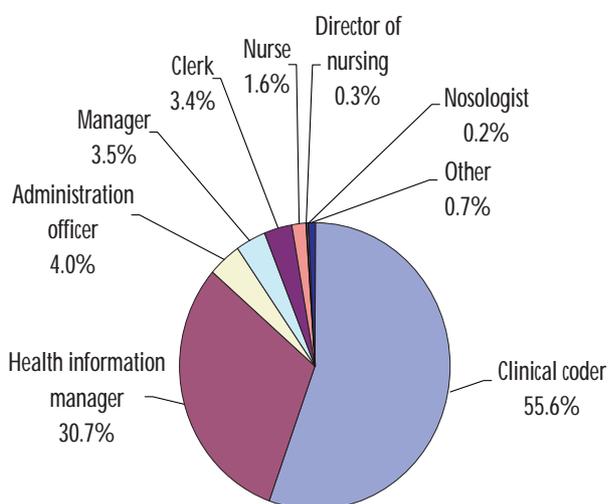


Figure 1: Position titles of coders

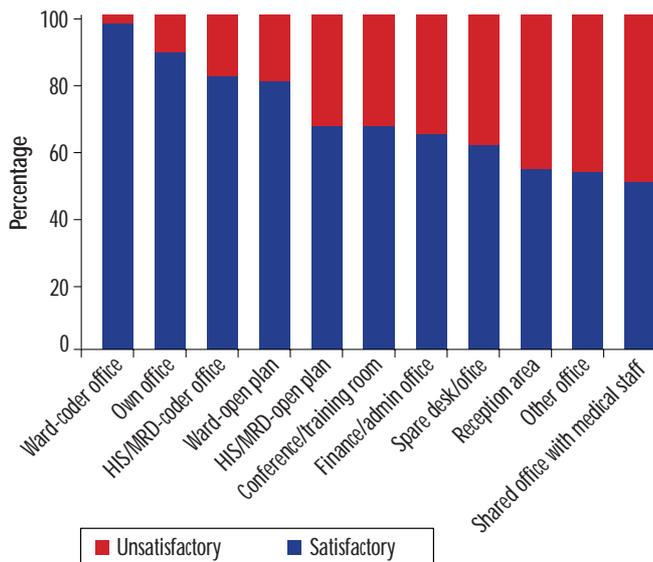


Figure 2: Coders' work environment satisfaction

Coders' work-related resources were also investigated in this survey. Nearly all (94.28%) respondents have access to a full set of the current edition (ICD-10-AM Third Edition) coding books. *Coding Matters* was available to most (88.65%). Over three quarters of respondents reported access to previous editions of coding books. Just over half had Internet access, but only 39% had access to the Code-L list server.

Most coders (74.8%) had access to clinical staff to discuss coding issues at their work sites. Coders were asked to indicate where and how they contact clinical staff. A quarter (24.4%) of coders reported *ad-hoc* meetings with clinical staff. Less than 3% of coders attended ward rounds to access clinical staff.

Coder duties

It is common practice for coders in the workforce to undertake other tasks in addition to abstracting information from records and assigning codes to episodes. The survey provided 14 categories for coders to indicate the other tasks that they perform. Respondents were asked to tick all that applied to their roles. All respondents answered this question. Two thirds of coders indicated that the most common additional activity undertaken was related to quality initiatives. This was followed closely by data entry and general medical record functions. A break down of the tasks performed in addition to coding is shown in Figure 3.

Coders also provided details about other tasks performed that were not listed in the 14 categories listed in the survey (and illustrated in Figure 3). Of the 352 coders who responded, 24.4% indicated mandatory reporting is the most common uncategoryed additional activity, followed closely by another 21.9% who said that managerial/supervisory duties were also a significant part of their work.

Coding quantity and quality

Coders were asked whether they were required to meet a coding throughput, and if so, the number of records they were required to code. Only 44% of coders indicated that they were required to meet a coding throughput. Of these, 333 reported the actual throughput targets. The average daily throughput requirement was indicated at 28 records per standard working day (3–4 records per hour). However, the coding throughput mode (most frequently reported) was slightly higher at 30–39 records per day (4–5 records per hour). The coding throughput requirements for free-standing day-care facilities and hospitals were as follows:

Free-standing day-care facilities:

- average 28 records per day
- minimum 3 records per day
- maximum 100 records per day (this was an outlier, and the second highest coding throughput was 42 records per day)

Hospitals:

- average 36 records per day
- minimum 6 records per day
- maximum 80 records per day (11 hospitals stated that their coding throughput requirements were greater than 60 records per day).

Coders were asked to report issues that they believed had an impact on the accuracy, completeness and timeliness of coding at their own facilities. They were asked to rank each factor on a scale from no impact to an enormous impact. For ease of interpretation, the categories of *no impact* and *slight impact* were combined into the *no impact* category. The categories of *moderate impact* and *enormous impact*

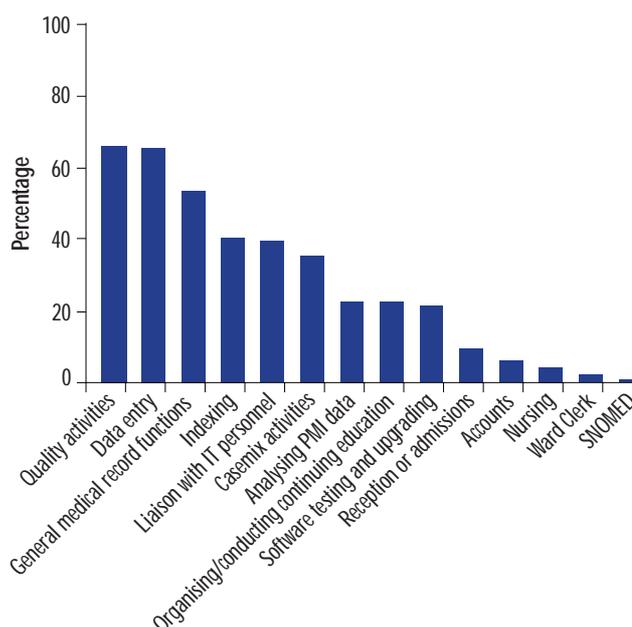


Figure 3: Tasks coders perform in addition to coding



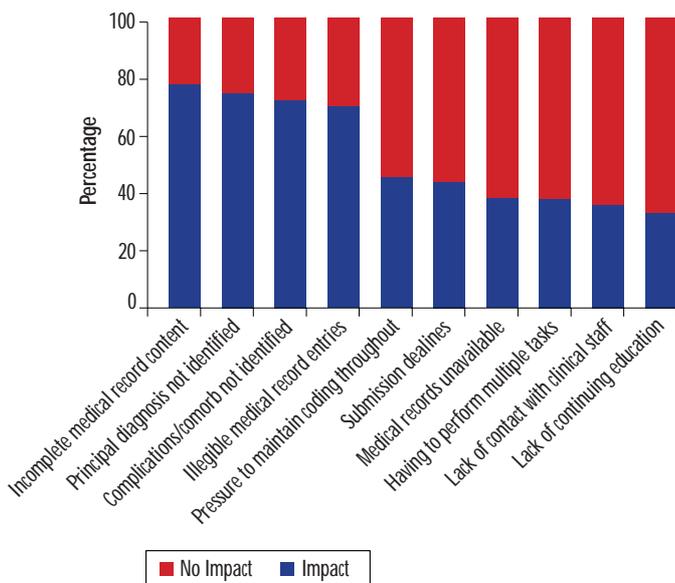


Figure 4: Coders' views of factors affecting coding quality

were combined into an *impact* category. Overall, the availability of complete and accurate documentation was reported as the major problem that inhibited quality coding. The survey found that three quarters of coders (77%) indicated that an incomplete medical record had an impact on coding quality. This was closely followed by the principal diagnosis not being uniquely identified (73.7%) and complications/comorbidities not being identified (71.1%). A quarter of respondents identified that a lack of coders in their facility had an adverse impact on coding quality. The impact of the top ten reported factors is displayed in Figure 4.

Coders were asked if they performed regular quality assurance (QA) activities in their own facilities. Responses indicate that two thirds of coders are involved in QA activities. New South Wales has the smallest percentage (57.4%) of coders involved in QA activities. Nearly all of the Tasmanian coders who responded (91.7%) performed QA activities. Approximately a third of coders said that audits were performed to assess coding quality. In-house analysis using *Performance Indicators for Coding Quality* (PICQ) was performed by 14% of coders and 9% said that external analysis using PICQ was made to assess coding quality. In-house analysis using *Australian Coding Benchmark Audit* (ACBA) software was performed by 7.6% of coders. Another 6.6% indicated that external analysis using ACBA was made to assess coding quality.

A third of respondents stated that they did not undertake QA activities. Of these, 181 coders specified these reasons for not performing QA activities:

- QA is performed by the manager or health department (23.8%)
- no time is available (21%)
- there is only one coder at the facility or the coder is a contract coder (15.5%)

- there are plans to begin QA in the future (14.4%)
- the coder is a new employee (9.9%)
- *ad hoc* QA is performed (8.3%)
- QA is not required at the facility (7.2%)

Coder education and training

Coders were asked to indicate where they learned to code. They were asked to tick all applicable categories from a list including undergraduate degree, postgraduate degree, distance education and on-the-job training. Just over a third (36%) of coders held undergraduate health information management/medical record administrator (HIM/MRA) degrees that contributed to them learning to code. Of these, 78% learned solely through their degree education. An additional 5.5% learned to code both during undergraduate education and from on-the-job training. A third said they learned to code on-the-job. A significant number of coders (10%) said they had no formal coding education beyond on-the-job coding. The Health Information Management Association of Australia Ltd (HIMAA) distance education course was the third most common way that respondents learned to code (28.7%) with half of these coders learning exclusively through the HIMAA distance education course. Coding education responses are illustrated in Figure 5.

Coders were asked if they felt that the education they received adequately prepared them to code when they commenced work. About two thirds (60%) believed that their coding education prepared them adequately. Obtaining HIM postgraduate education was deemed to provide adequate preparation to code in the work environment by three quarters of respondents who had acquired this level of education (n=22). Completion of an undergraduate HIM degree was thought to be the least adequate education mode for coders. Half of all coders who had completed undergraduate degrees said they felt inadequately prepared to code in a work environment (n=176).

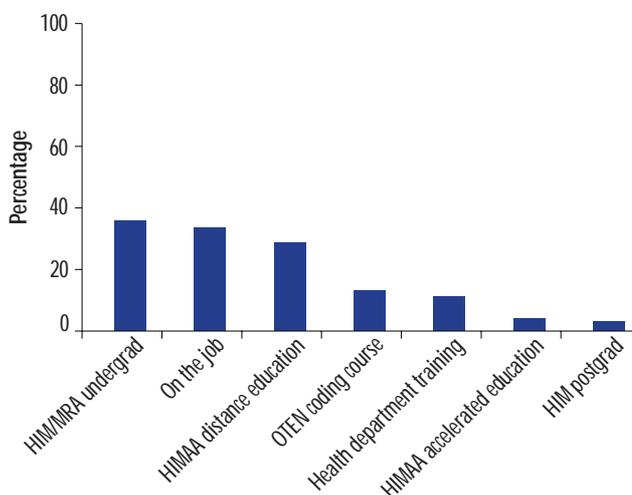


Figure 5: How coders learn to code

The survey evaluated support for coders to participate in continuing education activities. Coders were asked if their facilities supported participation in continuing education. Most (90%) coders stated that their facilities support continuing education. Over half (58%) had employer support to provide time away from work for continuing education without a requirement to make up that time. An additional 4% of coders were allowed to have time off work but were required to make up the time later. Over half (55%) of coders indicated that their organisation supported them by way of payment of registration/enrolment fees. A quarter of employer facilities did not provide any support for continuing education.

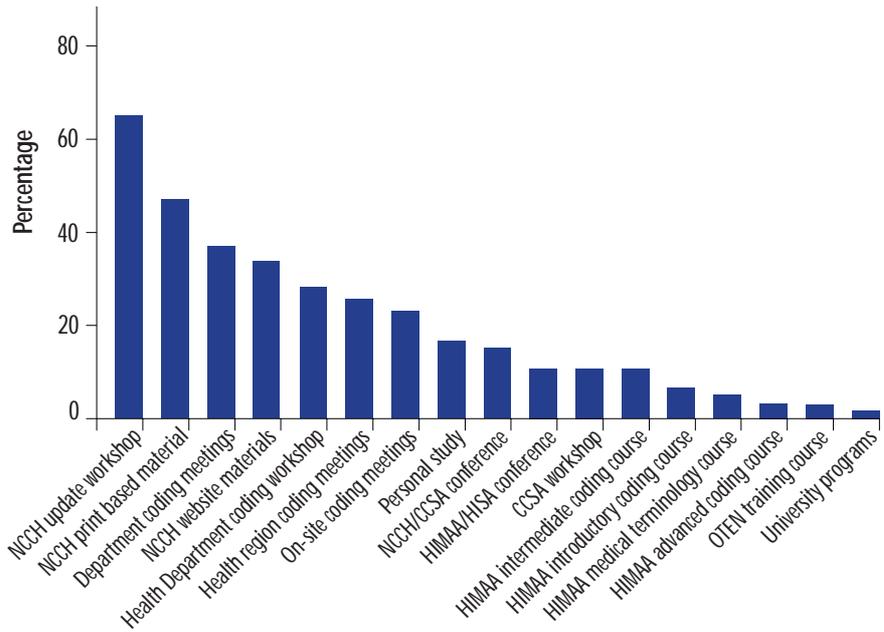


Figure 6: Coders' continuing education events

Coders were asked to nominate types of continuing education activities they had been involved in over the last three years. Nearly two thirds (65%) of coders indicated that they had accessed an NCCH update workshop, about half (47%) said that they had accessed NCCH print-based materials and over a third (37%) had attended department coding meetings. Figure 6 shows the breakdown of coders' continuing education activities.

A comprehensive report of all survey findings will be published in September 2003 as part of the NCCH monograph series.

About the authors

Dr Kirsten McKenzie is a research fellow at the NCCH (Brisbane) and was responsible for the collection, collation and statistical analysis of the coder workforce survey.

Sue Walker is the Associate Director, NCCH (Brisbane) and was the project manager of the coder workforce survey.

Andrew Klisanin is a senior research assistant at NCCH (Brisbane).

Melanie Spallek was completing a professional placement at NCCH (Brisbane) at the time of the survey. She is a student completing a degree in Medical Documentation and Information Systems at the University of Applied Science of Ulm, Germany.

Please contact either Kirsten McKenzie (ph 07 3864 5809, e-mail k.mckenzie@qut.edu.au) or Sue Walker (07 3864 5873, e-mail s.walker@qut.edu.au)

CLOSE IN SPELLING... DIFFERENT MEANING

Castration means 'to deprive of the testicles, emasculate...' (Macquarie, 1991)

Castrametation means 'the art of designing a camp' (Noble, 2002)

Fornicate means 'to commit fornication.

Fornication: voluntary sexual intercourse between unmarried persons, adultery' (Macquarie, 1991)

Formicate means to engage in ant-like behaviour (Noble, 2002)

Noble G (2002) *More word of the day*. Penguin Books, Australia.

The Macquarie Dictionary, Second ed (1991).

The Macquarie Library Pty Ltd, Macquarie University, Australia.



Washington in cherry blossom time. Members of WHO Training & Credentialling subgroup. L to R: Donna Glenn, USA; Patricia Wood, Canada; Marjorie Greenberg, USA (chair); Ron Casey, Australia; Tyringa Ambrose, USA

NCCCH Brisbane Associate Director, Sue Walker, attended two World Health Organization (WHO) meetings and the third conference of the International Collaborative Effort (ICE) on Automating Mortality Coding in Washington DC during April.

Training and Credentialling subgroup

This group is a subcommittee of the WHO ICD-10 Implementation Committee and has representation from Australia, the USA, the United Kingdom, Brazil, Sweden and Canada. Its major functions are the development of a core curriculum for coder training, both for morbidity coders and for cause of death (mortality) coders, and the establishment of some form of international credentialing or accreditation process for coders using the ICD-10. During the three-day meeting, the group refined the curriculum outline that was originally developed in October 2002. This outline is aimed to set a standard for the minimum educational requirements for coders, initially at entry level but eventually working towards requirements for intermediate and advanced level coders. The group has decided to work firstly on the needs of coders who are responsible for assigning codes either for underlying cause of death or for main condition (principal

diagnosis) because the WHO standards for these are well-established and documented in Volume II of the ICD-10. Ultimately, we hope to recommend both coding standards and educational requirements for coders who code all diagnoses occurring in a hospital episode of care, or all causes of death reported on a death certificate. However, such standards do not currently exist and whilst there is commonality amongst countries regarding what is coded, there are sufficient differences for this to require considerable negotiation and thought.

The aim of the curriculum development is twofold – firstly for coder educators to use as a checklist to ensure that their materials cover all the identified requirements; and secondly, to have a modular training program available that can be used by coders in countries where there are no existing formal training programs. Parts of the curriculum have been given to each member of the group to flesh out and we will then work towards standardising the materials into a cohesive product.

The group plans that the accreditation or credentialing program will be auspiced jointly by WHO and the International Federation of Health Records Organizations (IFHRO). It will likely be hosted by an

IFHRO member nation with sufficient capacity to conduct the program on behalf of the international community. The group has not yet determined exactly how the program will operate but is working towards the presentation of a proposal to the IFHRO Grand Council at the next IFHRO congress in Washington in October 2004. IFHRO is currently represented on the Training and Credentialing subgroup to ensure their views are considered. Questions such as the need for different language versions, whether the examination should be paper-based or web-based, how it should be administered and adjudicated and sources for coding questions, are currently being considered.

Mortality Reference Group (MRG)

This WHO group met in Washington on 3–4 April 2003. As the committee responsible for the development of mortality coding standards and recommendations for changes to ICD-10 to assist mortality coders, a number of the members of this group overlapped with those of the Training and Credentialing subgroup. The MRG is chaired by Lars Age Johansson from the Nordic Collaborating Centre. The Centre also hosts the Mortality Forum, an Internet discussion group much like Code-L, to which individual coders can send coding queries or difficult death certificates for advice and discussion. Arising out of such discussions are issues of lack of comparability in assignment of codes or interpretation of the WHO coding rules, and these problems are added to the MRG's waiting list for consideration. In Washington, we



George Washington look alike at Mount Vernon

worked on around 50 problems arising from the 'waiting list' and also from incomplete discussions from the 2002 Brisbane meeting, making coding recommendations and suggestions for updates to the classification to be forwarded to the Update Reference Committee. A lengthy debate was held about the coding of SARS, with the MRG making a recommendation to the Update Reference Committee that a new temporary code, U04.9, be implemented to allow unique identification of SARS cases in the future. It is recommended that U04.9 be used in conjunction with B97.2 *Coronavirus as the cause of diseases classified to other chapters* but we await the formal decision of the URC before these codes can be used. The U codes in ICD-10 have been purposely left blank by WHO with the intention that the code range U00-U49 be used for new and emerging diseases, and the range U50-U99 for country-specific codes.

International Collaborative Effort on Automating Mortality Coding (ICE)

The ICE on Automating Mortality Coding is one of several international activities organised and sponsored by the US National Center for Health Statistics at the Centers for Disease Control and Prevention. The ICE's primary purposes are to:

- share knowledge and experiences in the use of automated systems for mortality coding
- develop and improve automated systems through international collaboration
- help with the transition to ICD-10 for mortality
- establish and support mechanisms for technical assistance for users of automated systems.

<http://www.cdc.gov/nchs/about/otheract/ice/automort/automort.htm>

This gathering was the third meeting of the ICE group, held 7–10 April, with around 70 participants.

Many extremely interesting and useful papers were presented, under the themes of:

- Overview of existing automated systems – including the USA's Mortality Medical Data system (MMDS – used widely for mortality coding, including in Australia), the Swedish MIKADO system, STYX used in France, SCB used in Brazil and reports of different processes used in Japan, Mexico, South Africa. Many of the international systems use ACME, the automated coding decision tables developed in the US, to assign the underlying cause of death using the WHO coding rules. The advantage of this is that, whilst the individual systems differ to suit local conditions and languages, the main decision making software is the same, leading to standard coding output.
- Multiple causes – summary of the different perspectives on mortality provided by underlying cause versus multiple cause coding, sources of data to support multiple cause coding, need for standard definitions and coding rules, methods of data organisation and reporting.



- Electronic death registration – reports on moves to implement electronic death certification and registration, including activities by the NSW Registry of Births, Deaths and Marriages, the Office of National Statistics in the UK, New York City death registry office.
- Language issues – differences in coding output as a result of different language versions of the classification or software being used to support the coding process, the possibility of converting the MMDS software to languages other than English, experiences in Italy, Sweden, Japan, Brazil
- Training – development of education packages for certifiers of deaths, clinicians; how to become a multiple cause coder (the US experience), demonstration of Intercood (a learn-to-code software package developed by the Pan American Health Organization).
- Comparability studies – reports of experiences in the implementation of ICD-10 and artefactual changes in output statistics arising as a result of coding changes.
- Data quality – papers relating to Eurostat studies of data quality and comparability, use of querying techniques to improve the coding of specific causes of death, research to compare underlying causes of death with main diagnoses for hospital deaths, uses of coded data in Taiwan.
- Electronic tools – report of the work of the WHO Electronic Tools Committee to develop an electronic version of the ICD-10; reports of the approaches taken in Australia, Germany, the USA and Canada to maintain national modifications of the ICD-10 using a database or XML or a combination of both.
- Knowledge and data dissemination – work of the Australian Bureau of Statistics to implement an internet Bulletin Board for users of automated coding systems; analysis and reporting tools, such as Supercube (an Australian development, available from Space-Time Research Pty Ltd reference: <http://www.str.com.au/>), SAS, data warehousing and IRMA (a Canadian product developed at Statistics Canada).

The meeting concluded with a series of presentations to set future directions for ICE work. Grace Bediako from the United Nations Statistics Division, urged participants to support the needs of developing countries in their quest to implement automated products. She also spoke of the need to improve vital registration systems and increase the use of health information for resource utilisation and planning. Dr Bedirhan Üstün, from WHO, reminded the group that the International Classification of Diseases is 150 years old this year. He challenged us to start considering moves to ICD-11, describing the ICE as a model platform for sharing knowledge and experiences.



Sue Walker beneath cherry blossom

I very much enjoyed my time in the US – despite the snow on arrival! I particularly enjoyed the opportunity to visit the Washington cherry blossoms which were in full bloom late in the first week of our stay. Dr Üstün quoted a haiku by Japanese poet, Issa, which seemed to sum things up for me:

What a strange thing!
To be alive
Beneath cherry blossoms.

Sue Walker
Associate Director
NCCH (Brisbane)

What's it mean?

Do you know what these terms mean? Compare your understanding with the definitions on page 23

Steatopygia
Eructation
Febrifuge
Horripilation
Bistoury
Epizooty
Nocuous

Deglutition
Carphology
Inanition
Organoleptic
Rhinotillexomania
Glossolalia

NCCH AND THE AUSTRALIAN BUREAU OF STATISTICS

a collaborative partnership

Margaret Campbell, a member of the NCCH Brisbane team, has been seconded to the Australian Bureau of Statistics (ABS) Cause of Death Unit Brisbane as a Senior Project Officer. Margaret is working on a number of valuable and interesting projects to improve data quality and communication of coded mortality data.

Chronicle changes to the Mortality Medical Data System (MMDS)

MMDS is a suite of automated coding software (ACS) developed in the US by the National Center for Health Statistics (NCHS). In 1997 Australia adopted MMDS to standardise coding and reporting of multiple causes of death for mortality coding.

The chronicle will be developed in collaboration with the NCHS. It will identify modifications to the MMDS suite of software, changes to ICD-10 codes and coding conventions as recommended by the World Health Organization's (WHO) Update Reference Committee (URC). It will also look for modifications to locally established coding practices to see if the identified changes in software capabilities and coding practices have impacted on cause of death information provided to researchers and other stakeholders.

Investigate development and provision of an on-line medical terminology course

An investigation is under way to assess the feasibility of developing a web-based on-line medical terminology course. The investigation is being made in conjunction

with other identified stakeholders to augment face-to-face training for mortality coders and managers working in the Cause of Death Unit.

Document ABS involvement with National Coroner's Information System (NCIS)

The NCIS is a national electronic database of coronial information that contains case-specific documentation from state and territory coronial records. NCIS has been designed to make it easy for Australian coroners to get timely access to coronial information.

The aim of the NCIS is to create an operating environment for collaboration and communication that enables relevant information about the project to be available and allows managers to get an insight into active stages of the project, perform project analysis and take action where required.

Coding quality activities

NCCH is responsible for quality assurance activities related to ICD-10 mortality coding. Activities involve improving the quality of Medical Certificates of Cause of Death, MMDS processing and coder review documentation. The Australian Coding Benchmark Audit (ACBA) (electronic version) is being implemented as a tool to measure coding quality.

Margaret Campbell
Senior Project Officer
NCCH (Brisbane)

Alex's conundrum

Where did the term retina come from?

The retina is the innermost of the three tunics of the eyeball that surround the vitreous body. Images from the eye's optical system are converted into electrical impulses by the retina and are sent to the brain along the optic nerve.

Retina comes from the Latin word *rete*, which can mean coat or net. At first reading, this seems a bit odd because the retina doesn't contain any very net-like structures.

The real reason of how the retina came by its name appears to have come about from a translation error.

Galen, the celebrated Greek physician, named this part of the eye *amphiblestron* the Greek word meaning a surrounding coat that has an alternate meaning of fisherman's net. When *amphiblestron* was translated into Latin, the translator chose the second meaning instead – a net – and gave rise to the term retina that we know today

Reference

Perry Pepper, OH. Medical Etymology: The history and derivations of medical terms for students of medicine, dentistry and nursing.

<http://www.emory.edu/ANATOMY/AnatomyManual/Etymology.html>. Accessed 31 March 2003.

NCCH Prize for Clinical Coding



QUT Coding prize winner Narelle Doss (centre) with Professor Brian Oldenburg and Sue Walker

The NCCH Prize for Clinical Coding is awarded annually to outstanding graduating students who have completed health information management and clinical coding courses.

2002 NCCH Prize for Clinical Coding recipients are:

Angela Bayley	The University of Sydney
Lisa Maree Galea and Penny Quinlan	La Trobe University
Rachel Peake	Curtin University of Technology
Narelle Doss	Queensland University of Technology
Jennifer Todd	Health Information Management Association of Australia Ltd
Theresa Collins	Open Training and Education Network – Distance Education



The Australian Refined Diagnosis Related Groups (AR-DRG) version 5.0

Diagnosis Related Groups (DRG) is a patient classification scheme that provides a clinically meaningful way of relating the number and types of patients treated in a hospital to the resources required by the hospital. AR-DRG is developed and maintained by the Commonwealth Department of Health and Ageing.

AR-DRG version 5.0 builds on the foundation of version 4.2 and incorporates ICD-10-AM Third Edition.

AR-DRG version 5.0 consists of 3 volumes and includes a CD-ROM with supplementary tables.

Copies may be purchased from the NCCH. Versions 4.0 and 4.2 are also available. See enclosed order form for details.

For more details about AR-DRG version 5.0 visit:
www.health.gov.au/casemix

ICD-10-AM Third Edition eBook

The ICD-10-AM eBook is the interactive, electronic version of ICD-10-AM Third Edition, that looks like the printed manuals on screen

The ICD-10-AM eBook features:

- ▶ hyperlinks between volumes
- ▶ personalised user notes
- ▶ notes marker
- ▶ 10-AM Commandments full-text links
- ▶ user defined search facility



Update Available Now

See page 13 for details of the new drag and drop feature

CLINICAL CODERS'



SOCIETY OF AUSTRALIA LTD

ACN 075 387 727

The Clinical Coders' Society of Australia Ltd was established in 1996 and is affiliated with the Health Management Association of Australia (HIMAA). The CCSA constitution states that the primary objective of the Society is to provide a forum and also support for clinical coders and those interested in the coding of health care data.

The CCSA aims to provide members with advice on workforce and professional issues, continuing education activities, coder accreditation support, regular publications, in addition to helping to raise the profile of the clinical coders and to promote the understanding of the value of coded data.

The constitution of the CCSA enables membership to be offered to clinical coders, health information managers and those interested in clinical coding.

The CCSA is managed through a Board of Directors comprised of a member from each state and territory and a HIMAA Board member who will act as an ex-officio director. The membership fees are \$60 annually (students \$30) plus a one off \$30 initial joining fee. These fees are tax deductible.

For further information contact:

www.CCSofA.org.au

(membership information and forms on-line);

Your state or territory CCSA representative;

or

CCSA Membership

PO Box 203, North Ryde NSW 1670

Ph: 02 9887 5001 or Fax: 02 9887 5895

answers to What's it mean?

Steatopygia	an abnormal accumulation of fat on and about the buttocks
Eructation	belching
Febrifuge	medicine to reduce fever
Horripilation	causing the hair on the back of the neck to bristle
Bistoury	a surgeon's scalpel
Epizooty	a disease prevalent temporarily among animals
Nocuous	harmful
Deglutition	swallowing
Carpology	delirious fumbling with bedclothes
Inanition	exhaustion from lack of food
Organoleptic	pertaining to the use of sensory organs
Rhinotillexomania	nose picking
Glossolalia	non-meaningful speech

Reference: Noble G (2002) *More word of the day*. Penguin Books, Camberwell.

answer to WORDOSCOPY

The hidden meaning is: THERAPEUTIC

coding matters



Volume 10 Number 1 June 2003
National Centre for Classification in Health

NCCH (Sydney)

Faculty of Health Sciences, The University of Sydney
PO Box 170 ph: 02 9351 9461
Lidcombe NSW 1825 fax: 02 9351 9603
Australia e-mail: r.bernard@fhs.usyd.edu.au

NCCH (Brisbane)

School of Public Health, QUT
Victoria Park Rd ph: 07 3864 5809
Kelvin Grove QLD 4059 fax: 07 3864 5515
Australia e-mail: ncch.brisbane@qut.edu.au

NCCH (Melbourne)

School of Public Health
La Trobe University ph: 03 9479 1811
Bundoora VIC 3086 fax: 03 9479 5657
Australia e-mail: qed@latrobe.edu.au
<http://www.fhs.usyd.edu.au/ncch/>

Editor: Ann Jones

Production and Layout: Peter Long & Rodney Bernard

ISSN 1322-1922

Coding Matters is the quarterly newsletter of the National Centre for Classification in Health (NCCH). NCCH (Sydney) is funded by the Casemix Program, Commonwealth Department of Health and Ageing. NCCH (Brisbane) is funded by the Australian Institute of Health and Welfare, the Australian Bureau of Statistics and the Queensland University of Technology.

July	14-16	First Australian Conference for Safety and Quality in Health Care	Burswood Convention Centre Perth, WA	www.safetyandquality.org
Aug	8-10	24th HIMAA Conference 2003	Sydney Convention Centre Sydney, NSW	www.himaa.org.au
Aug	10-12	HIC 2003	Sydney Convention Centre Sydney, NSW	www.hisa.org.au
Aug	13-18	Australian Healthcare Association / Australian College of Health Service Executives (AHA/ACHSE) Congress 2003	National Convention Centre Canberra, ACT	www.aushealthcare.com.au

15th Casemix Conference postponed
 The 2003 National Casemix Conference in Australia has been postponed. The conference will be held at the National Convention Centre, Canberra, 29 August-1 September 2004

September	28 Sept - 1 Oct	35th Public Health Association of Australia Annual Conference: Essentials, Differentials and Potentials in Health	Brisbane, QLD	www.pha.org.au
October	8-11	19th Patient Classification Systems Europe Conference (PCS/E)	Washington DC	www.pcse.org
October	18-23	American Health Information Management Association (AHIMA) Annual Convention	Minneapolis, MN, USA	www.ahima.org/convention
November	8-12	Annual Symposium of the American Medical Informatics Association (AMIA)	Washington DC USA	www.amia.org

Next edition: September 2003

- SARS
- How stuff works – lungs
- ICD-10-AM Third Edition user survey feedback

