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Front Cover

In support of contemporary Zulu telephone wire baskets

Artist: Dudu Cele, Port Shepstone, Kwazulu-Natal

Photographer: William Raats



Dudu's work is well described as being full of riotous colors and oozing individual expression. She had a passion for celebrating life and occasion in her work, and her baskets showcase images of soccer championships and other such events. Her artwork is available from the BAT Shop, Durban, Tel: (031) 332 9951, E-mail: batcraft@mweb.co.za

Photographs reproduced from the book, *Wired*, by David Arment and Mariska Fick-Jordaan, 2005, S/C Editions Santa Fe. ISBN 0-89013-449-9, with permission. © 2005 David Arment and Mariska Fick-Jordaan. The book is available from David Krut Publishers, (011) 880 4242 or info@davidkrutpublishing.com and local book shops in South Africa. Proceeds from the book will benefit the Wilson Education Foundation and educational development projects in South Africa

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FEES AND CHARGES

(Applicable 1 June 2006 to 31 May 2007)

PAYABLE BY MEMBERS OF THE CMSA:

Annual Subscriptions

Local:

Associate Founders, Associates, Fellows, Members and	
Certificants:	R550
Diplomates:	R325
Overseas (all categories of members):	R550
Retired members:	R62

Assessment Fee: Fellowship by Peer Review: R800

Registration Fee: Associates: R520

Fellows, Members, Certificants and Diplomates: R350

(The registration fee for Fellows, Members, Certificants and Diplomates forms part of the examination fee)

Voluntary Constituent College Levy: R60

Purchase or Hire of Gowns and Hoods

(The charge for the hire of gowns by new Fellows, Members, Certificants and Diplomates is included in their registration fees)

For occasional hire:

Gown and hood:	R110
Gown only:	R80
Hood only:	R40
Purchase of hoods:	R200

PAYABLE BY THE CMSA:

Subsistence Allowance (in addition to accommodation only) per day or part thereof, actually spent on CMSA business

Senators, examiners and staff (local): R196/day

CMSA delegates (overseas): \$190/day

Honorarium (local subsistence)

Local examiners: R180 per day less PAYE of R45: R135/day

Remuneration for Setting FCS(SA) Part 1 Papers: R280

Remuneration for Assessment of Case Books and Commentaries: R200

Remuneration Invigilating:

(not applicable to salaried personnel of the CMSA)

Full day: R330

Half day: R175

Remuneration for Secretarial Assistance:

(not applicable to salaried personnel of the CMSA)

The following sliding scale applies:

Hours worked	Remuneration		
Up to 8 hours	R30 per hour	08 – 10 hours	R300
11 – 15 hours	R425	16 – 20 hours	R570
21 – 25 hours	R650	26 – 30 hours	R740
31 – 35 hours	R830	36 – 40 hours	R950
41 – 45 hours	R1 045	46 – 50 hours	R1 100

There is a ceiling of R1 100 as persons providing secretarial assistance to the CMSA receive a salary from their employers.

Claims in respect of secretarial assistance rendered at the time of the examinations have to be supported by a special recommendation for payment signed by the examination Convener.

RATE OF REMUNERATION FOR LABORATORY TECHNOLOGISTS/TECHNICIANS

The current rate of remuneration is R70 per hour.

Claims for reimbursement of laboratory technologists/technicians who assist during CMSA examinations also have to be supported by a special recommendation for payment signed by the examination Convener.

COST OF PAST EXAMINATION QUESTION PAPERS

Per set of 6 papers (covering a period of 3 years): R50

Reimbursement for Travelling on CMSA business: R2,46/km

ADDITIONAL FUNDING FOR EXAMINER'S MEETINGS

Additional funds have been made available to allow for examination meetings and examination preparation so as to increase the efficacy of the process. These funds have been allocated from budget surplus and does not influence the examination expenses or fee structure. No examination fee increase is proposed.

- Prof Tuviah Zabow; HONORARY TREASURER

CMSA MEMBERSHIP PRIVILEGES

LIFE MEMBERSHIP

Members who have remained in good standing with the CMSA for thirty years since registration and who have reached the age of sixty-five years qualify for life membership, but must apply to the CMSA office in Rondebosch.

They can also become life members by paying a sum equal to twenty annual subscriptions at the rate applicable at the date of such payment, less an amount equal to five annual subscriptions if they have already paid for five years or longer.

RETIREMENT OPTIONS

The names of members who have retired from active practice will, upon receipt of notification by the CMSA office in Rondebosch, be transferred to the list of "retired members".

The CMSA offers two options in this category:

First Option

The payment of a small subscription which will entitle the member to all privileges, including voting rights at Senate or constituent College elections. If they continue to pay this small subscription they will, most importantly, qualify for life membership when this is due.

Second Option

No further financial obligations to the CMSA, no voting rights and unfortunately no life membership in years to come.

Members in either of the "retired membership" categories continue to receive the Transactions of the CMSA and other important Collegiate matter.

WAIVING OF ANNUAL SUBSCRIPTIONS

Payment of annual subscriptions is waived in respect of those who have attained the age of seventy years and members in this category retain their voting rights.

Those who have reached the age of seventy years must advise the CMSA Office in Rondebosch accordingly as subscriptions are not waived automatically.



EDITORIAL

PROF. GBOYEGA A. OGUNBANJO

Dear colleagues,

Since I took over the editorship of the Transactions in 2004, each time I compile an issue of the journal, I normally ask myself this question "What will interest the reader in this issue"? Considering the diversity of the Colleges of Medicine of South Africa (CMSA) with its many medical disciplines, this is usually not an easy task. The primary role of the Transactions journal is to disseminate information on the activities of the CMSA over the last six to nine months, which usually include the presidential newsletter, admission ceremony, list of successful candidates and various CMSA lectures delivered by colleagues.

This issue has the last presidential newsletter from the outgoing CMSA President Prof. Lizo Mazwai (2004-2007), in which he highlights some events he represented the CMSA during the past year. A very important highlight was the merger of the association of Surgeons of East Africa with the Colleges of Surgeons of East, Central and Southern Africa (COSECSA) at their December 2006 joint meeting in Blantyre, Malawi. On the national front, the ground breaking meeting with the South African national department of health on issues related to specialist training and standards opened the door for the CMSA as a significant role player concerning the department's human resource development plans for medical specialist education and training in the country.

He completes the newsletter with a few challenges to the CMSA to develop the following areas beyond its core business of running medical specialist examinations: quality assurance of the examination process, improving the image and stature of the organization, promoting its membership to incorporate registrars, and to continue its transformation programme. The latter challenge, which he coins as the 'Africanisation' of the CMSA refers to sensitive matters such as the insignia and emblems of historical significance. He ends his term of office in May 2007 with Prof. Zephne M van der Spuy (College of Obstetricians and Gynaecologists) taking over the baton as the new CMSA President for the next triennium (2007-2010).

The JC Coetzee lecture presented at the 13th National Family Practitioners' conference at Mthatha, South Africa by Prof. F Guidozzi of the University of Witwatersrand, Johannesburg has been written up as an article titled "**Hormone Therapy: Targets beyond the obvious**". It covers the 2002 controversies on hormone replacement therapy (HRT) in women, the impact of the cancellation of the oestrogen only arm of the Women's Health Initiative (WHI) trial in March 2004, and provides a rational evidence-based approach to HRT in women. A few important issues highlighted in the article include the following:

- The WHI did not evaluate the impact of HRT as a primary preventive agent on cardiovascular disease in a *young healthy postmenopausal* population encountered in our clinical practices
- The risks of cardiac disease and breast cancer in postmenopausal women taking HRT in the WHI were *not statistically significant* when compared to those who took placebo

He concludes by advocating for the continued use of HRT in well-selected postmenopausal women due to its benefits outweighing the risks, in combination with lifestyle modification, including

exercise, dieting, cessation of cigarette smoking and attention to underlying medical disorders.

The 2006 Arthur Landau lecture delivered by Prof. S Hough of the University of Stellenbosch, Cape Town titled "**A rational approach to the treatment of osteoporosis**" is also presented as an article. It covers another important clinical condition that affects primarily postmenopausal women. The article is a well-written article on this important medical condition and provides up-to-date information that a medical practitioner needs on osteoporosis from definition, diagnostic evaluation to non-pharmacological / pharmacological measures. New developments on future treatment and a rational choice of therapy are presented based on the nature of the osteoporosis, the patient, cost-effectiveness / side effects and availability of the medications.

The last article is an **original article** from the department of Urology, University of Stellenbosch on the assessment of the urology registrars' log books for their admission to the final examination of the Fellowship of the College of Urologists of South Africa. The aim of the study was to analyze the operative experience of registrars in the Department of Urology at Tygerberg hospital, Cape Town. The conclusions of the study reported a decrease of 32% in the average number of urological procedures per registrar and a decrease of 33% in the ratio of procedures performed by the registrar as surgeon rather than as assistant in the past decade. These findings highlight concerns on the proficiency of future urology registrars in performing operative procedures in their discipline when they qualify as urologists, if these trends continue. It will be important for other colleges to perform similar studies on their registrar logbooks as part of the quality improvement process for registrar training in their disciplines.

The future trend of the Transactions journal will be to feature more articles from the various CMSA lectures and original studies. I encourage colleagues who deliver CMSA lectures to convert them to articles, and original articles that have bearing on the quality improvement process of registrar training and examinations to submit such for publication. Enjoy this copy of the Transactions as you read all the interesting articles!

Prof. Gboyega A Ogunbanjo

Editor: Transaction

E-mail: gao@intekom.co.za

*NB: Please review the list of **lost members** on page 51 and contact the CMSA office Cape Town with information on how to contact them.*

LOST MEMBERS

The office of the CMSA is keen to establish the whereabouts of the following "lost members". Any information that could be of assistance should please be submitted to:

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 E-Mail: mem@colmedsa.co.za
 Internet: http://www.collegemedsa.ac.za

Bernhardt, Gina Leanne (*College of Family Practitioners*)
Block, Joseph (*College of Neurosurgeons*)
Block, Sidney (*College of Family Practitioners*)
Bresler, Pieter Benjamin (*College of Public Health Medicine*)
Drew, James du Preez (*College of Anaesthetists*)
Friedmann, Allan Isadore (*College of Ophthalmologists*)
Gibson, John Hartley (*College of Obstetricians and Gynaecologists*)
Hill, John William (*College of Physicians*)
Kenyon, Michael Robert (*College of Physicians*)
Kornell, Simon (*College of Physicians*)
Leigh, Werner Eberhard Julius (*College of Family Practitioners*)
Lwin, Zarnie (*College of Physicians*)
Malik, Muhammad Atif (*College of Psychiatrists*)
Matus, Szejma (*College of Radiologists*)

Medaiyese, Ayorinde Adebayo (*College of Family Practitioners*)
Ndimande, Benjamin Gregory Paschalis (*College of Anaesthetists*)
Oduwole, Olusesan Odusami (*College of Anaesthetists*)
Phillips, Kenneth David (*College of Family Practitioners*)
Raubenheimer, Arthur Arnold (*College of Obstetricians and Gynaecologists*)
Richmond, George (*College of Physicians*)
Sartorius, Kurt (*College of Public Health Medicine*)
Sesel, John Ruby (*College of Radiologists*)
Shaw, Keith Meares (*College of Surgeons*)
Smith, Robin Errol (*College of Paediatricians*)
Van den Aardweg, Machteld Sonja (*College of Surgeons*)
Van Wyk, Hester Catharina (*College of Surgeons*)

Information as at 16 February 2007

INSTRUCTIONS FOR AUTHORS

1. Manuscripts

- 1.1 All copies should be typewritten using double spacing with wide margins.
- 1.2 In addition to the hard copy, material should also, if possible, be sent on disk (in text only format) to facilitate and expedite the setting of the manuscript.
- 1.3 Abbreviations should be spelt out when first used in the text. Scientific measurements should be expressed in SI units throughout, with two exceptions; blood pressure should be given in mmHg and haemoglobin as g/dl.
- 1.4 All numerals should be written as such (i.e. not spelt out) except at the beginning of a sentence.
- 1.5 Tables, references and legends for illustrations should be typed on separate sheets and should be clearly identified. Tables should carry Roman numerals, thus: I, II, III, etc. and illustrations should have Arabic numerals, thus 1,2,3, etc.
- 1.6 The author's contact details should be given on the title page, i.e. telephone, cellphone, fax numbers and e-mail address.

2. Figures

- 2.1 Figures consist of all material which cannot be set in type, such as photographs, line drawings, etc. (Tables are not included in this classification and should not be submitted as photographs). Photographs should be glossy prints, not mounted, untrimmed and unmarked. Where possible, all illustrations should be of the same size, using the same scale.
- 2.2 Figures' numbers should be clearly marked with a sticker on the back and the top of the illustration should be indicated.

- 2.3 Where identification of a patient is possible from a photograph the author must submit consent to publication signed by the patient, or the parent or guardian in the case of a minor.

3. References

- 3.1 References should be inserted in the text as superior numbers and should be listed at the end of the article in numerical order.
- 3.2 References should be set out in the Vancouver style and the abbreviations of journals should conform to those used in *Index Medicus*. Names and initials of all authors should be given unless there are more than six, in which case the first three names should be given followed by 'et al'. First and last page numbers should be given.

Article references:

- Price NC. Importance of asking about glaucoma. *BMJ* 1983; 286: 349-350.

Book references:

- Jeffcoate N. Principles of Gynaecology. 4th ed. London: Butterworths, 1975: 96.
- Weinstein L, Swartz MN. Pathogenic properties of invading micro-organisms. In: Sodeman WA jun, Sodeman WA, eds. Pathologic Physiology: Mechanisms of Disease. Philadelphia: WB Saunders, 1974: 457-472.

- 3.3 'Unpublished observations' and 'personal communications' may be cited in the text, but not as references.



LIZO MAZWAI

President 2004 - 2007

Greetings and good wishes for 2007

As the heading indicates, my term of office is drawing to an end. A time of reflection is appropriate, not over the whole three years, but certainly for 2006. From my perspective, we closed 2006 on a high note on several points. Some of these need to be followed up in 2007 onwards in order for them to bear fruit.

1. International Relations

In October the College of Surgeons of Edinburgh closed its Quincentenary Celebration with a joint meeting with the College of Surgeons of Hong Kong. This was followed by a meeting of the IACAP on 12 October 2006, attended by 19 delegates representing 13 Colleges. The highlight of the discussions centered around 3 areas.

- The future of IACAP as an organisation. It was clear that to service this need, both a permanent office and secretariat was necessary. Consequently funding resources would be required. This would need canvassing in the constituent sister Colleges.
- Secondly, the future role of such an organisation in international postgraduate education and training would be linked to Human Resource in Health Development. In relation to HRH Development, it

was recommended that official contact be made with international organisations such as the WHO in order to find a platform for a stronger and unified voice of advocacy. The emphasis would be the impact in the developing world.

- Thirdly, to identify international topical issues on which to make statements or formulate position papers. Such a position paper would for a start be on "migration" of doctors. I am one of the members of a task team that will be preparing such a paper. The above would be a new focus to launch the IACAP into a more active orbit.

The second highlight was my attendance of a meeting of the Colleges of Surgeons of East, Central and Southern Africa (COSECSA) in Blantyre, Malawi in December 2006. This meeting was held jointly with the Association of Surgeons of East Africa. The College, having been recently formed, needs some assistance and is open to the idea of the South African Colleges playing a role in its development. However, this role must clearly be by invitation. They have identified the following areas of cooperation and collaboration -

- a. Formulating Statutes and By-Laws.
- b. Reviewing curriculum/syllabus.
- c. Participating in examinations in a reciprocal fashion.
- d. Finally, ideas on choosing colors of gowns and the format of the admission ceremony

Many of the constituent Colleges of the CMSA have been participating with African Colleges, e.g. members of the Colleges of Surgeons, Orthopedic Surgeons, Ophthalmology and Pediatricians and many others.

After 50 years of existence the Association of Surgeons of East Africa is merging with the new College to form COSECSA. I think this is a wonderful opportunity to initiate collaboration whilst keeping it at an academic and professional level. This is going to require much diplomacy as there is a legacy of multinational politics. However, we need to promote the concept of African Development in the academic field, regardless of political, national and other barriers.

Regrettably I could not attend the meeting of the College of Surgeons of West Africa in Dakar, Senegal (14-20 January 2007) due to University commitment as Dean. However, we sent them good wishes. I hope to hear from their President.

2. National

On the home front we have to follow up on our recent discussions with the National Department of Health regarding a more active, participatory role on issues that affect training and standards in specialist training. This was a ground breaking meeting and although there was hesitation about full engagement,

the door that had hitherto been closed is now open particularly on the critical matter of HRH Development. It is important to maintain open dialogue with the DOH. They already have a "seat" on our Senate, we should look for reciprocation on some of their policy making structures. This would be based on the understanding that we are a significant role player.

3. Organisational

It is clear that the CMSA has many challenges and issues similar to those experienced by other like-minded organisations. In principle these relate to its core function - the examinations in terms of

- Quality Assurance,
- Implementing resolutions taken to improve the image and stature of the organization,
- Passive to active promotion of its membership which will now incorporate Registrars.

A future challenge which will always loom in the background, going together with the transformation of the Colleges, is Africanisation of the CMSA. This may start with sensitive matters such as insignia and emblems, sensitive because of their historical significance. The

graduation ceremony has taken some of the character of Africa adding ceremonial celebration e.g. music and praise singers and our overseas visitors are without exception highly impressed. These matters are more in the realm of evolution and must not be seen as revolutionary. Change must come with time but should be through directed strategy and planning. This must also not cause unnecessary divisions. Therefore we must be prepared and be ready to accept these changes through dialogue and consensus.

I wish to thank once more the three offices of the CMSA, the Vice Presidents for their duty and counsel, members of Senate for the stimulating debate and support. The Presidents of constituent Colleges for frank and open discussion of issues of governance

I hope the brainstorming in March 2007 will bring new and fresh ideas on how to improve on what we do so well.

May 2007 be a happy, prosperous year with good wishes extended to the President-elect and Vice Presidents-elect who take office in May.

Lizo Mazwai
President 2004-2007

ADMISSION CEREMONY

19 October 2006

The admission ceremony was held in the Odeion, on the campus of the University of the Free State, Bloemfontein.

At the opening of the ceremony the President, Professor Lizo Mazwai asked the audience to observe a moment's silence for prayer and meditation.

The President announced that he would proceed with the admission to the CMSA of the new diplomats, certificants, members and fellows.

The new Diplomates, Certificants and Members individually, were announced and congratulated.

The Honorary Registrar - Examinations and Credentials, Dr Jeanine Vellema announced the candidates, in order to be congratulated by the President. The Honorary Registrar Education, Professor Anil Madaree individually hooded the new Fellows. The Junior Vice President, Professor Andries Stulting handed each graduate a scroll containing the Credo of the CMSA.

One medallist was congratulated by the President for her outstanding performance in the CMSA examinations.

Four Honorary Fellows were admitted. Mr William Ernest Ghinn Thomas to the College of Surgeons citation written by Professor Damon Bizos and read by Professor Del Kahn. Professor Alan Charles Bird to the College of Ophthalmologists citation written and read by Professor Andries Stulting. Dr Lawrence Scott Levin to the College of Plastic Surgeons citation written and read by Professor Anil Madaree. Professor Sir James CE Underwood to the College of Pathologists citation written and read by Professor Simon Nayler.

All in all the President admitted 153 Fellows, 8 Members, 254 Diplomates and 31 Certificants.

Professor Laetticia Moja, Dean of the Faculty of Health Sciences of the University of the Free State delivered the oration.

The National Anthem was sung, where after the President led the recent graduates out of the hall. Refreshments were served to the graduates and their families.

FELLOW BY PEER REVIEW: COLLEGE OF PATHOLOGISTS - MICROBIOLOGY



Prof Marais Nolan Jansen van Rensburg

MEDALLIST

Novartis Medal: The medal is awarded to candidates who excel in the Fellowship examination of the College of Neurologists of South Africa.



Dr Annette Swanepoel



50 Years
of Excellence
1955-2005

RECOMMENDATION FOR MEDALS - 2006

FCA(SA) Part II JACK ABELSOHN MEDAL & BOOK PRITZE

Dr Rosemary Dianne Mulder – May 2006

FC Derm(SA) Part II JANSSEN RESEARCH FOUNDATION MEDAL

Dr Mohlabe John Moche – April 2006

FC Neurol(SA) Part I SIGO NIELSEN MEMORIAL PRIZE

Dr Kaminie Moodley – October 2006

FC Orth(SA) Final JM EDELSTEIN MEDAL

Dr Franz Friedrich Birkholtz – April 2006

FCORL(SA) Final SA SOCIETY OF OTORHINOLARYNGOLOGY MEDAL

Dr Johan Grobbelaar – October 2006

FC Paed(SA) Part I LESLIE RABINOWITZ

Dr Elisabetta Walters – April 2006

FC Paed(SA) Part II ROBERT McDONALD MEDAL

Dr Judy Nicole Rothberg – April 2006

Dr Fiona Elize Kritzinger – October 2006

FC Path(SA) Chem COULTER MEDAL

Dr George Frederick Van Der Watt October 2006

FCP(SA) Part I AM MEYERS MEDAL (Best candidate in Basic Science)

Dr Brian William Allwood – October 2006

FCP(SA) Part II SUZMAN MEDAL (Best overall candidate)

Dr Anna Maria Klisiewicz – May 2006

FCP(SA) Part II ASHER DUBB MEDAL (Best candidate in the Clinical Section)

Dr Nasrin GOOLAM Mahyoodeen – May 2006

FC Psych(SA) Part I LYNN GILLIS MEDAL

Dr Elizabeth Legg – May 2006

FC Psych(SA) Part II NOVARTIS MEDAL & PRIZE

Dr Renata Schoeman – October 2006

FC Rad Diag(SA) Part I RHÔNE-POULENC RORER MEDAL

Dr Himat Hasmikhlat Gajjar – October 2006

FC Rad Diag(SA) Part II JOSSE KAYE MEDAL

Dr Stefan Jerzy Pryzbojewski – May 2006

Dr Salomine Hilda Theron – May 2006

FCS(SA) Primary TRUBSHAW MEDAL

Dr Colin Iaian McGuire – May 2006

FCS(SA) Primary FREDERICH LUVUNO MEDAL FOR ANATOMY

Dr Sumayyah Ebrahim – October 2006

FCS(SA) Intermediate BREBNER AWARD

Dr Leslie Marcia Maude Nunn – May 2006

Dr Izak de Villiers Jonker – October 2006

FCS(SA) Final DOUGLAS AWARD

Dr Cornelis Marius Hoogerboord – October 2006

FC Urol(SA) Final LIONEL B GOLDSCHMIDT MEDAL

Dr Jacobus Hendrik Henning – May 2006

Dip Allerg(SA) EUGENE WEINBERG MEDAL

Dr Tamatha Jane Urquhart – May 2006

DA(SA) SASA JOHN COUPER MEDAL

Dr Kim de Vascancellous – October 2006

Dip PEC(SA) WALTER G KLOECK MEDAL

Dr Caryn Suanne Frith – May 2006

MEDALLISTS 2006

MEDALLISTS 2006

CITATION FELLOWSHIP AD EUNDEM

MR WILLIAM ERNEST GHINN THOMAS
COLLEGE OF SURGEONS



Mr WEG Thomas is a consultant General Surgeon with a pancreatico-biliary interest and is Clinical Director of Surgery at the Royal Hallamshire Hospital. He is an Honorary Senior Clinical Lecturer in Surgery at the University of Sheffield.

Mr WEG Thomas is a consultant General Surgeon with a pancreatico-biliary interest and is Clinical Director of Surgery at the Royal Hallamshire Hospital. He is an Honorary Senior Clinical Lecturer in Surgery at the University of Sheffield.

His exceptional ability was recognised early and he was awarded numerous undergraduate awards at Kings College, London and St George's Hospital. Since then he has received numerous awards in diverse aspects of surgical endeavour as evidenced by the following accolades: Hunterian Professor RCS Eng 1986/7, Medical Manager of the Year by the British Association of Medical Managers (1995), the UK-Africa Business award for Surgical Educational Provision and courses within Africa (2002), President of the Surgical Section of the Royal Society of Medicine (2000/1). His extensive list of publications in peer reviewed journals, chapters in textbooks, membership of numerous international societies, invited lectures as well as his visiting lectureships confirm his status as an academic surgeon.

He is currently Surgical Tutor, Director of International Affairs and elected Member of Council at the Royal College of Surgeons of England. He has been instrumental, together with others at the Raven Department of Education, in developing and disseminating the Basic Surgical Skills within the United Kingdom and internationally. The BSS course is now mandatory for all surgical trainees in the United Kingdom. This has been the platform for the development of other surgical training courses at Basic, Intermediate and Advanced levels.

He has been extensively involved in other areas of surgical competence such as Examination and Assessment, STEP course development, Assessment of Operative Competence and Quality Assurance. He was a member of the Court of Examiners at the RCS Eng (1991-2001), MCQ Core Group and the MRCS Examinations Review Group.

Mr Thomas kindly visited South Africa to convene the inaugural BSS courses in 1998. The BSS was initially run under the auspices of the RCS (Eng), but is now run under the aegis of the Education Committee of The Colleges of Medicine of South Africa at all the postgraduate surgical training departments in

South Africa and is valued by both participants and faculty. To date, 923 participants have completed the BSS course and 520 have acted as faculty. The BSS has been a catalyst for the development of postgraduate Surgical Skills Laboratories and other training courses in South Africa. Bill Thomas has remained a friend of South African Surgery and has offered continued support and advice.

Bill Thomas is a gifted surgeon, academic and above all teacher whose enthusiasm, dedication and commitment act to inspire all those have worked with him. He is married to Grace and has five children and two grandchildren.

It is an honour for the College of Surgeons (CMSA) to present Mr William Thomas for admission to Honorary Fellowship.

Author: Damon Bizos

CITATION HONORARY FELLOWSHIP MR ALAN CHARLES BIRD COLLEGES OF OPHTHALMOLOGISTS



Mr Alan Bird was born on 4 July 1938 and was educated at Bromley Grammar School in Bromley, Kent and at Guy's Hospital Medical School in London. He obtained the MB BS (London) and the MRCS, LRCP (England) in 1961. He was an Ophthalmic Registrar at the St Bartholomew's Hospital in London from September 1963 - July 1964 and a Resident Surgical Officer at the Moorfields Eye Hospital from May 1965 to December 1967. Alan Bird also worked as a Senior Registrar at The London Hospital, National Hospital for Nervous Diseases in London and as a Clinical Fellow in Neuro-ophthalmology at the Bascom Palmer Eye Institute in Miami, Florida. In 1961 he received the Diploma in Ophthalmology (London) and in 1967 the Fellowship of the Royal College of Surgeons (England). He obtained a MD degree (London) in 1974 and the Fellowship of the Royal College of Ophthalmologists in 1988.

Alan Bird is Professor of Clinical Ophthalmology at the Institute of Ophthalmology in London and Honorary Consultant at the Moorfields Eye Hospital in the same city. He is a member of many national and international societies, including Membership of the Council of the Oxford Ophthalmological Congress and Master (1998-2000), Committee member of the Club Jules Gonin (1978-1986) and Vice-President (1982-1986), Membership of Academia Ophthalmologica Internationalis (1988 to date). He has received more than 60 awards and honours throughout the world, as well as 40 research awards and grants.

Mr Bird was a member of the Editorial Board of the *British Journal of Ophthalmology* (1987-1998), Managing Editor of *Graefe Archive for Clinical and Experimental Ophthalmology* (1980-1988), member of the Editorial Committee of the *Journal Francais d'Ophthalmologie* (1985 to date), member of the Editorial Board of *Investigative Ophthalmology* and *Vision Science* (1997 to date). He has published more than 370 articles in peer reviewed journals and has written 74 reviews.

He has been an external examiner at Queen's University, Belfast, the Royal College of Surgeons, Ireland, the Royal College of Physicians and Surgeons, Glasgow, Scotland, the School of Medicine, Riyadh in Saudi Arabia and at the Oxford University.

Alan Bird is a frequent and very popular visitor to South Africa. He has influenced many ophthalmologists in this country to have a better understanding of Medical Retinal diseases and we have all benefited from his wisdom, warmth and friendliness.

Mr President, I have the honour and great pleasure to ask you to confer the Honorary Fellowship of the College of Ophthalmologists (CMSA) on an international leader in Ophthalmology, Mr Alan Charles Bird.

Author: Andries Stulting

CITATION
HONORARY FELLOWSHIP
 DR LAWRENCE SCOTT LEVIN
 COLLEGES OF PLASTIC SURGEONS



Dr Lawrence Scott Levin is a renowned reconstructive surgeon, especially in the field of hand and microsurgery. He completed his residency in general surgery, orthopedic and plastic surgery at Duke University, North Carolina. He then went on to do a hand and microvascular Fellowship at Louisville, Kentucky and a hand Fellowship at Duke University.

He is board certified in America, both in orthopedic surgery and in plastic and reconstructive surgery. At present he is Professor in the Department of Surgery at Duke University and also Associate Professor in the Department of Pediatrics.

Dr Levin has been a very competitive student and has won numerous prizes during and after his residency. He is a very keen academic and has 137 publications in refereed journals, 45 chapters in books and has been an author in 18 text books and monographs.

He has extensive experience in clinical and laboratory research

and has procured numerous research grants some of which has been very sizable. Dr Levin is on 10 editorial boards and on various international and national committees. He belongs to 37 societies and has been invited to present at numerous international and national meetings. He has delivered 93 international and 104 national presentations.

Dr Levin is married to Helga Maria and has two children, Celica Blair and Benjamin Ross.

Mr President, it gives me great pleasure to present Dr Lawrence Scott Levin to you for admission to Honorary Fellowship of the College of Plastic Surgeons (CMSA).

Author: Anil Madaree

CITATION
HONORARY FELLOWSHIP
 JAMES C E UNDERWOOD
 COLLEGE OF PATHOLOGISTS



James Underwood, was born in 1942, and after completing his schooling at Downside School, Somerset in 1960, undertook his undergraduate medical training at St Bartholomew's Hospital Medical School and in 1965 was awarded MB,BS (London), MRCS (England), LRCP (London). He undertook his pathology training from 1966 -1969 at St Barts, thereafter was a lecturer in pathology at Sheffield University from 1969 – 1973. H was awarded the MRCPATH in 1972, his MD (London) in 1973 and FRCPath in 1984. From 1973 – 1983 he was senior lecturer in pathology at Sheffield University, and became Reader in Pathology 1983. Since 1983 he has held the post of Joseph Hunter Professor of Pathology, University of Sheffield. His main administrative duties have included being head of Histopathology Service, Royal Hallamshire Hospital and CSUH NHS Trust 1983–1994, thereafter head of Academic Unit of Pathology, Sheffield University Medical School 1983–2002

James Underwood has had a distinguished career in the field of diagnostic pathology and also in research. His main research interests have included Liver disease, with a longstanding interest in hepatitis C (formerly transfusion-associated non A / non B hepatitis), participating in the largest study of the morbidity of hepatitis C in haemophiliacs; this work is continuing. He has also researched extensively into and published widely on pathology and pathobiology of hepatitis C in asymptomatic blood donors detected by screening. He has participated in many clinical trials, most recently regarding methotrexate, and primary biliary cirrhosis, as well as a study of cytokine polymorphisms in

chronic inflammatory liver diseases. His other main interests have included breast pathology, particularly the role of steroid hormones and their receptors in the progression and behaviour of epithelial lesions of the breast. Early in 1980s, h was involved in seminal work evaluating and validating methods for steroid receptor determinations in tissues. More recently this work has extended to investigating the role of macrophages and hypoxia in angiogenesis in breast cancers, and mathematically modelling the biology of pre-invasive breast carcinoma. He has also carried out many scientific studies of the autopsy. These have involved investigations of the attitudes of the public, pathologists, and clinicians towards the clinical and scientific utility of the autopsy.

His contributions to diagnostic work and research have been paralleled by a deep interest in medical education and he has made substantial contributions to the MB,ChB and BDS curricula of the University of Sheffield. In addition he has been intimately involved with ethics and in particular the legal and ethical aspects of using human tissues and also regarding the retention of human tissues, at the highest levels in the United Kingdom under the auspices of the Royal College of Pathologists and the Department of Health. Under his leadership the Royal College of Pathologists has issued important guidelines in this respect.

The name of Underwood is known to most undergraduate students of Medicine, as he has edited and part written *General and Systematic Pathology*, now in a third edition a proscribed textbook at many Universities in the UK and South Africa, which has been very successful and appears to be the most popular undergraduate pathology textbook in British medical schools as well as enjoying a wide international readership with annual sales at around 10,000). The third edition has won first prizes in the

Royal Society of Medicine and Society of Authors Book Awards (2000) and in British Book Design & Production (2001).He has authored / edited 7 other books and sixteen book chapters and over 135 research articles. As president of the Royal College he has guided policy particularly rescuing the image of pathologists and medical professionals following the negative publicity after the Alder-Hay scandal. He has been awarded many prizes and honorary memberships, inter alii: Medical Research Council Clinical Research Fellowship 1973–74, Wellcome–Ramaciotti Research Fellowship 1981, Honorary Membership of Hungarian Society of Pathologists (elected 1997), Honorary Membership of Japanese Society of Pathologists (elected 1997), Honorary Fellow, Hong Kong College of Pathologists (elected 2001), Fellow, Royal College of Physicians of Ireland (from May 28 2004) Fellow, Royal College of Physicians (from 1 May 2004), Winner, Medical Book Awards 2000, Royal Society of Medicine (for third edition of *General and Systematic Pathology*), Winner (Academic Category), British Book Design & Production 2001 (for third edition of *General and Systematic Pathology*). He is on the editorial board of 6 journals and reviews for 14 other journals including the Lancet. He has been invited to give talks all around the globe, in diverse countries, including United Kingdom, Ireland, Canada, Australia, Holland, Greece, India, Ethiopia, Malaysia, Japan, USA, Hungary, Hong Kong, Sri Lanka, Kuwait, Oman, China and Bahrain.

James Underwood is a giant in the pathology world, who has made enormous contributions to the field of pathology, pathology training and medical education. He is well deserving of an Honorary Fellowship of the College of Pathologists (CMSA).

Author: Simon Nayler

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SEPTEMBER 2006

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LEVIN Andrew Ian	College of Anaesthetists
BLIGNAUT Charlmé	College of Public Health Medicine – Occupational Medicine
CARSTENS Sydney Ernest	College of Public Health Medicine – Occupational Medicine
SMITH Ferdinand Carl Albertus	College of Public Health Medicine – Occupational Medicine
POPIS Miroslawa	College of Obstetricians and Gynaecologists

Fellowship of the College of Anaesthetists of South Africa: FCA(SA)

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GRAY Rebecca Mary	UCT
KEMP Karmen	UCT
KESSOW Aneet Brijlal	UCT
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NATES Wayne Adam	WITS
PIENAAR Grant Louw	UCT
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PRETORIUS Daniel Johannes Hendrik	STELL
SINGH Dhinesh	UCT
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Fellowship of the College of Dermatologists of South Africa: FC Derm(SA)

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OMAR Mohamed Hanif	UCT
VAN ZYL Petrus Johannes Francois	UFS

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SHAHZAD Anjum	WITS
VERMAAK Ethenne Johan	STELL

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Fellowship of the College of Urologists of South Africa:

FC Urol(SA)

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ENGELBRECHT Matthys Johannes	UP
SINHA Sunil	UCT
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MCFP(SA)

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LAWAL Maruf Olatunji Mesinoye	UP
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OGUNDANA Gbenga Bola	UP
PLANT Christine Margaret	WITS
RAS Tasleem	UCT

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Cert Cardiology(SA) Paediatricians

NGWEZI Deliwe Precious	WITS
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Cert Child Psychiatry(SA)

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SCRIBANTE Lindi	UP

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Cert Clin Haem(SA) Physicians

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Cert Clin Haem(SA) Paediatricians

GOGA Yasmin	UKZN
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Cert Critical Care(SA) –Anaesthetics

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ROBERTSON Simon John	WITS

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Cert Critical Care(SA) Paediatricians

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Cert Developmental Paediatrics(SA)

RICHARDS Mark Thomas	UCT
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Certificate in Endocrinology & Metabolism of the College of Paediatricians of South Africa:

Cert Endo & Metabolism(SA) –Paediatricians

CARRIHILL Michelle Margaret	UCT
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Certificate in Endocrinology & Metabolism of the College of Physicians of South Africa:

Cert Endo & Metabolism(SA) Physicians

BACUS Hajira Bibi	UKZN
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Certificate in Gastroenterology of the College of Surgeons of South Africa:

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BALABYEKI Moses Aschenaz	WITS
SHAW John Michael	UCT

Certificate in Geriatrics of the College of Physicians of South Africa:

Cert Geriatrics

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LAMBIE Lindsay Ann	WITS
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Certificate in Medical Oncology of the College of Paediatricians of South Africa:

Cert Medical Oncology(SA) Paediatricians

DU PLESSIS Johannes Petrus	UFS
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DIPPENAAR Ricky	STELL
RHODA Natasha Raygaan	UCT

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Cert Nephrology(SA) –Physicians

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LUBBE Elisabeth	UP

Certificate in Paediatric Surgery of the College of Surgery of South Africa:

Cert Paed Surg(SA)

LOVELAND Jerome Alexander	WITS
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Certificate in Pulmonology of the College of Physicians of South Africa:

– Cert Pulmonology(SA)Physicians

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KHAN Mahomed Siddique	UKZN
KOEGELENBERG Coenraad	
Frederik Nicolaas	STELL
VAN ZYL-SMIT Richard Nellis	UCT

Certificate in Rheumatology of the College of Physicians of South Africa:

Cert Rheumatology(SA) Physicians

DU TOIT Riette	STELL
PARUK Farhanah	UKZN

Certificate in Vascular Surgery of the College of Surgeons of South Africa:

Cert Vascular Surgery(SA)

FORLEE Martin Vernon	UCT
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HIGHER DIPLOMAS

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H Dip Orth(SA)

KINYANJUI David Gitau

DIPLOMAS

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Dip Allerg(SA)

Shirani NAIDOO

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DOLO Khutso Friddah

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 GOUS Coert
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 RIKHOTSO Tshikani Norman
 SELATOLE Moshibudi Juliet
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 BOTHA Maresa
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 KOBESSE Babalwa
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 LEPUTU Sepalo Rose
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 MAGAGULA Thulisile Gladys
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 SCHLÜNZ Friedl
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 ARNOLD Mogamad Armien
 BALATSENG Joseph Onthatile

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 BOUWER François
 DELPORT Elsie Sophia
 FLOWEDAY Clare Louise
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 THAVER Aneshree Terrilla
 VAN WYK Erika Maria
 VAN ZYL Gideon
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 KIRSCH David Mendel
 KLEYENSTUBER Thomas
 LEE Clover-Ann Patricia
 LEE William George David
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 MONONYANE Kgopotso Rudolf
 NAIDOO Megandree
 NEJTHARDT Marcin Bartosz UCT
 NIKSCHAT Otto Franz Alfred
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 SCHÜLEIN Simone

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Part I of the Fellowship of the College of Dermatologists of South Africa:

FC Derm(SA) Part I

MATHEKGA Keneiloe Elsa

Part I of the Fellowship of the College of Forensic Pathologists of South Africa:

FC For Path(SA) Part I

HOLLAND Shakeera

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FCMFOS(SA) Intermediate

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FC Neurol(SA) Part I

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 PARUK Hoosain Faruk
 RAMKISSOON Karuna

Part I of the Fellowship of the College of Obstetricians & Gynaecologists of South Africa:

FCOG(SA) Part I

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 ANNOR Victor Agyekum
 BANDA CHIPUNGU Ennet
 BOSMAN Mathys Gerhardus
 CHIDAKWA Claitos
 CLOETE Marinus
 DIARRA Abdoulaye
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VAN GREUNEN Johannes Petrus
WOLDU Belete Gebremedhine

Part I of the Fellowship of the College of Ophthalmologists of South Africa:

FC Ophth(SA) Part I

BAWA Sachin
BOTH A André Frederik
CULLEN Claire
OJAGEER Rashika
VAN HELSDINGEN Nicolaas Tjaart
VAN ZYL Lourens Marthinus

Part I of the Fellowship of the College of Paediatricians of South Africa:

FC Paed(SA) Part I

BHOOLA Roopesh Nagin
BRICE Nicola Siân
CAMANOR Sia Wata
CULLIS Robyn Mary
DU BUISSON Christel Jacomien
HARDING Denise Chevonne
HOFFMAN Elizabeth
KAMWANA Dumisani George
MAGAQA Nokwazi Ethel
MAMD OO Fahmida
MARRAN Kerry Joan
MITCHELL Jennifer Gwen
MORRISON Julie Lyn
MURPHY Susan Margaret
NANDHLAL Jenisha
RABAN Moegammad Shukri
RAMDHAR Natasha Praveenlall
ROSE Penelope Cathryn
SEEDAT Yazeed Aboobaker
STRÖBELE Silvia
TAYOB Shafeeka Ismail
VAN DER SCHYFF Aziza

UKZN

Part I of the Fellowship of the College of Pathologists of South Africa – Anatomical:

FC Path(SA) Anat Part I

KHOSA Sally-Anne Rhulani
MALAKA Shumani Emmanuel
MUBAKO Takawira Veke
PATHER Sugeshnee
SMALBERGER Gert Jacobus
WALKER Christopher Louis

Part I of the Fellowship of the College of Pathologists of South Africa – Haematology:

FC Path(SA) Haem Part I

DHLAMINI Matshediso Bernice
GERDENER Theodor Johannes Adolph
MOODLEY Nivashini Pamela
VAN SCHALKWYK Willem Adendorff

Part I of the Fellowship of the College of Physicians of South Africa:

FCP(SA) Part I

ALLWOOD Brian William
BALTON Charlene Chandrika
BISRAM Rakesh Devanand
BOTH A Julia Dorothea
BURTON Rosemary Carol

UCT

DUBULA Thozama
HITZEROTH Jens
KATENGUA Motona
KAYE-EDDIE Grace Helga
KENYON Christopher Richard
KHALFEY Hoosain
KHAN Rahim
LAKHA Atul Baldev
MAHALA Bonginkosi
MANTHR Nerissa I
MBHELE Brian Sibusiso Blaikie
MORLEY Rachael Louise
NAMARIKA Dan Christopher
NTSHWANA Kgaogelo Rachel
RAJABALLY Muhammad Naayil
SUNDAS Amima
WADEE Ayesha
WASSERFALL Marius
WEARNE Nicola
WILDERVANCK Pieter Johannes

WITS

Part I of the Fellowship of the College of Psychiatrists of South Africa:

FC Psych(SA) Part I

MUDALY Niresha
Nomnandi NKOWANE
REID Eloise
STOLOFF Kevin Miles
SUKOOL Alishia Monica

Part I of the Fellowship of the College of Diagnostic Radiologists of South Africa:

FC Rad Diag(SA) Part I

BANDERKER Ebrahim
DAVIS Razaan
DU PLESSIS André Tertius
DURAND Miranda
GAJJAR Himal Hasmukhlal
GURA Siph Theophilus
HARTWIG Philip Conrad
KAMOLANE Thabo
MPHOMANE Stephen Mogami
PILLAY Kaveshni
RANCHOD Amaresh Indravadan
SCLANDERS Basil Andrew

Part I of the Fellowship of the College of Radiation Oncologists of South Africa:

FC Rad Onc(SA) Part I

NARINESINGH Dylan
RAMIAH Duvern

STELL

Primary Examination of the Fellowship of the College of Surgeons of South Africa:

FCS(SA) Primary

ADAM Ahmed
ADEWUNMI Abdus-Sami Adegoke
AHMED Nadiya
AKHUNDOV Kamil
BAKANE-TUOANE Palesa
BHAGALOO Delon
BRUCE John Lambert
CHITSUNGE Gerald Sheunesu
DE WET Jacques Bertram
DEONARAIN Rishan

DU SART yan Craig
 DU TOIT Johannes Marthinus
 DUZE James
 EBRAHIM Sumayyah
 FERREIRA Yolandi
 GELDENHUYS Agneta
 GOVENDER Keshnee
 GOVENDER Lubendran
 GREY Barend Christiaan
 HARRAN Nadine
 HARRISON Derek Stanley
 HUMAN Pieter Johannes
 JENNINGS Vicky Adele
 KAMEDIEN Mogammad Sauliegh
 KARCZ Marcin Krzysztof
 KARRAS Konstantinos Anastasios
 KELLY Adrian Graham
 KENT Mark Llewellyn
 LOMBAARD Johannes
 MALHERBE Gideon Francois
 MAREE Frans Engelbertus
 MARINGA Rhulani Knowledge
 MARNEWICK Jacques
 MONARENG Teboho Taalib
 MONZON-TORRES Barbaro Ignacio
 MOOLLA Muhammed
 MURRAY Richard David
 MURUGAN Nivashini
 NAIR Vimal Manmohan
 NDOFOR Brown Chwifeh
 NEL Philippus Jacobus
 NGQANDU Makhosonke Duke
 NIAZI Javed Iqbal Khan
 NYAMAREBVU Cameline Tinaani
 OCTOBER Nathan Alistair
 PADILHA João Filipe Somenson
 PATERSON Richard Wingate
 PILLAY Tharuneshan Ganas
 POTGIETER Dawid Jacobus
 REDDY hirusha
 REDDY Luren
 RYAN Paul Vincent
 SATHEKGA Mokgopo Cynthia
 SATHIRAM Ronisha
 SCOTT Devan
 SINGH Avesh
 SMIT Johannes Gysbertus Marthinus
 SMITS Cornelis Adrianus Gerardus
 STECK Heidi
 SULIMAN Mohamed Feroz
 SURRIDGE Daniel Johnathan David
 SWART Oostewalt
 TER HAAR Michiel
 TERREBLANCHE Owen Dale

VAN DER HORST Alexander
 VAN TONDER Riaan
 VAN WYK Pieter
 VAN ZYL Aletha Suphia
 VAN ZYL Hendrik Petrus
 VARELA Carlos Gomes
 VENTER Pieter Johannes Lodewikus
 VERMEULEN Lodewikus Petrus
 WICHT Jonathan Henri

Primary Examination incl Neuroanatomy of the Fellowship of the College of Surgeons of South Africa:

FCS(SA) Primary incl Neuroanatomy

MBILI Sizwe Malusi
 MURRAY Richard David
 SSENYONGA Peter Kato

Intermediate Examination of the Fellowship of the College of Surgeons of South Africa:

FCS(SA) Intermediate

BREWIS Anton Eben
 BROEZE Nadine
 DAVIDSON Murray Brian
 DU PLOOY Philippus Theunis
 EAGLES Per-Erik STELL
 ELOFF Edmund Phillipus
 GOWEN Michael John Andrew
 GRETSCHER Armin NATAL
 GRIEVE Andrew Duncan
 HAMILTON Auerilios Erastus Ricardo
 JACKS Gavin Rubin
 JONKER Izak de Villiers
 KEINEETSE Jeremiah
 MARAIS Pieter Jacobus Andries
 MOOLMAN Conray
 MORNA Martin Tangnaa
 NAIDOO Kessendhra NATAL
 NICHOLLS Michael Cecil NATAL
 PRETORIUS Philippus NATAL
 REDDY Darshan
 SCHAMM Markus Riaan
 SEGWAPA Leposha Frans
 SINGH O'Sharran Roy NATAL
 SMIT Shaun Garrick
 SURTEES Grant Michael NATAL
 VAN DER MERWE Hendrik Johannes
 VAN MOLENDORFF Vincent
 WALSH Michelle Marie Elise
 WOOD Bradley Ryan
 ZARRABAmir David I

Primary Examination of the Fellowship of the College of Urologists of South Africa:

FC Urol(SA) Primary

AIRE Odion Oseghae
 VAN DER MERWE Jacobus Johannes

MINUTES OF THE ANNUAL GENERAL MEETING HELD ON 20 October 2006

Fifty First Annual General Meeting of The Colleges of Medicine of South Africa (CMSA) held at 10:30 on Friday 20 October 2006 in the Board Room, George du Toit Administration Building, University of the Free State, Nelson Mandela Drive, Bloemfontein

PRESENT:

Prof E L Mazwai	(President) in the Chair
Prof A A Stulting	(Senior Vice President)
Prof Z M van der Spuy	(Vice President)
Dr L J Ramages	(Acting Honorary Treasurer)
Prof A Madaree	(Honorary Registrar Education Committee)
Dr J Vellema	(Honorary Registrar Examinations and Credentials Committee) (Editor Transactions)
Prof G A Ogunbanjo	
Prof P L A Bill	
Dr M H Kabaale	
Prof A J Claassen	
Prof R E Kirsch (IPP)	
Dr W A M Clewlow	
Dr W G J Kloeck	
Prof M J Coetzee	
Prof T E Madiba	
Prof B Donde	
Prof S Naidoo	
Prof B V Girdler-Brown	
Prof A L Peters	
Prof L Goedhals	
Prof J M Pettifor	
Prof T S Gugushe	
Mr A Reddi	
Prof C F Heyns	
Dr P M Saffy	
Dr G S F Heyns	
Prof H Saloojee	
Prof K R L Huddle	
Prof A M Segone	
Dr A C Hurribunce	

BY INVITATION:

Dr G S Harris	(SARA representative)
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APOLOGIES:

Prof G J Vlok	(Chairman F & G P Committee)
Prof J F Lownie	(Chairman E & C Committee)
Prof J V Robbs	(Chairman Education Committee)
Prof T Zabow	(Honorary Treasurer)
Prof P de la M Hall	
Mr I Kathrada	
Prof M A Lownie	
Prof C Prys-Roberts	

SECRETARY:

Mrs Bernise Bothma (Chief Executive Officer)

IN ATTENDANCE:

Mrs Ann Vorster	(Academic Registrar)
Mrs Jane Savage	(Minute Secretary)
Miss Patricia Bredenkamp	(Administrative Secretary)

WELCOME:

The Chairman welcomed all and declared the meeting suitably constituted to conduct the business at it appeared on the agenda.

1. Registration of proxies

The Secretary duly registered 78 proxies.

2. Minutes of the Forty-ninth Annual General Meeting held on 15 October 2004

The minutes were ADOPTED and signed.

3. Matters of urgency

None.

4. Matters arising from the minutes of the last Annual General Meeting

None.

5. Annual report of the senate of the CMSA for the period June 2005 to May 2006**ADOPTED:**

The Annual Report of Senate as published on page 25 in the Transactions for July – December 2006.

ACCLAMATION**6. Financial report of the honorary treasurer**

In the absence of Prof Tuviah Zabow, Dr Les Ramages reported as follows:

“On page 7 of the Annual Financial Statements the assets and liabilities are shown, i.e. what we have, where we have it, who owes us what and to whom do we owe what. The non-current assets are monies tied up either in bricks and mortar or in banking instruments with a long lead time before the fund can be cashed in. If you look at the statements you have property, plant and equipment with Note 5 which explains where the money is. So the R27 847 703 is not the value when we bought the buildings. We bought the property at cost and over the years it appreciated in value, so part of that money is a promise or a non-distributable

reserve. Looking at Note 10 on page 18 you will see the non-distributable reserve of R23 926 612.

Note 6 on page 17 refers to Investments totalling R1.4 million which is essentially money kept in fixed deposits (not readily available). Note 7 refers to Investment of Trust Funds under Administration, viz. R3.591 million. We hold this money, but it does not really belong to us, it belongs to a Trust so it's a liability. The same figure appears under Note 11. Many people ask "who does the money belong to"? Well, there's the K M Browse Scholarship (R157 000), the Phyllis Knocker/Bradlow Award (R255 000), J C Coetzee Lectureship (R2 million), Jacobson Annual Lectureship (R75 000), Arthur Landau Lectureship (R29 000), Margaret Orford Lectureship (R17 000), Medals (R415 000), Robert McDonald Visits (R64 000), Sir Arthur Sims Professorship (R337 000), Sonia Machanick Professorship (R94 000), K M Seedat Lectureship (R83 000) and M S Bell Scholarship (R28 000). So that is part of our assets, but it falls under liabilities for the same amount. Then we hold in trust R124 000 that the Colleges of Medicine Foundation has for us.

Current Assets are monies that we can put our hands on immediately either a bank balance or on a call account or in a money market account, or money that we can collect from people who owe us money. These are Medals and Saleable Inventory (R231 000), Accounts Receivable (R982 000) and Note 9 which you will see on page 17 will tell you who owes us that money and how much each one owes. Cash at bank and on deposit amount to R6.344 million.

Monies that we hold in trust or monies that we owe can be found under Funds and Liabilities and you have the notes that correspond with the respective amounts. Under this heading there is an item "Accounts Payable" with an amount of R1,5 million. The details of this amount appear under Note 13 on page 19. Sundry Payables are people we owe money to on a month to month basis. Special grants total R508 000, accrual for audit fees R77 000 and provision for leave pay R118 000. These are liabilities that the organisation has.

This is the Balance Sheet telling us what money we have, where it is lying, who we owe money to and who owes us money.

The other interesting sheet is the Income Statement which is how we earned and how we spent. We get our income from 6 sources, the first being subscriptions, i.e. membership fees, totalling R3.123 million and then there are registration fees from new members amounting to R399 000. We then have income from Interests and dividends, returns from invested money (R413 000) and you will notice the breakdown given.

An explanation for Sundry Revenue is given on page 19, Note 14 which amounts to R181 000. I will talk specifically on the examination surplus of R1.65 million on page 20, but would like to note with appreciation the donation of R1 000 from Dr Anvir Adam who is a life member.

So our surplus for the year is R2.162 million and of that surplus there was an examination surplus of R1.65 million. On page 20 of the Annual Financial Statements it explains to us how this comes about. You will notice that it says that the fees collected was R6.97 million and expenses were R5.319 million, the latter being made up of direct and

indirect expenses. Direct expenses include having to fly examiners around the country and accommodate them and provide transport, etc.

The CMSA exists primarily to do examinations and quality control of standard of academia in medicine and for that we have three offices, one in Johannesburg, one in Durban and one in Cape Town. The running of these offices, involves administrative expenses and a various proportion of each offices' administrative expenses get accounted for as examination expenses. 40% of the Cape Town administrative expenses get booked out as expenses towards examinations, Durban 80% and Johannesburg 100%. The administrative amount that appears in the Annual Financial Statement is the accrued amount for all three offices. On page 21 under Administrative you will find the expenses such as audit fees, depreciation, general overheads, property and salary expenses totalling R6.56 million. Of this amount R3.897 million is booked to examination expenses and the balance of that amount which is R2.662 million is called Administrative Expenses and goes to the General Statement.

Why do we have such a huge examination surplus? Well, our financial year ends on 31 May of each year and when we prepare a budget we essentially have to do it two years in advance and predict how many candidates we are going to have two years in advance. You probably heard yesterday that Prof Ken Huddle made mention of the fact that you can have one candidate for an examination, but you would have to fly three examiners from across the country, you have to send those scripts by courier to the examiners to mark. If you have to put all those expenses to the one candidate, it would be impossible for him to pay that kind of fee to write an examination. So therefore there is cross-subsidisation across all the various examinations. As we can more or less work out what the expenses are going to be, for this particular year we said that expenses would be in the region of R5.7 million and then in order to cover that amount, we had to decide how many candidates we propose we should have. We then looked at the historical data of how many wrote over the last couple of years and tried to get some idea of how many people would be writing and we came to the conclusion that for that year there would be 1 679 candidates. To find out how much the fee should be you then take the expenses and divide it by the proposed number of candidates and you end up with a figure of R3 400 which is the mean as some are going to be more expensive and some cheaper. What however happened in this particular year was that we had an unprecedented number of candidates. In fact the actual number was 2 053 - approximately 300 more than what we anticipated. So you can see that we had a huge income of (R6.9 million), our expenses which we worked out at R5.7 million came in at R5.3 million and that gave you the surplus of R1.6 million. Now because this is historical we decided that we would keep the examination fee unchanged and there would be no increment in the fee. Unfortunately we could not do the same for the members, we increased their fees which you will see in Transactions page 2.

Before concluding, I just want to refer to one further item in the breakdown of the income and expenditure, i.e. the audit fee on page 21. You will notice in the block there is the current year which was R60 000 and the line below gives an under provision of R3 008. That amount was part of the previous year's fee which was actually R63 008. The current year's fee is R77 178 which equates to an increment of R14

170 i.e. 22.48%. The auditors know the scope of the work and therefore to increase their fees by 22% is iniquitous bearing in mind that our inflation rate is running in single digit figures, but they would want to blame Enron for this debacle and so they have to increase their fees. So when it comes to re-electing the auditors we must make it subjective to realistic fees.

This concludes my report.”

ACCLAMATION

Prof Bill asked whether information on the CMSA's Investments were available, i.e. the amounts and where they were placed.

Dr Ramages explained that some of the money was in investments in current accounts which was available on call. Some money was in fixed deposits which was not available on call. The decision as to where the money was placed was in the hands of the Honorary Treasurer with excellent advice being received from the lay Trustees of The Colleges of Medicine Foundation and financial advisers. The allocation of the funds were as follows: *General Investments* - R611 000 with Absa Bank, R63 000 with Nedbank Corporate, R568 000 with Nedbank giving a total of R1.2 million. *Life membership Investment* - R94, 000 with Absa Bank, R33 000 with Nedbank Corporate and R11 000 with Investec. *K M Browse Scholarship* - R5 400 with Nedbank Corporate and R122 000 with Investec. The *Phyllis Knocker/Bradlow Award* - R87 000 with Absa Bank, R56 000 with Nedbank Corporate and R140 000 with Investec. *J C Coetzee Trust* - R318 000 with Absa, R769 000 with Nedbank, R1.1 million with Investec. *Arthur Landau Lectureship* R19 000 with Absa Bank, R7 000 with Nedbank Corporate and R1 000 with Investec, etc. Absa Bank totalled R1.3 million, Nedbank Corporate R1.1 million, Investec R2 million giving a total of R4.5 million. The 32 day and 90 day investments were as follows: R900 000 with Nedbank Corporate, R1 million with FNB, R1.5 million with Nedbank and R3.2 million with Investec.

Dr Hurribunce believed firstly, that the CMSA should be convinced that the complexities of its activities did not cause additional work on the side of the auditors and secondly, any new activities that might impact on the financials. The auditors were also subject to the volatile markets in terms of costs to them resulting in certain increases being out of the auditors control. He recommended that Dr Ramages be commended on the most meticulous and insightful way he conducted this section of the meeting as most present were lay members as far as the financials were concerned.

ACCLAMATION

7. Report of the President : Prof E L Mazwai

The President reported as follows:

The report is based on activities which are by and large reported in Transactions as functions of the three offices in Cape Town, Johannesburg and Durban so I went go into detail on that. The important thing for me is to say that as President, I have been very impressed by the way the Committees and Centres have discharged their duties in sustaining the activities of the CMSA and maintaining the expected high level of efficiency right through my period as President, particularly in the last year.

The major content of my report appears under the President's Newsletter (page 5) in Transactions, which covers the period from October last year to date. The report looks brief but is actually only a summary and highlights of the activities during that period which includes the Golden Jubilee Symposium, benefits to members, Discovery Foundation projects, the Africa Development Initiative and issues on our core function, i.e. the National Equivalence Examination (NEE).

I believe that in terms of our internal relations, we have made major strides with a more formal relationship with the Department of Health. Most of the activities are "work in progress" and senators were updated yesterday on some of the activities that were taking place. Most of these have been transformational and in the ten years much of the transformation took place at the level of Senate and constituent College Councils. I think that as we move forward the junction will be to transform, not only at the top level, but at grass root level. I would therefore reiterate my request that the Colleges should bring in younger people, more women and more Blacks to reflect the demographics of the country. Of course this would not be mere tokenism but people who are deserving.

The third part of my report is to cover the aspects which are not in Transactions, i.e. the international visits which took place mainly between August and October. Very briefly, I had three visits, one to the Academy of Medicine in Malaysia. At that meeting I was elected to Honorary Fellowship. The scientific meeting's theme was on Public Medicine and Medico-Legal Issues which gives the flavour of some of the problems that they have in the areas of South East Asia. This was a joint meeting between Malaysia and Singapore.

The Second meeting that I attended was at the Royal College of Physicians and Surgeons of Canada which took place between 28 – 30 September 2006. I was also honoured with an Honorary Fellowship of the this College. The theme of that Congress was Leadership in Medicine, again looking at what sort of qualities, what sort of responsibilities professionals have both within and outside their profession. This was followed by what we call an international round table where the Presidents of the various Colleges meet for informal discussion. The theme was Certification, Continuing Professional Development, particularly the impact it had on the issues of HR development and migration of professionals (brain drain), the latter being high on the agenda.

The last meeting I attended was at the Academy of Medicine in Hong Kong which took place from 10 – 13 October 2005. This was a joint meeting between the Royal College of Surgeons of Edinburgh and the College of Surgeons of Hong Kong and was in fact the final stage of the centennial celebrations of the Royal College of Surgeons of Edinburgh. An IACAP (International Association of College and Academy Presidents) meeting was held as a follow-up to the meeting in Cape Town. These meetings are held every two years and the agenda for this meeting concentrated on the issues of CPD, Certification and Recertification, the issue of specialisation and sub-specialisation. The important aspect of this meeting was the feeling that IACAP was merely debating issues and it was therefore decided that in order for IACAP to become more involved at an international level, position papers would be formulated, particularly on the issue of HR Development and submitted to the WHO. A small task team was established (of which I am a member).

The other meetings that I could not attend were those of the Ceylon College of Physicians and the American College of

Surgeons. The policy has been that when these invitations are received, they are referred to the individual Colleges if the CMSA President is unable to attend, but I believe because of date clashes, even the constituent College Presidents were not able to attend these particular meetings. Future meetings that will arise in pursuit of the Federation of Colleges in Africa is a meeting of the Colleges of Surgeons of East Central and Southern Africa in Malawi in November and the West African Colleges of Surgeons in Senegal in 2007.

Ladies and gentlemen that concludes my report to the AGM. Thank you."

ACCLAMATION

8. Report of the chairman of the examinations and credentials committee : Prof J F Lownie

Dr Jeanine Vellema reported on behalf of the Chairman as follows:

I notice that most of the people present today were present during the Senate meeting yesterday, so this report will briefly summarise the examination-related issues that arose during yesterday's Senate discussions. One of the issues brought up by the College of Radiologists, related to the elevation of their examination standards by possibly raising their final pass mark to 60%. However, they reported that during discussions at their Council meeting (which was held during this examination week), they agreed upon an alternative solution, namely that an adjustment to the weighting of their examination components, should resolve their examination standards-related problems.

In terms of competencies, Dr Hurribunce will be sending out a document which should become a living document. He is asking for input from Senators on this document as it is felt that it will benefit all tremendously.

We briefly discussed the reciprocity issue between the CMSA and the East and West African Colleges and it was decided that reciprocity would be established on an ad hoc basis by the individual Colleges.

It was unanimously accepted that the name of the Certificate examination would in future be referred to as a Specialty Certificate examination.

The other issue that was clarified very well by Prof Gerhard Lindeque arose out of discussion of the NEE issue. It became apparent that the HPCSA was driving the matter and was ultimately looking at a three component examination for candidates to be registered as specialists: the first being a certificate examination from a university (which would represent the formative continuous assessment profile of the candidate), the second being a research component, (which could include a research course, project or equivalent), and the third being a professional competency examination, which we have always referred to as an exit examination. It appeared that the CMSA would be best suited and had everything in place to be vying for the professional competency exit examination. It was also mentioned that the Department of Education would ultimately be defining the research component referred to by the HPCSA".

Dr Vellema thanked Mrs Vorster and her team for all their hard work in the CMSA examinations office.

REPORT ADOPTED WITH ACCLAMATION

9. Report of the Chairman of the Education Committee : Prof J V Robbs

Prof Madaree reported on behalf of the Chairman as follows:

Prof Robbs asked me to express his appreciation to the constituent Colleges for the funding of eponymous lectures where the funds were virtually depleted. This has resulted in the CMSA being able to appoint lecturers for three of the lectureships in 2007.

The Committee is most grateful for the excellent cooperation from the constituent Colleges with regard to regulation updates and we are in the final stages of producing a living document. The plea is being made to include research ethics into the curriculum and to examine on this.

The Medico-Legal Symposia we have in Durban is continuing. We have had three so far this year with a fourth one to come. These are very well attended and very valuable.

The Newsletter has not been as successful as we had hoped, the major problem being a lack of input from the constituent Colleges and other bodies. So the plea is that we submit articles for this Newsletter. The suggestions were made for Faculties of Health Sciences to submit all their postgraduate programmes, which could appear on the CMSA website and secondly for the constituent Colleges to submit postgraduate courses. Thirdly, it was suggested that a flyer be included with the annual subscription accounts to draw the attention of members to the existence of the monthly Newsletter.

The first draft of the information booklet tabled at the Senate meeting yesterday, will be amended. This will be a useful booklet to hand to graduates at the admission ceremonies.

A combined meeting of the Examinations and Credentials and Education Committees would be held to discuss the logbooks and we are hoping to have a symposium in Durban in April 2007 on the portfolios to try to implement guidelines at all College levels.

Developments with regard to the purchasing of additional properties in Durban is on the move and we will be submitting a proposal to the next Executive Committee meeting in February 2007.

The proposals for the Registrar contracts are under consideration by HPCSA.

In conclusion, we wish to thank Anita Walker and Antoinette Conning for their assistance in the office".

REPORT ACCEPTED WITH ACCLAIM

10. Report of the Editor of Transactions: Prof G Ogunbanjo

Prof Ogunbanjo reported as follows:

At the last AGM, Dr Hurribunce suggested the utilisation of the blank pages and as you will see in this current issue we

have tried to make use of these by way of advertisements. The pharmaceutical companies are very tight on advertisements, but I am pleased to report that for 2007 we have been able to secure advertising. The costs after commission are not much, but will enable us to save approximately R10 000 per issue.

On page 22 of the Annual Financial Report you would see what looks like a jump from R224 000 to R280 000 in terms of the publishing costs. To account for this we had to move from 48 pages to 64 pages for the journal and the circulation increased from 7 000 to 8 300. There was also the increased postal costs. However, the publishers have given the assurance that production costs will be kept down.

Finally, the last point I wish to mention is the CMSA website. Once this is up and running all the issues of Transactions that I started will be put on as archives and as pdf files. We will continue to have hard copies of the Journal”

REPORT RECEIVED WITH APPRECIATION

11. Annual appointment of Auditors

AGREED:

That, after having taken due regard of the recommendation arising from the report of the Honorary Treasurer as presented by Dr Ramages and the cautionary statements made by Dr Hurribunce, Deloitte & Touche be reappointed as the CMSA Auditors for the ensuing year.

12. Correspondence

The President raised a suggestion from the CEO to move the AGM to the Wednesday afternoon.

AGREED:

That the Foundation meeting be held at 16:30 on the Wednesday, followed by the AGM at 17:30 (in October) and then the President’s Dinner at 19:30 for 20:00.

13. CONCLUSION

Prof Stulting thanked all for their attendance of the meetings in Bloemfontein (the City of Roses).

Dr Hurribunce, on behalf of the Senate, the three standing committees and the staff, extended a vote of appreciation and confidence in the exemplary manner in which the President, Prof Mazwai, led the CMSA during his term of office. There was still work to be done by the President, but Dr Hurribunce further attested that ever since Prof Mazwai took office, the personable manner in which he executed his responsibility, the metaphoric way in which he demonstrated his likings and the pragmatic way in which he ran the meetings, made it more than just a joy to be part of the Senate - it was also a learning experience.

Dr Hurribunce continued: “When I came in 1996 to speak to the College on transformation, I met the leadership of this organisation. When I now look back on the paper that I presented, which appeared in Transactions, I can tick all of the issues that I indicated that should be attended to if this College and Senate was serious about transformation. I wish to underscore that it was through your leadership, together with that which you gleaned and extracted from those around you, that we have achieved so much. Lastly Mr President, the quality of discussion at Senate has grown through your leadership and on behalf of all of us I wish to thank you from the bottom of our hearts.”

ACCLAMATION

President’s response:

Before I close the meeting I wish to state that I am humbled by your comments and it would be ungracious of me not to respond. All the things that I have done during my tenure of office was inspired by the College itself. I have received amazing support from everyone and am happy that I have met your expectations. The CMSA has become to me like family and I appreciate all the support I have received from everyone.”

ACCLAMATION

With there being no further matters for discussion, the Chairman called the meeting to a close at 12:05.

Rondebosch
25 January 2007

HORMONE THERAPY: TARGETS BEYOND THE OBVIOUS

Guidozzi F, FRCOG, FCOG(SA)
Academic Head and Chief Specialist
Johannesburg Hospital
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Introduction

In August 2005 I had the honour and privilege of presenting the JC Coetzee Lecture for the CMSA. This took place in Umtata and the lecture was entitled "HORMONE THERAPY: TARGETS BEYOND THE OBVIOUS". This is a brief resume of the presentation.

Hormone therapy, either as estrogen alone, or as estrogen and progestogen, has been used for decades by millions of women world-wide for relief of menopausal symptoms. These primarily will be hot flushes, night sweats, insomnia, mood swings, vaginal dryness, vaginal burning, painful intercourse, urinary frequency, urinary incontinence and nocturia. Long term use has been advocated for the prevention of osteoporosis, and based on previously published observational study evidence, was considered to be potentially beneficial for the primary prevention of heart disease, Alzheimer's disease and colorectal cancer.

Hormone Replacement Therapy

The year - 2002 proved to be the "annus horribilis" for HRT. The impact of various reports from the Women's Health Initiative (WHI) and the Million Women Study (MWS) had a major negative effect on doctors prescribing hormone therapy (HT) and at the same time on postmenopausal women being prepared to continue taking their medication. In the USA, and in some European countries, use of hormone therapy decreased by around 40%. Much of this was due to the resulting media frenzy of negative publicity and in particular, the emphasis on the relative increase in risk of breast cancer, which presented a more alarming impression than the real figures of absolute risk. This trend has however, slowly reversed and absolute usage of HT since late 2005 has started increasing again.

The WHI was a randomized placebo controlled trial that examined the effects of estrogen plus progestogen and estrogen only on various health benefits and risks in postmenopausal women vary-

ing in age from 50 – 79yrs, with a mean age of 63yrs. The trial was designed to last 8.5 years, but the estrogen plus progestogen arm was stopped in 2002 after 5.2 years, because the National Heart, Lung and Blood Institute of the U.S. National Institute of Health accepted the study's Data and Safety Monitoring Board (DSMB) evaluation that the risk for breast cancer was increased excessively. There was also an associated increased risk for coronary heart disease, venous thromboembolic disease, stroke and at the same time a decreased risk for hip fractures, colorectal and endometrial cancer.

The DSMB used a "global index" to weigh the observed risks and benefits to the health of the participants. According to their analysis, by February 2002, the overall measure suggested that the treatment was causing more harm than good (global index 1.15, CI 1.03 – 1.28), although mortality was not increased. (HR 0.98; CI 0.82 – 1.18). Table 1 shows the WHI outcome measures for the combined estrogen and progestogen arm.

About 21 months later, on 03.03.04, the National Heart, Lung and Blood Institute of U.S. National Institutes of Health cancelled the estrogen only arm of the WHI. The patients had completed an average of almost 7 years of follow up and date of closure was approximately 8 months earlier than the intended termination date. The DSMB was not unanimous in their decision; some wanted to stop the study, whilst others wanted the study to continue after sending a letter to the participants describing the findings. The study was stopped because the conjugated equine estrogen increased the risk of stroke similar to the estrogen-progestogen preparation, although it did not affect the risk of coronary heart disease and did not increase the risk of breast cancer. It also decreased the risk of hip fractures and there was a trend towards an increased risk of probable dementia and or of mild cognitive impairment.

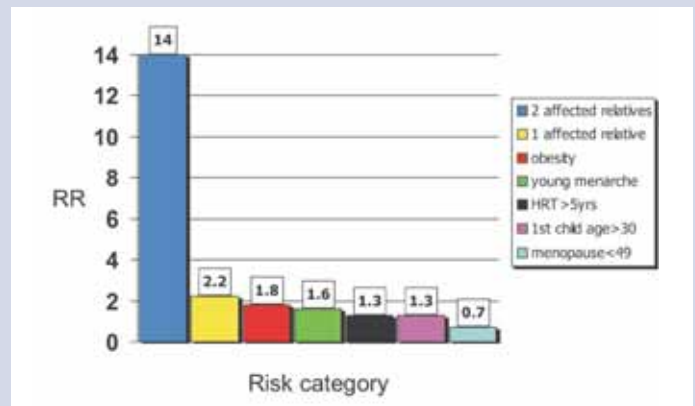
Table 1: WHI Outcome measure

WHI OUTCOME MEASURES (CEE/MPA)				
Outcome	Hazard ratio (95% CI)	Relative Risk (%)	Absolute Risk (%)	Number/ 10 000
CHD	1.29 (0.85-1.92)	+29	+0.07	7
Breast Cancer	1.26 (0.83-1.92)	+26	+0.08	8
VTE	2.11 (1.26-3.55)	+111	+0.18	18
Stroke	1.41 (0.86-2.31)	+41	+0.8	8
Endometrial cancer	0.83 (0.29-2.32)	-17	-0.01	1
Colorectal cancer	0.63 (0.32-1.24)	-37	-0.06	6
Hip fracture	0.66 (0.33-1.33)	-34	-0.05	5

Extra cases of Breast Cancer based on Risk Factor

Risk Factor	Breast Cancers diagnosed over the 20 year from ages 50 to 70	Extra Breast Cancers
Never used HRT	45/1000	-
>5 years' HRT use	47/1000	2/1000
>10 years' HRT use	51/1000	6/1000
>15 years' HRT use	57/1000	12/1000
Late menopause (age 60)	59/1000	14/1000
Alcohol (2 drinks/day)	72/1000	27/1000
No daily exercise	72/1000	27/1000
Weight gain (>20 kg)	90/1000	45/1000

Fig 1: Relative Risk of Breast Cancer



The WHI was a study of astronomical proportion, both in size and cost, with a most meaningful and noble intention: to determine whether hormone therapy, in the form of 0.625mg conjugated equine estrogen plus 5mg medroxyprogesterone or 0.625mg conjugated equine estrogen alone, provided primary prevention of heart disease and hip fractures, and at the same time to identify any associated risk for breast and colonic cancer and development of other risk factors. No study of the size and scope of the WHI will be free of criticism, but it was the astonishing response by the media which led to further confusion and panic among the menopausal women and their medical attendants. The results were rapidly amplified by the world's media and in many cases reported out of clinical perspective. Absolute risks, rather than relative risks, and details pertaining to the limitations of the WHI were not presented.

The WHI did not evaluate the impact of hormone therapy as a primary preventative agent on cardiovascular disease in a young healthy postmenopausal population that we encounter in our clinical practices. In the WHI, 66% of the women were older than 60yrs and 21% older than 70 yrs; two thirds of these were first-time users of hormone therapy; 1.7% had a previous history of myocardial infarction, 0.8% stroke, 1.3% coronary artery bypass graft or percutaneous coronary revascularization, 2.8% transient ischaemic attacks, 4.4% diabetes, 31% were obese, 36% were hypertensive, 12.7% had hypercholesterolaemia, 6.9% were on statins and 19% on aspirin. Despite the claims that have appeared in the media, the risks of cardiac disease and breast cancer in postmenopausal women taking hormone therapy in the WHI were not statistically significant when compared to those taking placebo. In fact, in the subgroup analysis, it was only in the women who were 20 or more years distant from menopause that had a statistically significant increased risk of coronary heart disease. Manson et al reported that the greater risk for coronary heart disease in the CEE/MPA arm was associated with initiation of therapy at longer intervals since menopause, RR = 0.89 for <10 years, RR = 1.22 for 10-19 years, RR = 1.71 for >20 years. In the unopposed arms of the study, the RR was 0.56 when initiation of hormones was at age 50-59 years, 0.92 if initiated at 60-69years and 1.04 if at age 70-79yrs. Subtracting this group of participants from the rest, revealed coronary heart disease to have identical prevalence in the remaining subgroups comparing treated and placebo groups. It is therefore inappropriate to deduct or state that hormone therapy will increase the risk of coronary heart disease in all postmenopausal women. The data supports that it is the specific older women who are at risk and it reflects that time of initiating HT may be crucial to long term outcome. A power analysis of the WHI furthermore showed that it was 10-fold underpowered to detect the early estrogen cardioprotective effect of the magnitude reported in the observational Nurses Health Study.

The WHI provides data pertaining to breast cancer risk that is no more alarming than the previously published observational studies, case controlled studies and even prospectively randomized trials. These all showed a relatively small and borderline statistically significant increase in the occurrence of breast cancer in postmenopausal women using HT for 5 years or longer. The

relative risk has usually been about 1.2 – 1.3, similar to that found in the WHI. In all these studies there has not been an increase of pre-invasive disease, with evidence to support that estrogen most likely acts as a promoter of breast cancer and unlikely as an initiator of the cancer. Support for the hypothesis that the progestogen is significant in the development of breast cancer comes from the estrogen only arm of the WHI. Invasive breast cancer in this arm was decreased (RR 0.77 CI 0.59-1.01) which was not statistically significant. The Canadian Obstetrical and Gynaecological Society have listed the extra cases of breast cancer associated with various risk factors and is shown in Table 2. Interestingly, based on epidemiologic studies, the relationship between HT and breast cancer is weaker than other modifiable risks such as obesity and alcohol intake. Figure 1 provides even further comparison when taking risk factors for breast cancer into account.

The findings of the Million Women Study have been interpreted by some as providing final and definitive evidence that hormone therapy increases the risk of breast cancer. In the U.K all women aged 50-64 years are invited to undergo screening mammographies at 3 year intervals. From May 1996 to March 2001, the Million Women Study sent letters of invitation and questionnaires to all women scheduled for routine mammography. A total of 1,084,110 women were recruited and followed for invasive breast cancer incidence and mortality in NHS Central Registries. The main analyses were confined to past and present HT use, as recorded at the time of recruitment (baseline) among 828,923 postmenopausal women. This study claimed that in current users at recruitment, the relative risk for development of breast cancer for estrogen only, for estrogen and progestogen and for Tibolone was 1.3, 2.00 and 1.45 respectively – all associations were statistically significant. Astonishingly, this study also claimed that compared to women who were never users of HT, those last exposed more than 1 year earlier had no increased risk for breast cancer, even when it had lasted 10 or more years i.e. all effect on breast cancer risk was lost within one year of cessation of usage. The MWS was a study based purely on recall and provided results that were confusing. The RR for estrogen only and for estrogen and progestogen, although marginally higher than other studies, were still plausible. It was the claim that HT lost all its impact on breast cancer risk after stopping it for year (RR 1.03, CI 0.92 – 1.12) and that Tibolone increased the risk (RR 1.45) of breast cancer which were surprising, contradictory and highly unlikely. These perceptions had never been supported or suggested in any previously published study. The MWS estimated that after 10yrs there are 5 additional cases of breast cancer per 1 000 women in estrogen only users and 19 additional cases per 1 000 women in estrogen progestogen users. This study has been widely criticized and challenged.

At present, World Bank data show that life expectancy of the world's population is 66.5 years. The population of women over the age of 65 years has been increasing and is expected to double over the next decade. Most women will live approximately one-third of their life span after the menopause. Interestingly men don't

live as long as women. Women live on average 8 years longer than men, but women will have higher rates of illness, experience more days of disability and seek healthcare more frequently than men. In 1900, older men outnumbered women by 102 to 100, but in the 1980's, there were only 68 men for every 100 women over 65yrs and by the age of 85yrs, only 45 men are alive for every 100 women. By 2050 it is estimated that life expectancy for women will be 87yrs and that for men 81yrs. The overall objectives for preventive measures and health promotion in elderly women are to prevent premature mortality and to maintain adequate physical, sexual and mental function. The menopause related diseases that will provide society with its greatest costs, both direct and indirect (hospitalization, rehabilitation, outpatient care) and indirect (i.e. invalidity, permanent disability, death) will be cardiovascular disease, osteoporosis, psychosomatic disorders (including Alzheimer's disease) and urinary incontinence.

Estrogen therapy has no equal for the treatment of acute menopausal symptoms mentioned previously. The positive effects on bone mineral density and its ability to decrease osteoporotic fractures are overwhelmingly clear.

What then, are the targets beyond the obvious for estrogen therapy?

Women's sexual activity, unlike that of men, has been shown to decline with age, especially after 50yrs of age. Whereas about 50% of 45-59yr old women report being sexually active at least once a week, this number falls to 24% for 60-74yr old women and to less than 7% for women 75yrs old or older. Approximately, 40% of 55-59yrs old women in one study said they had not been sexually active in the last year, compared to about only 12% of the women aged 18-24yrs. In this study the most commonly reported sexual problem was lack of interest in sex in 35% of women, followed by inability to achieve an orgasm, not finding sex pleasurable, having trouble lubricating and experiencing pain during sex. In another study of 46-62yr old women, reasons for lack of a regular sex life included, in order of sequence, absence of a partner, loss of sexual desire, and partner's loss of sexual desire. Many factors, including biologic, intrapsychic, interpersonal, contextual and cultural contribute to women's sexual desire and arousal difficulties. Whether or not a woman has a sexual partner is highly associated with her attitudes towards sexual activity following the menopause. In a study of women ≥ 45 yrs, 50% with a partner said that sexual activity is important to quality of life, whereas only about 10% of women without a partner said so. Lower estrogen levels have been associated with an increased prevalence of symptoms of discomfort during sexual activity. Over 40% of women with estradiol levels < 50 pg/ml will have vaginal dryness, dyspareunia and pain with penetration, compared to 5-10% or less in women with higher estradiol levels. About 40% of women who are 3 years beyond their menopause will complain of vaginal dryness, painful intercourse and a large number of these women will ultimately fear or avoid intercourse because of the pain. Changes in gonadal hormones, including androgen levels, will have an impact on sensory function, sexual drive or libido, central and peripheral nerve transmission, peripheral blood flow and the capacity to develop muscle tension. Ovarian steroids have an impact on nerve cell growth, proliferation, transmission time and rate of discharge along nerve fibres. Touch receptors along the pudendal nerve distribution path of the rat have been shown to become smaller after oophorectomy and expand with the administration of estrogens. Estrogens will enhance vibration sense, taste and smell. In a study of 79 menopausal women, 45% reported less sexual arousal, 50% said arousal levels were the same and only 5% said their levels of arousal had increased after menopause. The Australian Longitudinal Study of women experiencing natural menopause observed that it is not age, but the reduction in circulating estradiol and resulting genito-urinary atrophy that is associated with a decline in sexual function. Women who undergo induced menopause seem to be far more aware of these symptoms compared with women who experience the slower hormonal changes that occur during natural menopausal transition. The induced loss of ovarian function is typically accom-

panied by a 50% or greater loss of circulating testosterone which may result in the androgen insufficiency syndrome. Desire and arousal phase function may be further compromised by medications or routes of hormonal admission that increase sex hormone binding globulin levels. Symptoms pertaining to genital atrophy can be addressed by using topical, oral or transdermal estrogen therapy, which, in general, produce excellent results. More and more data is becoming available to support a role for androgen administration to improve desire, enjoyment and ability to attain orgasm in postmenopausal women. This option will however only work in a woman on appropriate concurrent estrogen therapy.

Sex hormones have long been thought to play some role in the predisposition to osteoarthritis in women. Osteoarthritis rapidly increases in women after the menopause with the ratio between men and women rapidly increasing from 1:1 before 50yrs of age to 1:3 after the menopause. "Menopausal or degenerative arthritis" is more likely to involve multiple joints with an aggressive progression. Women with excessive number of hot flushes appear to have greater associated musculoskeletal pain. Recent studies seem to suggest that HT has a protective effect, particularly in current users. Six epidemiological studies, three of which investigated primarily radiographic evidence of disease, found that women who received HT had a lower than expected risk of osteoarthritis. In the largest prevalence study involving 4366 women, the odds ratio in current users of HT was 0.62 when compared to non-users, whilst in the Framingham Study involving 551 women, the odds ratio for incident osteoarthritis was 0.8 in past-users and 0.4 in current users at 8 years follow-up when compared to never users. An age-related decline in muscle performance is a known risk factor for falling, fracture and disability. Following the menopause, a clear deterioration in muscle performance is seen, be it due to reduced muscle mass, immobility, insufficient physical activity, loss of trophic factors at the neuromuscular junction or reduced nervous stimuli. In a randomized placebo controlled trial involving 80 post menopausal women, HT and high impact physical activity had a positive effect on muscle performance, muscle cross sectional area and muscle composition. Not only will HT have a significantly positive effect on bone mineral density but it will also maintain ligament trophism, reduce age-dependent laxity that makes older joints unstable, contribute to maintaining muscle trophism and induce central and peripheral neuroplasticity.

More and more data is accumulating to support that the eye is a target organ for HT. Keratoconjunctivitis or the "dry eye syndrome" is fairly common in the menopause, presenting with varying degrees of severity associated with estrogen deficiency. The conjunctiva is red, painful and the eye feels as though it has sand in it. The pain commonly becomes worse with every blink. The fact that the syndrome occurs with high frequency in women during menopause while it is rather rare in men of the same age group suggests an endocrine cause; namely, estrogen deficiency. Oral or transdermal HT has shown to be most effective in eradicating the symptoms described above. Interestingly, a randomized study of 84 women given eye drops containing estrogen showed a significant difference in subjective eye complaints in favour of the group taking the estradiol eye drop. Women using estrogen eye drops in addition to systemic HT generally not only report an improvement of symptoms but may even report complete disappearance of symptoms. The Beaver Dam Eye Study showed a modest protective effect of estrogen exposure on the lenses of women. Women who had a younger age at menarche were less likely to have nuclear sclerosis, and older age at menopause was associated with a decreased risk of cortical opacities. Women reporting 20 years of postmenopausal estrogen use had, on average, 65% of the risk of those reporting no use at all. In the Blue Mountains Eye Study from Australia, among current HT users aged ≥ 65 yrs, the odds ratio for cortical cataract was 0.4. The Multicenter Eye Disease Case - Control Study Group examined risk factors for central retinal vein occlusion and for idiopathic macular holes. In both studies, the authors reported a significantly decreased risk in women who were former and current users of HT.

Estrogen loss places postmenopausal women at higher risk for tooth loss and periodontal disease. The infection starts in the gingivae, spreads to the clinical attachment fibers, which attaches tooth to bone, and eventually in advanced stages, penetrates bone causing significant bone loss. About 32% of women in USA have no teeth. Perhaps the strongest evidence of HT benefits on teeth come from the Nurses Health Study. The RR (adjusted for age and smoking) for tooth loss among current users was 0.76.

Aging is not particularly kind to skin and after the menopause its effects on the connective tissue become obviously apparent with considerable aesthetic changes taking place. Besides thinning of the dermis and epidermis, the rete pegs flatten out. There is easy bruising due to lack of support of the surrounding connective tissue on the skin capillaries. The skin sags, wound healing is poor and there is loss of skin elasticity. Connective tissue have been shown to have estrogen receptors, also found on macrophages, fibroblasts and endothelial cells. These play a vital role in the healing process of intact and wounded skin. In skin, estrogen directly increases the concentration of mucopolysaccharide, water content and collagen content of the dermis. It also alters the quaternary structure of collagen. HT can improve skin thickness and elasticity and bruising is less. The flattening of the rete pegs of the epidermis reverses. These connective tissue changes and loss of elasticity in the menopause may also be responsible for all functional deterioration noted in the pelvic floor, predisposing to prolapse, and the urinary bladder, leading to urinary incontinence. Oestrogen receptors have been demonstrated throughout the lower urinary tract and are expressed in the squamous epithelium of the proximal and distal urethra, vagina and trigone of the bladder, although not in the dome of the bladder. Receptors are also found in the pubococcygeus muscle, cardinal and the uterosacral ligament, although not in the levator ani muscles. In addition, receptors are localized in the urethral sphincter and when sensitized by estrogens, they are thought to help maintain muscular tone. HT is known to have an important role in the management of urinary incontinence and urogenital atrophy in the menopausal woman.

The central nervous system with specific reference to the brain is a target for estrogen and other sex steroids. Alzheimer's disease is the most common cause of dementia in most countries, being characterized by an insidious development of memory loss as an early symptom. A key biochemical change is the deposition of the abnormal protein fragment (beta-amyloid) in specific brain regions. Risk for Alzheimer's disease is affected by a number of factors, but essentially the number of people diagnosed with the disease will double every five years beginning at age 65 years and the death rate among women is almost 2.5 times higher than that among men. According to the Alzheimer's Association, 1 in 10 people older than 65yrs and nearly half of those older than 85yrs have Alzheimer's disease. A person with Alzheimer's disease will live on average 8 years, and as many as 20yrs or more, from the onset of symptoms. More than 7 out of 10 people with Alzheimer's disease will have to live at home, with 75% of home care being provided by family and friends. Half of all nursing home residents suffer from Alzheimer's disease or a related disorder. The Women's Health Initiative Memory Study (WHIMS) concluded that in the population studied (average age 63yrs) the risk of probable dementia was increased in women taking estrogen and progestogen and in those taking estrogen only the risk of mild cognitive impairment was increased by estrogen only therapy. The increased dementia risk was hypothesized to be due primarily to an increase in vascular related dementia. An important and unanswered question is whether the WHIMS finding based on women 63yrs and older can be extrapolated to the postmenopausal patient population whom we confront and who initiate therapy earlier in life for the treatment of menopausal symptoms. There is an appreciable amount of data derived from laboratory experimentation and from observational studies that question the wisdom of this statement. Within the central nervous system, estrogen is both neurotrophic and neuroprotective. Estrogen promotes the growth of nerve processes,

enhances plasticity at neuronal synapses, protects neurons from damage caused by noxious exposure, oxidative stress, beta-amyloid, ischaemia and apoptosis. Estrogen modulates several neurotransmitter systems, including acetylcholine, dopamine, noradrenalin and serotonin. Alzheimer's disease arises as a result of an imbalance between neuronal injury and neuronal repair. Over the past decade, numerous observational studies have consistently reported that use of estrogen at any time after the menopause, but especially in those who use HT close to menopause, is associated with a 40-60% reduction in risk of Alzheimer's disease. Of 15 published observational studies, 9 had significantly reduced risk in women who had used estrogen therapy, the majority of which was initiated at the time of menopause or very close to it. The Cache County Study demonstrated that if estrogen was commenced in the early menopause, there was a 40-80% reduced risk for Alzheimer's disease whereas if it was commenced after 60yrs of age there was a 2 fold increase risk. Past use of HT was associated with decreased risk, whereas current use of recent onset only was associated with increased risk. Current users for 10 years or more, and who therefore had started early in their menopausal life, also showed a reduced risk of Alzheimer's disease. Even in the WHIMS, subgroup analysis demonstrated that women who had used HT in the past, also had a reduced risk of Alzheimer's disease. Infact, despite the final conclusion of WHIMS, the study itself clearly supports the concept that initiating HT after 60yrs of age results in an increased risk of Alzheimer's disease, whereas earlier initiation may dramatically reduce a woman's risk for Alzheimer's disease. It is estimated that for every 1000 women initiating HT at the time of menopause, there will be about 150 fewer women who will develop Alzheimer's disease if used for approximately 10 years. The very recently published REMEMBER study from Australia has added further weight to the above mentioned perspective. Early initiators of HT performed better than late initiators and early, as well as late initiators, performed better than never users in almost all cognitive measured areas. This again supports the theory that "an early window of opportunity" exists for initiating HT in order to impact positively on cognitive function. Studies that have the potential effect of estrogen on women with established symptoms of Alzheimer's disease are however disappointing. In these studies, no benefit of estrogen has been found for global functioning of cognitive abilities.

Colorectal cancer is recognized as one of the leading cancers in the Western World and is associated with high mortality. Estrogen receptors have been found in colonic epithelium and stroma. The incidence of carcinoma of the colon accounts for 9% of all adult cancers in the developed world and is the third most common solid tumour in women after lung and breast. More than 20 published case-control studies show generally protective effects of parity and use of post menopausal HT on the incidence of colonic cancer, with the reported level of protection varying between 10-45%. A recent review of 27 studies published in 1999, showed that recent HT usage was associated with a 33% reduction in risk of colonic cancer (RR 0.67, CI 0.59-0.77). RR for ever use of HT was 0.92 (CI 0.79-1.08). The duration of HT usage surprisingly had no significant influence on the incidence of colonic cancer. The risk of colorectal cancer in the WHI CEE/MPA group was reduced, RR 0.63 (adjusted CI 0.32-1.24). This risk reduction of 37% is in concordance with other epidemiological investigations.

Conclusion

Menopause cannot be treated in a vacuum and HT must go hand-in-hand with lifestyle modifications, including exercise, dieting, stop smoking and attention to underlying medical disorders. Yet, I do believe that HT has taken a battering that was not warranted or justified. Not only will HT effectively minimise or eliminate menopausal symptoms totally, it has benefits beyond the obvious which in addition will contribute to improving quality of life following menopause.

References

Available on request from author

A RATIONAL APPROACH TO THE TREATMENT OF OSTEOPOROSIS

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Arthur Landau lecture – 2006.

Introduction:

Osteoporosis is a common, costly and serious disease. The life-time risk of an osteoporotic fracture in Caucasian women approximates 50%. Epidemiologic fracture data in South Africa are limited, but the incidence of osteoporosis appears to be similar in white, Indian and mixed ancestry (Coloured) females. Hip fractures are clearly less prevalent in our Black population, but unlike African American women, the spine bone mass and fracture rate of black and white South African women appear to be comparable. In Europe and America, about 25-30% of hip fractures occur in men; in developing countries including South Africa, men account for 50% of all hip fractures. Approximately 20% of all hip fracture patients die within 1 year of the event; even more disconcerting is the fact that 50% are incapable of leading an independent life, and usually require institutionalisation. It is furthermore predicted that the prevalence of fractures will increase in future, yet no more than 10-20% of all women who sustain an osteoporotic fracture currently receive appropriate treatment for osteoporosis.

Definition of osteoporosis:

Originally defined on a histologic or clinico-radiologic basis, the diagnosis of osteoporosis has for the past decade, depended nearly entirely on the accurate measurement of bone mass (as bone mineral density, BMD) employing dual energy x-ray absorptiometry (DEXA), and its densitometric classification into normal, low BMD (osteopenia), osteoporosis (OP) and severe OP categories.

While the four diagnostic categories of this WHO classification (Table I) have provided a practical basis to identify those at risk of sustaining a fracture, we do need to take cognisance of the limitations of raising a risk factor for fracture (albeit an important one like BMD), to the status of a diagnostic criteria: (i) a single BMD measurement lacks sensitivity and up to 50% of patients with a known osteoporotic fracture may have a BMD value that is not in the osteoporosis range i.e. a BMD – the so-called T-score – which is 2.5 SD or more below the peak value in young adults, (ii) the WHO criteria are based on data obtained from white postmenopausal women employing DEXA of the axial skeleton, and cannot be extrapolated to other populations (young individuals, Blacks, males) or to other techniques that measure BMD (e.g. QCT, ultrasound). Under these circumstances, a diagnosis of OP is best considered if the so-called Z-score (BMD compared with age, gender and race-matched controls) is below -2. (iii) causes of a low BMD other than osteoporosis (e.g. primary hyperparathyroidism, osteomalacia) are not considered (iv) extraskelatal risk factors (e.g. propensity to falls) are not addressed, and (v) qualitative bone changes are not assessed (Table I). Numerous recent studies have emphasized the importance of bone quality as a major BMD - independent risk factor for fracture. Unfortunately bone quality cannot readily be measured and surrogate markers (e.g. biochemical markers of bone turnover) therefore need to be employed (vide infra).

Table I: World Health Organisation (WHO) criteria for the diagnosis of osteoporosis in postmenopausal caucasian women employing dual energy x-ray absorptiometry (DEXA) of the axial skeleton.

WHO Criteria for Osteoporosis in Women

Normal	BMD or BMC < 1SD below the young adult reference range
Low bone mass	BMD or BMC 1-2.5SD below the mean of young healthy women
Osteoporosis	BMD or BMC > 2.5SD below the mean of young healthy women
Severe osteoporosis	BMD or BMC > 2.5SD below the mean of young healthy women and the presence of one or more fragility fractures

WHO Technical Report Series: B43,1994

Pathophysiology and risk factors:

Since bone mass accounts for approximately 70% of the variance in bone strength *in vitro*, and is the only variable that can be accurately determined, its measurement (as BMD) currently embodies the practical basis for the diagnosis of osteoporosis.

Bone mass is essentially a function of (i) peak bone mass (PBMD) attained during early adulthood, (ii) age related bone loss, and (iii) total duration of loss. PBMD is largely ($\pm 70\%$) determined by heredity and gender, although nutrition (especially total energy and calcium intake), physical activity, pubertal development and general health may exert a considerable influence. Age-related bone loss appears to result mainly from (i) menopausal hormone deficiency (resulting in increased bone resorption), and (ii) progressive age-related osteoblast incompetence (resulting in impaired bone formation). Additional factors are, however, clearly operative but poorly understood (e.g. all women age and become oestrogen deficient, yet not all develop osteoporosis). If *genetic* (both a maternal and paternal history of OP is important) or *lifestyle factors* (poor nutrition, lack of exercise, smoking and alcohol abuse), *diseases* (e.g. endocrine, malignant, gut disorders), and/or *bone toxic drugs* (notably glucocorticoids, but also anti-epileptic agents, anti-coagulants, HAART, immunosuppressive drugs etc) are superimposed on age-related (involutional) bone loss, significant osteoporosis may ensue (Table III).

A number of risk factors for osteoporosis have been identified. The weighting and prioritization of such risk factors may differ from one area to another, but the following factors are usually clinically useful to identify women at risk of sustaining an osteoporotic fracture: a *low BMD* (fracture risk doubles for each SD decrease in T-score), advanced *age*, *prior fragility fracture* (increases fracture risk 5-fold), a *family history*, *low body weight*

Table II: Bone strength *in vivo* is largely, but not exclusively determined by its mass (quantity) Bone quality is an important BMD – independent determinant of bone strength

Mass -based	Non -mass determinants
<ul style="list-style-type: none"> • Sensitivity • WHO -cohort • Other causes of low BMD • Qualitative factors • Extraskkeletal factors 	<ul style="list-style-type: none"> • Age • Genetics/Ethnicity • Turnover • History of # • Drug trials • Falls

(BMI <19kg/m²), chronic glucocorticoid use (>3 months, regardless of dose), smoking and alcohol abuse, as well as those at high risk of falls (previous history of falls; general frailty and sarcopenia; impaired balance, gait and reduced visual acuity; drugs – e.g. sedatives, anti-hypertensives).

**Diagnostic evaluation:
BMD Measurement**

In South Africa, with its heterogeneous populations and limited health resources, the prevention and treatment of osteoporosis is best managed employing a *case finding* approach, and not a *global screening* policy. It is suggested that clinical risk factors – related to bone mass (BMD), bone strength and/or falls – provide indications for further diagnostic assessment.

The National Osteoporosis Foundation of South Africa (NOFSA) has therefore recommended the following *indications for BMD measurement*: (i) diseases (endocrine, gut, malignant, nutritional/eating disorders) or drugs known to affect bone adversely (ii) radiological evidence of vertebral deformity or osteopenia (iii) history of non-traumatic fracture after age 40 yr (iv) to facilitate the decision whether to initiate/continue hormone therapy (HT) (v) the presence of strong historic risk factors (e.g. family history of OP, low BMI, heavy alcohol intake, smoking).

Dual energy x-ray absorptiometry (DEXA) of the axial skeleton is the preferred technique to measure BMD/diagnose OP and to assess rates of bone loss/gain. The BMD of both spine and hip should be measured and, until local reference ranges are established, it is recommended that the NHANES III reference data be used. Since average hip and spine BMD values of black South African women and men are substantially lower than their African American counterparts, it is suggested that Causasion reference data be used in all our ethnic groups in the interim.

Radiological Assessment of Fracture

Standard radiology is too insensitive to be clinically useful for the early detection of bone loss – 30-40% of skeletal mass needs to be lost before loss can be reliably detected on plain radiographs. The routine radiological assessment of the spine for detection of vertebral fractures is, however, essential. More than a third of all spine fractures are asymptomatic, the patient being unaware of their presence. Yet, the presence of vertebral fracture(s) increases the risk of a subsequent fracture 4-5 fold. Moreover, vertebral fractures are also indicators of increased risk of fractures at other sites, including the hip.

Morphometric assessment of the spine to detect vertebral fracture employing standard radiology or DEXA-based imaging (LVA, IVA) should therefore comprise a routine part of the work-up of any patient with possible osteoporosis.

Biochemical Markers of Bone-turnover

A high bone-turnover doubles the risk of fracture, independent of BMD. Modern biochemical markers of bone resorption include urinary and serum deoxypyridinoline, as well as collagen Type I cross-linked N (NTX) and C (CTX) telopeptides, while biomarkers of bone formation include serum osteocalcin, bone specific alkaline phosphatase (BALP), and C- (PICP) and N- (PINP) propeptides of Type I collagen.

In *population* studies, biomarkers have been shown to be useful predictors of bone loss, fracture risk independent of BMD, and response to anti-resorptive therapy. Technical and biological variations of up to 30% in *individual* subjects, however, limit their routine clinical use. They may be useful in problem cases (especially in the elderly) to aid in the decision whether to initiate treatment or not, and may be particularly useful to monitor therapy.

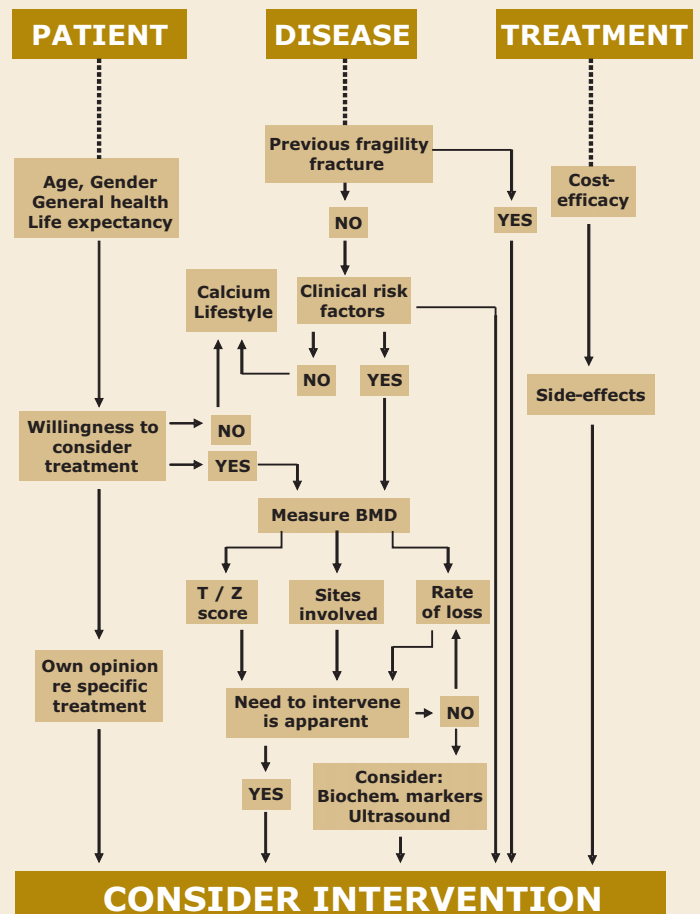
Biochemical Assessment

Biochemical evaluation to exclude causes of a low BMD other than osteoporosis (primary hyperparathyroidism, osteomalacia) and to identify underlying causes of osteoporosis should be considered in all patients with proven disease. The former usually includes a serum calcium, phosphate and ALP – a serum parathyroid hormone and 25 (OH) vitamin D level may also be considered. A full blood count, ESR, protein electrophoresis and sex hormone levels in premenopausal subjects are routinely employed to identify secondary osteoporosis. Further laboratory tests are generally dictated by clinical findings.

Diagnostic criteria vs. Interventional thresholds;

Although useful in epidemiologic studies and drug trials, the largely BMD-based criteria to diagnose OP lack sensitivity (>50%

Fig 1: Algorithm to assess whether to intervene in patients with possible osteoporosis. The intervention threshold or need to intervene should not depend on a mass-based diagnosis only, but should also take into consideration various patient, disease and treatment factors.



of subjects with an osteoporotic fracture do not have a BMD in the OP range i.e. a T score below -2.5). Similar to other chronic degenerative diseases like hypertensive stroke or dyslipidaemic coronary artery disease, *the intervention threshold* or need to treat cannot depend on a *mass-based diagnosis* only – advanced age, prior fragility fractures, strong clinical risk factors (e.g. chronic glucocorticoid use), continuing bone loss (as indicated by an increased bone turnover) are but a few non-BMD determinants of bone strength and propensity to fracture, which should be considered, in conjunction with a BMD measurement, in the rational management of this disease (Fig 1).

Non-pharmacological measures to prevent osteoporotic fractures:

Non-pharmacological measures to improve bone strength include a balanced diet rich in dairy, physical exercise (weight bearing to improve bone mass, muscle strengthening to prevent falls), limiting alcohol consumption (2 units/day in both men and women; modest social drinking may have a bone protective effect in postmenopausal females), the avoidance of smoking and bone toxic drugs, and the prevention of falls (including the selective use of hip-protectors).

Pharmacologic interventions:

Drugs used to treat osteoporosis are conventionally classified as antiresorptive and bone formation stimulating agents. (Table IV). These names are, however, misleading since the process of bone resorption and formation are coupled – even in most subsets of osteoporosis. So-called antiresorptive drugs therefore decrease bone resorption (within weeks), and subsequently also bone formation (within months). Likewise, bone formation stimulating drugs like teriparatide augment bone formation, which is followed by an increase in resorption a few months later.

Calcium & Vitamin D

Calcium (ensuring a daily intake of 1-1.5g) and vitamin D (800 IU/d) are routinely recommended for the prevention and treatment of osteoporosis. Their effect on BMD is, however, often modest. The ability of vitamin D (with or without calcium) to reduce vertebral fracture seems to be well documented, but effects on the rate of hip fracture remain controversial and apparently dependent, at least in part, on the study population – frail elderly subjects with a low dietary calcium intake and a low serum 25-hydroxyvitamin D appear to respond better. One of the major problems with calcium supplementation is poor compliance which can usually be ascribed to gastro-intestinal side-effects, particularly constipation.

Table III: When genetic or lifestyle factors and / or bone toxic drugs are superimposed on age-related (so-called involutinal) bone loss, significant osteoporosis may ensue

Risk Factors & Causes of Osteoporosis

- **Genetic and ethnic factors**
- **Environmental factors**
 - **Lifestyle**

Diet	Alcohol
Exercise	Smoking
 - **Medical**

Hormones	Bone toxins
Malignant disorders	Others
- **Age -related factors**
 - Hypogonadism
 - Ageing

It is important to note that sun exposure during winter in the Western Cape, results in the activation of previtamin D which is markedly less than in Gauteng. Ethnicity and religious custom (covering sun exposed surfaces) may further limit vitamin D delivery. Vitamin D supplementation is recommended for all elderly institutionalised patients. If significant deficiency is suspected, measurement of serum 25-hydroxyvitamin D is recommended. High dose vitamin D treatment (50 000 IU, 1-4 times/2weeks) should include periodic determinations of 24h urinary calcium excretion. Active metabolites of vitamin D, calcitriol and alfacalcidol, were shown in earlier studies to reduce the fracture rate – therapeutic and toxic doses seem to overlap and their routine use in the treatment of osteoporosis cannot be recommended.

Hormone Therapy (HT) & SERMS:

Data from the Women's Health Initiative (WHI) have convincingly shown that treatment of postmenopausal women with oestrogen prevents fractures of both the spine and hip. Hormone therapy is, however, not side-effect free and should probably be reserved for younger women (<60yr), especially those with menopausal symptoms.

Selective oestrogen receptor modulators (SERMS) have been shown in the MORE study to reduce the risk of spine, but not hip fracture. These agents also reduce breast ER+ cancer by 70%.

Bisphosphonates

Bisphosphonates are stable analogues of pyrophosphate which safely and effectively reduce the risk of spine and hip fractures, and remain the cornerstone of antiresorptive therapy. They do, however, have limitations related to long-term compliance, gastrointestinal intolerance, poor absorption from the gut, and oversuppression of bone turnover (including osteonecrosis). Intermittent intravenous administration might address problems with compliance and absorption, and is the focus of much current research.

Teriparatide

Daily subcutaneous injections of human parathyroid hormone (hPTH 1-34) for as little as 21 months, markedly increase bone mass, improve skeletal micro-architecture and reduce the risk of new vertebral fractures by 65% and non-vertebral fractures by 35-40%. Given its very high cost, the National Osteoporosis Foundation (NOFSA) has recommended that this drug should only be used in patients with severe OP i.e. (i) a low BMD plus 2 or more prevalent fractures or (ii) failed antiresorptive therapy i.e. after adhering to adequate antiresorptive therapy for 12 months or more, the patient experiences: (a) an incident fracture or (b) an unacceptable rate of bone loss (e.g. a decrease in vertebral BMD of >5% per year as documented on 2 or more follow-up BMD measurements). Currently consideration is being given to extend these indications – e.g. to include glucocorticoid-induced osteoporosis.

Strontium ranelate

Strontium ranelate has a unique dual action on the skeleton – it stimulates bone formation whilst it also decreases bone resorption. This results in a marked increase in bone mass, size and strength, as well as a significant reduction in the risk of vertebral (SOTI-trial) and non-vertebral (TROPOS-trial) fractures of 41-52% and 36% respectively. In these trials, compliance with the drug was good and side-effects did not differ significantly from that of controls.

Other drugs

Calcitonin has a direct-inhibitory effect on osteoclast action and also has central opiate-mediated analgesic properties. Its anti-fracture efficacy is, however, poorly documented.

Fluoride is a potent osteoblast mitogen, which stimulates bone formation and significantly increases BMD. It also causes a dose-dependent mineralisation defect and has not been shown to reduce fracture risk.

Future treatments:**New Antiresorptives**

Recent advances in osteoclast biology, in particular our understanding of the RANKL/OPG system, lysosomal cysteine proteinases and intracellular acidification, have led to the development of a number of new and exciting antiresorptive agents – these include OPG analogues, RANKL inhibitors, disintegrins which bind and inhibit osteoclast $\alpha V\beta 3$, carbonic anhydrase II (CA2) modulators, Cathepsin K inhibitors and more.

New Bone Formation Stimulators

Mitogens and growth factors are difficult to target exclusively to bone and therefore have limited therapeutic potential at present. Sclerostin is however a novel bone morphogenetic protein (BMP)-antagonist, expressed exclusively in bone. Mutations in the SOST-gene which codes for sclerostin, results in the sclerotic bone disease called sclerosteosis – inhibitors of sclerostin have been developed and are now being tested as novel anabolic agents.

A rational choice of drug therapy

Given the clinical, histological and biochemical heterogeneity of osteoporosis, no “best drug scenario” to optimally treat this condition is appropriate. In fact, fracture reduction has not been assessed in head-to-head trials, so it is not possible to compare the efficacy of bone active agents directly. The choice of drug(s) to manage osteoporosis should therefore be determined by: (i) the *nature of the disease* (e.g. calcium/vitamin D for mild osteopenia; strontium ranelate or bisphosphonates for osteoporosis; and the addition of an anabolic agent in patients with severe osteoporosis) (ii) the *patient profile* (e.g. strontium ranelate or bisphosphonates in otherwise healthy subjects requiring a bone specific agent; HT in young postmenopausal women with troublesome menopausal symptoms, SERMS for those at risk of breast cancer etc.), and (iii) *cost-effectiveness, side-effects and availability* of drugs (Table V).

Monitoring:

Clinical monitoring to assess efficacy (height, kyphosis), side-effects and compliance is essential.

Densitometry follow-up every 18-24 months (within 6-12 months in patients with glucocorticoid OP) is important for patient motivation and to monitor compliance and efficacy. Antiresorptive therapy fills in the remodelling space (bone which has been resorbed yet not replaced) which accounts for the 5-10% increase in BMD during the 2-3 years after initiating treatment with these drugs. The

Table IV: Pharmacological drugs used to treat osteoporosis are conventionally classified as antiresorptive and bone formation stimulating agents.

Drug Therapy for Osteoporosis**A. Anti-Resorptive Agents**

- Calcium
- Vitamin D/Metabolites
- Sex Hormones/SERMS
- Calcitonins
- Bisphosphonates

B. Anabolic / Dual Action Agents

- Fluoride
- Anabolic Steroids
- Low - Dose Intermittent PTH
- Strontium Ranelate

Table V: The choice of drug(s) to manage osteoporosis should depend on the nature of the disease, the patient profile as well as the cost-efficacy, side-effects and availability of drugs.

Rational Choice of Therapy• **Nature of the Osteoporosis**

- Severity of the Osteopenia
- Presence of Fractures
- Turnover / Sites
- Response to Therapy

• **The Patient**

- Healthy, requiring a Bone-Specific Drug
- Menopausal Symptoms
- Risk of Breast Cancer
- Frail Elderly / Life Expectancy
- Personal Preferences / Willingness

• **Cost-Effectiveness / Side-Effects**• **Availability**

magnitude of the increase depends in part on initial bone turnover – absence of an increase in BMD should not be seen as a therapeutic failure

Morphometry. Vertebral imaging (x-rays, LVA IVA) every 2-3 years is essential to assess the efficacy of treatment.

Biochemistry. Biomarkers of bone turn-over hold much promise, but large biological and technical variations limit their routine use in individual patients.

Conclusion:

Recent advances in the field of osteoporosis have involved both fundamental conceptual changes in our understanding of its definition and natural evolution on the one hand, as well as a number of technological developments on the other. The former have highlighted the limitations of a largely BMD-based diagnosis; emphasized the importance of bone quality and BMD-independent risk factors of osteoporosis; and stressed the need to distinguish between simple diagnostic criteria and often complex interventional thresholds. The latter have largely confirmed the efficacy and safety of antiresorptive drugs like the bisphosphonates in large randomised controlled trials (RCTs); cautioned against the use of agents which had not previously been subjected to rigorous RCTs (e.g. use of HRT prior to the WHI); and included the launch of new anabolic (teriparatide) and dual-action (strontium ranelate) drugs. Improved understanding of bone biology has further led to the development of a vast array of bone active drugs which will enable the care physician to efficiently and safely treat even advanced cases of osteoporosis in a rational and scientific way.

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CMSA ANNOUNCEMENT

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THE REGISTRAR'S LOG BOOK – REPORTING THE OPERATIVE EXPERIENCE OF SURGICAL PROCEDURES OBTAINED BY REGISTRARS DURING SPECIALIST TRAINING IN UROLOGY

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Abstract

Objective

As from March 2004, registrars in Urology are required to submit a Log Book of their surgical experience for admission to the final examination for Fellowship of the College of Urologists of South Africa. However, there are no defined criteria for the minimum number of operative cases or the spectrum of Urological procedures required to ensure adequate training. The aim of this study was to analyze the operative experience of registrars in the Department of Urology at Tygerberg Hospital, an 800 bed academic teaching hospital attached to the University of Stellenbosch, in order to provide data which may be used for the evaluation of the Urology registrar's Log Book of operative experience.

Methods

In total, 33,445 Main and Emergency Theatre cases performed in the period January 1975 to December 2002 and 19,955 Out-patient Cystoscopy Theatre cases performed in the period January 1995 to March 2005 were analyzed using a computerized (Microsoft® Excel) database.

Results

The total number of Main and Emergency Theatre procedures per registrar decreased by 32% ($p=0.0005$) from an average of 1752 procedures/registrar for those who started their training in the period 1975-80 compared to 1163 procedures/registrar for 1990-99. This was largely due to a 35% reduction in bed numbers and theatre time in the Urology Department during the same period as a result of budgetary restrictions. The ratio of procedures performed by the registrar as surgeon versus assistant decreased by 33% ($p=0.00002$) from an average of 3.7 in the period 1975-85 to 2.5 in the period 1990-2002, indicating that in the more recent past registrars were more often assisting rather than being the surgeon. There were substantial changes in the spectrum and frequency distribution of different types of procedures during the past decade, reflecting world-wide trends in Urological practice, as well as local changes in practice patterns. Our study provides average, minimum and maximum numbers for different Urological procedures which may be used as a yardstick for the evaluation of the Urology registrar's Log Book of operative experience. However, although these figures reflect the practical reality of training in our Department, they do not necessarily constitute criteria for optimal or minimum numbers of procedures that should be performed by registrars.

Conclusion

Findings that raise serious concern are (1) the decrease of 32% in the average number of Urological procedures per registrar and (2) the decrease of 33% in the ratio of procedures performed by the registrar as surgeon rather than as assistant during the past decade. If these trends continue, they will have serious implications for the adequacy of training in Urology, and may imply that future registrars will be less proficient in performing operative procedures than has been the case in the past.

Introduction

Surgical training has always required some form of apprenticeship involving the acquisition of surgical skills by trainees under the supervision of experienced surgeons. In former times it was assumed that defining a certain period of supervised training would be sufficient to ensure acquisition of the necessary skills by the trainee. However, more recently professional bodies and regulatory authorities in various countries have begun to set minimum criteria for operative experience of surgical residents.¹⁻⁷

Consequently, residents are required to record and report their operative experience, and several recent studies have described the use of computer-based technology such as hand-held personal digital assistants (PDA's) or the internet to improve the accuracy and to eliminate deficiencies in the reporting of surgical procedures performed by residents, thereby providing a validated operative log for use by program directors or registering bodies.⁸⁻¹²

A Medline literature search has revealed very few published studies addressing the question of the minimum or optimal numbers of procedures or the length of clinical rotation required to ensure adequate training of surgical residents.^{6,13-15} Some studies have

described changing trends in the operative experience of General Surgery residents, but none have detailed the operative experience of Urology registrars.¹⁻⁷

Factors which may impact on the operative exposure of surgical residents include increased numbers of trainees relative to the volume of surgical procedures, reduction in the working hours of residents, increased nonoperative, endoscopic or medical management of certain conditions, concerns about the increased costs of teaching residents, increased subspecialization, and decreased funding of teaching hospitals.^{2,5,16-41} It is a fact that at most tertiary academic institutions in South Africa there has been a progressive decline in bed numbers and theatre time since the middle 1990s, mainly due to budgetary constraints consequent upon government policies leading to the diversion of funds from the tertiary to the primary and secondary health care sectors.

As from March 2004, registrars in Urology are required to submit a Log Book of their surgical experience for admission to the final examination for Fellowship of the College of Urologists of South Africa. However, there is no clarity with regard to the question whether the Log Book should form part of the formal assessment

of candidates, and there are no defined criteria for the minimum number of operative cases or the spectrum of Urological procedures required to ensure adequate training.

Specialist Urological training in South Africa is provided at 7 university-based Departments, each with 4-8 registrars attached to one or more tertiary level teaching hospitals. The regulatory requirements of the Health Professions Council of SA are that every Department should have 1 full-time equivalent specialist for every 2 registrars, the training period should be a minimum of 4 years (of which 1 year may be in General Surgery) and the registrar must obtain Fellowship of the College of Urologists of SA or a Master's degree (MMed) in Urology from a university.

The aim of this study was to analyze the operative experience of registrars in the Department of Urology at Tygerberg Hospital, an 800 bed academic teaching hospital attached to the University of Stellenbosch, in order to provide data on the numbers of different operative procedures performed, which may be used as a yardstick for the evaluation of the Urology registrar's Log Book of operative experience.

Materials and methods

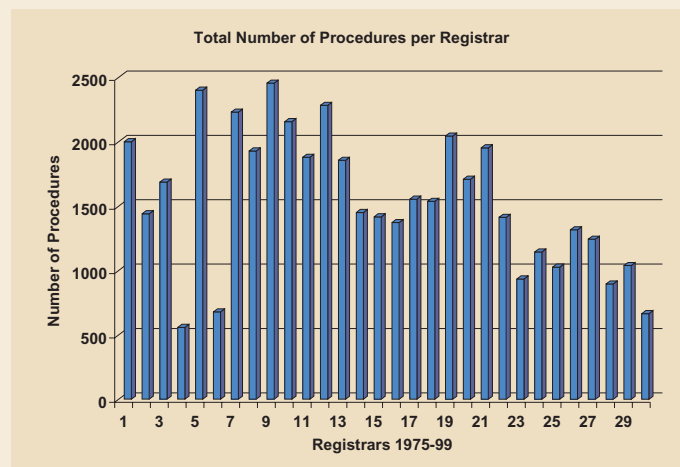
The handwritten records of the Urology Main and Emergency Theatres and the Urology Out-patient (Cystoscopy) Theatres were typed into an Excel (Microsoft®) database for analysis. In total, 33,445 Main and Emergency Theatre cases performed in the period January 1975 to December 2002 and 19,955 Cystoscopy Theatre cases performed in the period January 1995 to March 2005 were analyzed. The database did not include procedures performed during the period when the registrars were doing their year's rotation in General Surgery. In cases where the registrar remained in the Department of Urology after completion of his/her training, only the first 4 years' activities were included. Statistical analysis was performed using Student's t-test to compare differences between groups.

Results

The total number of procedures performed or assisted per registrar did not change significantly when comparing the group of 10 who started their training in the period 1975-80 with the 10 registrars who started during 1980-90, but there was a significant decrease of 32% (p=0.0005) in the total number of procedures per registrar for the group of 10 who started their training in the period 1990-99 (1752 procedures/registrar in 1975-80 compared to 1163 procedures/registrar in the period 1990-99) (Figure 1, Table I). During the same period there was an approximately 35% reduction in bed numbers and available theatre time in the Urology Department as a consequence of financial constraints resulting from government budgetary restrictions.

There was considerably more variation in the total number of procedures per registrar for those who started their training in the pe-

Figure 1: Total number of Main and Emergency Theatre procedures performed or assisted by each of 30 consecutive registrars who started their training in the period 1975 to 1999.



riod 1975-80 compared with the periods 1980-90 and 1990-99, as shown by the much larger standard deviation and the larger difference between the maximum and minimum number of procedures (Figure 1, Table I). This is due to the fact that, in the period 1975-80, two registrars completed only 2 ½ years of Urology training, whereas most subsequent registrars completed at least 4 years. The variation in the number of procedures per registrar decreased in the period 1980-90 compared with 1975-80, but increased again in the period 1990-99 compared with 1980-90 (Table I).

With regard to Main Theatre procedures, comparing the period 1990-2002 with 1975-85 showed a dramatic increase in percutaneous nephrolithotomy (PCNL), radical prostatectomy, ureterorenoscopy, ureteric stenting, inguinal herniotomy (fluid hernia repair) and debridement. There was a relative decrease in 42 types of Urological procedures, with an increase in 25 types during the period 1990-2002 compared with 1975-85 (Table II).

With regard to the different types of Out-patient Cystoscopy Theatre procedures performed by 8 registrars in the period January 1995 to March 2004, there was considerable variation in the minimum and maximum number of procedures performed by each of the registrars (Table III).

With regard to Main and Emergency Theatre cases, the ratio of procedures performed by the registrar as surgeon versus assistant decreased by 33% (p=0.00002) from an average of 3.7 in the period 1975-85 to 2.5 in the period 1990-2002, indicating that registrars were more often assisting rather than being the surgeon (Table IV). The decrease in the surgeon/assistant ratio occurred in 59 types of procedures, whereas the ratio increased in only 6 types of procedures (Table IV).

Table I: Total number of Main and Emergency Theatre procedures performed or assisted by each of 30 registrars according to the year in which their Urology training started.

Total Procedures per Registrar (n)	Start Date of Registrar's Training				
	A:1975-80	B: 1980-90	% Change B v A	C: 1990-99	% Change C v B
Average	1752	1709	-2%	1163	-32%
SD	639	285	-55%	335	+18%
p-value		0.84		0.0005	
Minimum	557	1371	+146%	665	-51%
Maximum	2454	2281	-7%	1952	-14%
Maximum minus Minimum	1897	910	-52%	1287	+41%

Table II: Average total number of Main and Emergency Theatre procedures per registrar and % change in the average number of procedures in the period 1990-2002 compared with 1975-85 (not all procedures are shown, therefore totals are higher than sum of numbers in each columns).

Type of Procedure	A = 1975-85			C = 1990-2002			% Change C v A
	Ave	Min	Max	Ave	Min	Max	
Kidney							
Nephrectomy	58	14	97	25	16	34	-57%
Heminephrectomy	7	2	13	1	0	2	-83%
Nephro-ureterectomy	4	0	8	2	0	5	-35%
Renal transplantation	14	0	34	16	1	31	+13%
Exploration of kidney	12	6	23	3	1	7	-75%
Open renal stone surgery	32	10	57	4	1	8	-87%
PCNL	0	0	1	23	4	41	+23300%
Ureter							
Pyeloplasty	7	0	12	4	2	10	-44%
Reimplantation of ureter	14	4	22	5	1	12	-64%
Cutaneous ureterostomy	2	0	6	1	0	1	-79%
Transuretero-ureterostomy	1	0	3	0	0	1	-88%
Ureterolithotomy	18	4	26	6	2	16	-66%
Ureterorenoscopy	0	0	1	2	0	4	+1700%
Ureteric stenting	2	0	7	19	7	35	+708%
Bladder							
Cystoscopy	376	107	546	253	108	527	-33%
TURBT	30	4	75	42	22	61	+40%
Bladder biopsy	12	1	33	10	5	22	-20%
Radical cystectomy	9	2	21	8	2	15	-9%
Bricker diversion	13	0	34	13	4	33	-4%
Cystoplasty	1	0	6	2	0	5	+38%
Bladder diverticulectomy	2	0	3	0	0	1	-88%
Vesicostomy	1	0	4	2	0	6	+67%
Suprapubic cystostomy	24	6	43	9	3	27	-65%
Bladder stone surgery	10	3	16	9	5	18	-13%
Female incontinence surgery	11	2	17	9	2	22	-12%
Bladder rupture repair	6	0	13	9	1	14	+54%
Vesico-vaginal fistula	1	0	3	1	0	2	-55%
Prostate							
TURP*	154	31	251	70	23	188	-54%
TUBNI*	16	7	31	9	2	31	-43%
TURBN*	3	0	11	1	0	5	-62%
Open prostatectomy	78	34	109	9	2	18	-89%
Radical prostatectomy	1	0	3	5	0	14	+440%
Prostate biopsy	8	2	16	11	4	19	+34%
Urethra							
Dilatation urethra	20	0	49	4	1	8	-78%
Urethrotomy	23	0	71	11	2	26	-54%
Urethroplasty	49	20	93	14	6	23	-72%
Urethrostomy	3	0	8	2	0	6	-27%
Meatoplasty	3	0	5	2	0	5	-26%
Meatotomy	6	2	9	1	0	2	-89%
Urethrectomy	2	0	4	2	0	5	-16%
Posterior urethral valve resection	2	0	6	1	0	4	-32%
Penis							
Circumcision	7	1	15	13	8	20	+89%
Dorsal incision	3	0	8	1	0	5	-81%
Penectomy	3	0	7	4	1	7	+27%
Priapism	2	0	4	1	0	3	-48%
Nesbit procedure	0	0	0	1	0	3	
Penile prosthesis	2	0	5	2	0	6	-18%
Hypospadias repair	8	0	13	12	2	19	+46%
Urethrocutaneous fistula repair	5	0	9	6	2	12	+33%

Testis / Scrotum							
Bilateral orchidectomy	54	19	86	61	39	87	+12%
Radical orchidectomy	2	0	6	4	1	8	+100%
Orchidopexy	17	8	26	35	15	49	+105%
Hydrocelectomy	25	7	48	17	8	22	-33%
Herniotomy (fluid hernia repair)	2	0	4	16	2	24	+913%
Varicocelectomy	22	2	35	8	3	15	-62%
Vasectomy	8	1	15	1	0	4	-90%
Exploration scrotum	5	1	18	6	0	10	+26%
Epididimal cyst excision	3	1	6	2	0	6	-32%
Testis prosthesis	2	0	5	1	0	2	-74%
Renal failure patients							
Creation of AVF for haemodialysis	52	16	109	22	11	48	-58%
Tenckhoff catheter for dialysis	11	1	32	42	22	62	+274%
General							
Laparotomy	16	0	25	25	10	40	+54%
Inguinal hernia repair	19	3	29	10	2	16	-47%
Inguinal node dissection	1	0	3	2	0	5	+54%
Debridement	3	0	11	8	3	16	+215%
Skin graft	2	0	5	2	1	4	+12%
Drainage of abscess	5	1	8	3	0	5	-48%
Radiology							
Retrograde pyelogram	17	3	40	25	2	63	+48%
TOTAL	1752	557	2454	1163	665	1952	-34%

Ave = average, Min = minimum, Max = maximum, PCNL = percutaneous nephrolithotomy, TURBT = transurethral resection of bladder tumour, TURP = transurethral resection of prostate, TUBNI = transurethral bladder neck incision, TURBN = transurethral resection of bladder neck, AVF = arteriovenous fistula).

Table III: Total number of Out-patient Cystoscopy Theatre procedures per registrar performed in the period January 1995 to March 2004 (not all procedures are shown, therefore totals are higher than sum of numbers in columns).

Type of Procedure	Average	Minimum	Maximum
Kidney			
ESWL	17	0	33
Ureter			
Dormia basket stone extraction	6	2	12
Ureteric stenting (double-J-catheter)	55	21	114
Ureterorenoscopy	14	4	25
Ureterolithotripsy with Lithoclast	9	3	23
Bladder			
Cystoscopy	735	464	990
Bladder wall biopsy	79	32	136
Bladder washout	4	0	8
Suprapubic catheter insertion	30	7	70
Intravesical BCG instillation	4	0	16
Prostate			
Prostate biopsy	66	23	189
Urethra			
Urethral dilatation	123	43	243
Internal urethrotomy	29	7	55
External meatotomy	1	0	3
Meatal dilatation	6	3	12
Penis			
Circumcision	59	12	167
Fulguration of penile warts	6	1	13
Testis			
Orchidectomy	6	0	24

Vasectomy	11	0	37
Radiology			
Nephrostogram	26	8	40
Retrograde pyelogram	77	30	132
Cystogram	23	4	34
Urinating cysto-urethrogram	4	0	16
Retrograde urethrogram	254	24	567
Loop-o-gram	8	0	13
Cystometrogram	56	0	117
Whitaker test	5	0	16
TOTAL	1276	1010	1730

ESWL = extracorporeal shock wave lithotripsy, BCG = Bacille Calmette Guerin

Table IV: Average total number of Main and Emergency Theatre procedures per registrar acting as first surgeon or assistant in the period 1990-2002 compared with 1975-85 (not all procedures are shown, therefore totals are higher than sum of numbers in each columns).

Type of Procedure	Surgeon		Assistant		Ratio Surg/Asst		% Change C v A
	A:1975-1985	C:1990-2002	A:1975-1985	C:1990-2002	A:1975-1985	C:1990-2002	
Kidney							
Nephrectomy	38	10	20	15	1.9	0.7	-63%
Heminephrectomy	5	0	2	1	2.2	0.2	-91%
Nephro-ureterectomy	2	1	2	2	1.2	0.6	-49%
Renal transplantation	9	11	5	6	1.7	1.9	+14%
Exploration of kidney	8	1	4	2	2.4	0.8	-66%
Open renal stone surgery	21	1	11	3	1.9	0.3	-84%
PCNL	0	16	0	8		1.9	
Ureter							
Pyeloplasty	4	1	3	3	1.4	0.4	-70%
Reimplantation of ureter	7	2	8	4	0.9	0.4	-50%
Cutaneous ureterostomy	1	0	1	1	1.4	0.0	-100%
Transuretero-ureterostomy	0	0	0	0	1.0	0.0	-100%
Ureterolithotomy	12	3	7	4	1.7	0.7	-59%
Ureterorenoscopy	0	1	0	0		3.5	
Ureteric stenting	2	15	0	5	7.0	3.2	-54%
Bladder							
Cystoscopy	327	204	53	49	6.1	4.1	-33%
TURBT	29	38	2	5	12.4	8.2	-34%
Bladder biopsy	12	9	1	1	16.9	7.3	-57%
Radical cystectomy	5	2	4	7	1.3	0.2	-82%
Bricker diversion	8	4	6	9	1.3	0.5	-64%
Cystoplasty	1	0	1	2	1.0	0.1	-88%
Bladder diverticulectomy	1	0	1	0	1.7	1.0	-40%
Vesicostomy	1	1	1	1	1.4	1.0	-29%
Suprapubic cystostomy	21	5	4	3	5.4	1.6	-71%
Bladder stone surgery	9	6	2	3	4.7	2.0	-58%
Female incontinence surgery	6	3	5	6	1.3	0.5	-63%
Bladder rupture repair	5	6	1	3	7.0	2.1	-69%
Vesico-vaginal fistula	0	0	1	1	0.4	0.0	-100%
Prostate							
TURP*	144	61	11	9	13.6	6.5	-53%
TUBNI*	14	8	2	1	7.8	6.5	-16%
TURBN*	3	1	0	1	33.0	1.2	-96%
Open prostatectomy	50	5	28	5	1.8	1.0	-42%
Radical prostatectomy	1	2	0	4	1.5	0.5	-64%
Prostate biopsy	7	10	1	1	10.6	10.9	+3%
Urethra							
Dilatation urethra	18	3	1	1	13.1	2.1	-84%

Urethrotomy	22	9	2	2	13.5	5.6	-59%
Urethroplasty	37	6	12	9	3.0	0.6	-78%
Urethrostomy	2	1	0	1	7.7	0.9	-88%
Meatoplasty	2	1	1	1	2.4	1.0	-58%
Meatotomy	5	1	1	0	8.3	5.0	-40%
Urethrectomy	1	0	1	1	0.9	0.3	-63%
Posterior urethral valve resection	2	1	0	1	5.7	1.6	-72%
Penis							
Circumcision	6	11	1	3	6.3	3.6	-43%
Dorsal incision	3	1	0	0	9.3	5.0	-46%
Penectomy	2	1	1	3	2.0	0.5	-76%
Priapism	2	1	0	0	6.0	2.7	-56%
Nesbit procedure	0	0	0	1		0.4	
Penile prosthesis	1	0	1	2	1.6	0.2	-87%
Hypospadias repair	5	4	3	8	1.9	0.5	-75%
Urethrocutaneous fistula repair	3	3	1	3	2.5	0.8	-67%
Testis / Scrotum							
Bilateral orchidectomy	47	52	7	9	6.4	5.7	-10%
Radical orchidectomy	2	2	1	2	3.2	1.3	-58%
Orchidopexy	13	27	4	8	3.0	3.2	+7%
Hydrocelectomy	22	14	4	3	5.9	5.7	-2%
Herniotomy (fluid hernia repair)	1	13	0	3	4.3	4.8	+10%
Varicocelectomy	16	6	6	2	2.6	2.5	-4%
Vasectomy	6	1	2	0	3.4	7.0	+107%
Exploration scrotum	4	5	1	1	6.7	8.7	+30%
Epididimal cyst excision	2	1	0	0	7.7	4.7	-39%
Testis prosthesis	2	0	1	0	2.8	2.0	-29%
Renal failure patients							
Creation of AVF for haemodialysis	44	13	8	9	5.4	1.4	-75%
Tenckhoff catheter for dialysis	10	35	1	7	10.3	4.7	-54%
General							
Laparotomy	12	16	4	10	3.0	1.6	-46%
Inguinal hernia repair	14	7	5	3	2.5	2.3	-10%
Inguinal node dissection	1	0	0	2	3.3	0.2	-95%
Debridement	3	7	0	1	25.0	7.2	-71%
Skin graft	1	1	1	1	2.6	2.2	-17%
Drainage of abscess	4	1	1	1	4.3	1.1	-75%
Radiology							
Retrograde pyelogram	13	18	4	7	3.4	2.6	-23%
TOTAL	1389	831	380	338	3.7	2.5	-33%

PCNL = percutaneous nephrolithotomy, TURBT = transurethral resection of bladder tumour, TURP = transurethral resection of prostate, TUBNI = transurethral bladder neck incision, TURBN = transurethral resection of bladder neck, AVF = arteriovenous fistula

Discussion

There is a significant correlation between the operative experience of surgical residents and their performance in examinations assessing their theoretical knowledge of surgery.¹⁴ However, there is little information about the rate of learning of medical students and residents during clinical rotations. A study of medical students, junior and senior residents at variable times during their rotation through an ICU over a period of 3 years demonstrated that examination scores improved as ICU experience increased, in both students and junior residents, but not in senior residents. The learning curve in juniors reached a plateau after 7 weeks' experience, indicating that there may be an optimal (and finite) duration of rotations during residency education.¹⁵

In a paper from Germany the authors calculated that 250-300 operations per year are needed to adequately train one Neurosurgical resident, and suggested adapting the number of trainees relative to the available operative case material.¹³ Assuming a residency period of 4 years, these figures would translate to a total of 1000-1200 procedures, which is comparable to the average total number of 1163 Main Theatre procedures performed by Urology registrars during the period 1990-99 in our study.

Nonetheless, the fact that the average number of procedures per registrar in our study progressively decreased by 32% during the past decade is reason for serious concern. It is quite probable that this experience is not unique to Tygerberg Hospital, but reflects

the decreases in bed numbers and theatre time which occurred at most of the tertiary academic teaching hospitals in the past decade. If this trend continues, it will have serious implications for the adequacy of training in Urology and other surgical specialties. The inevitable consequences are that more patients have to be treated medically or have to suffer without getting any treatment, more procedures have to be performed at secondary hospitals, which are sometimes poorly equipped and staffed, and surgical registrars obtain less experience of major operative procedures.

In the USA, the total number of Urology residency training programs has decreased by more than 20% since 1982, whereas the number of first year Urology residents decreased progressively between 1994 and 1998 before stabilizing at the current level of approximately 250 first year positions.¹⁶ A retrospective analysis of surgical resident operative experience in the USA found that, while the number of graduating residents had remained constant, operative volume had increased from 1991 to 1997.⁵

In the period 1964-87 the operative experience of general surgery residents in the USA showed a slight decline in head and neck and gastric surgery, remained stable in other primary component procedures (major breast, esophagus, intestine, colon, pancreas, spleen and endocrine) or increased (minor breast, anorectal, hernia, biliary, vascular and trauma). A dramatic increase in endoscopic procedures performed in the surgery department was noted during this period.¹ A review of surgical resident experience with unusual endocrine operative procedures such as adrenalectomy, pancreatic, nonthyroid and nonparathyroid endocrine diseases, suggested the need for fellowship training to acquire expertise in these uncommon procedures.⁴

An analysis of resident operative experience in the USA found increases in carotid endarterectomy (137%), pancreaticoduodenectomy (67%), laparoscopic cholecystectomy (65%), parathyroidectomy (51%), thyroidectomy (19%), colectomy (14% to 44% depending on subtype), and elective infrarenal aortic aneurysm repair (11%). Conversely, frequencies decreased for open cholecystectomy (63%), open parietal cell vagotomy (40%), modified radical mastectomy (15%), gastroesophageal antireflux procedure (10%), and subtotal gastric resection (9%). Resident experience was essentially unchanged for emergency infrarenal aortic aneurysm repair and laparoscopic proximal gastric vagotomy. The causes of these shifts were not specifically addressed by the study, but the authors speculated that technological advances in the diagnosis and management of surgical patients or the increase in subspecialty training may have affected the experience of general surgery trainees.⁵

An analysis of the surgical training experience of chief residents in the USA revealed that the mode number of procedures performed in 2000 and 2001 were 5 and 3 for abdominal aortic aneurysm repair, 15 and 17 for carotid endarterectomy and 0 for esophageal cancer surgery, respectively.⁶ For all gastric-related surgery in the period 1990 to 2001 the average reported cases per chief resident ranged from 9.8-12.4. Vagotomy decreased from 24% in 1990 to 7% in 2001, whereas gastric-reduction operations increased from 5% to 34%. The overall surgical experience of chief residents had not significantly diminished since 1990, although specific procedural volume varied.⁷

With the advent of laparoscopic cholecystectomy, the mean number of open cholecystectomies performed by residents decreased significantly, while the total number of resident cholecystectomies remained unchanged, raising considerable concern among junior-level residents about lack of training in open procedures.^{2,3}

Our study shows substantial changes in the spectrum and frequency distribution of different types of Urological procedures during the past decade. The dramatic increase in percutaneous nephrolithotomy (PCNL), extracorporeal shock wave lithotripsy (ESWL) and ureteroscopic lithotripsy are due to the increasing availability of these minimally invasive techniques, which has led to

a significant decrease in open surgery for urinary tract stones. The increase in radical prostatectomy is due to the availability of serum prostate specific antigen (PSA) screening for early stage prostate cancer since the early 1990s. The decrease in transurethral resection of the prostate (TURP) and open prostatectomy is due to the availability of medical treatment for benign prostatic hyperplasia (BPH) and stricter selection criteria whereby only patients with complications of BPH are chosen for surgery. Other changes are probably due to local shifts in our hospital practice patterns, e.g. more pediatric patients, increased trauma load with increasing nonoperative management of renal trauma, urethral stricture disease treated endoscopically on an out-patient basis rather than by urethroplasty, a preference for peritoneal over haemodialysis, and an increase in septic conditions requiring debridement.

Our study provides average, minimum and maximum numbers of different Urological procedures which may be used as a yardstick for the evaluation of the Urology registrar's Log Book of operative experience. However, although these figures reflect the practical reality of training in our Department, they do not necessarily constitute criteria for optimal or minimum numbers of procedures that should be performed by registrars. Moreover, the experience in our Department is probably not totally representative for all Urology Departments, since it is known that in some hospitals factors such as the profile of pathology, non-availability of high-technology instrumentation, lack of teaching expertise in certain areas, and local referral patterns diverting Urology patients to Paediatric Surgery or Gynaecology may significantly limit experience in procedures such as radical prostatectomy, PCNL, ESWL, ureteroscopic lithotripsy, hypospadias repair, female incontinence surgery, or vesicovaginal fistula repair.

The registrars' Log Book may serve to indicate deficiencies in operative exposure to specific procedures at certain training institutions. However, it remains questionable whether such deficiencies in training should constitute a reason for not admitting candidates to the final Fellowship examination or for not registering them as specialists. Moreover, remedying such deficiencies in the registrar's training may present significant challenges because of financial, bureaucratic and personal factors that limit the feasibility of rotating registrars between training institutions.

Another finding in our study which raises concern, is the decrease in the ratio of procedures performed by the registrar as surgeon rather than assistant in the past decade. This may be due to an increase in the number junior full-time consultants in teaching hospitals, who naturally compete with registrars to perform procedures. It may also be due to an increase in the ratio of registrars relative to the available operative case load, so that registrars have to assist each other in order to obtain surgical experience.

One of the factors potentially impacting on residents' operative experience is the imposition of an 80-hour work week for residents in the USA and several European countries.¹⁷⁻²⁷ Most studies have shown that the restriction of work hours resulted in a marked improvement in resident quality of life, with increased personal time and decreased fatigue at work.^{17-19,21,24} Some studies indicated that the reduction of resident work hours had beneficial effects on patient care, but most surveys showed that the quality of patient care was not improved, even though this was one of the stated objectives of the restricted work hours.^{17,24} Several studies indicated that the continuity and safety of patient care as well as resident surgical experience and education were adversely affected,^{17,19,21-23,26,41} but according to other studies resident surgical case load and procedural experience were unchanged.^{17,18,22,24} A minority of residents and faculty believe that the duration of residency training should be increased to compensate for duty hour restrictions.²⁷

Another factor which has negatively impacted on the operative surgical experience of residents is the increased nonoperative management of trauma patients with abdominal organ injuries.²⁸⁻³¹ A study from Georgia, USA, found that in the period 1991-93 compared to the period 1994-96 blunt trauma admissions increased by

24%, while nonoperative management increased 10% and 54% for liver and splenic injuries, respectively. As a result therapeutic laparotomies in patients with liver and splenic injuries decreased from 58% to 35%, and nontherapeutic laparotomies decreased from 33% to 11%, thus adversely affecting the operative caseload available to surgical residents.²⁸ A report from Kentucky revealed that between 1994 and 1999 the nontherapeutic laparotomy rate for trauma decreased from 35% to 14%, due to increased use of noninvasive diagnostic tests such as peritoneal lavage and CT, thereby decreasing the opportunity for residents to obtain operative experience.²⁹ A study from Michigan found that between January 1997 and December 1999 the number of operative trauma cases was an average of 6.4 per resident, which falls significantly short of the 16-case minimum requirement in trauma surgery established by the Residency Review Committee.³⁰ A report from Virginia indicated that surgical resident experience on most trauma services was heavily weighted to nonoperative management, with a relatively low number of procedures, which has serious implications for resident training.³¹ A study from Mississippi reported that the percentage of patients with blunt splenic and hepatic injuries who underwent surgery decreased from 100% and 93% in 1990 to 19% and 28%, respectively, in 1999. However, the number of patients with blunt solid visceral injuries increased more than four-fold from 1990 through 1999, therefore the number of operations for splenic and hepatic injuries performed by chief residents did not decline significantly (5.5 compared to 4.6 cases per chief resident in 1990 and 1999, respectively). The authors concluded that resident training in trauma surgery can be maintained if trauma volumes remain high enough.⁴²

Several studies have shown that teaching surgical procedures to residents requires longer operative and anesthetic times, with significantly higher costs.³²⁻³⁶ A report from Tennessee found that in the majority of case categories resident operative times were longer than those of faculty, translating to an annual cost of \$47,970 per graduating chief resident, with a total annual cost of training residents in the operating room amounting to \$53 million. This high cost suggests the need for teaching basic surgical skills outside the operating room or by means of virtual surgery training modules.³² A study conducted in Florida revealed that the hands-on teaching of knee arthroplasty to orthopedic residents resulted in longer operating room times and higher costs, with the increased perioperative resource consumption varying from 22% to 82%.³³ A study from Texas found that the anesthesia and operating times for arthroscopic procedures were significantly longer for senior orthopaedic residents than orthopedic surgeons, which translated to significantly increased costs, suggesting the need for technical training facilities outside the operating room.³⁴

Several studies have shown that there is no significant difference in the postoperative complication rate in matched groups of patients treated by senior surgical staff and residents.^{2,37-40} Although analysis of subgroups of patients sustaining moderate to severe postoperative complications showed a statistically significant difference between those treated by senior surgical staff and residents, this is probably attributable to the more complex operative problems handled by the senior staff.³⁷

It has been suggested that computer-based training in technical skills has the potential to solve many of the educational, economic, ethical, and patient safety issues related to teaching surgical residents how to perform operations. Future development of virtual-reality systems may encourage surgeons to incorporate computer simulation into the surgical curriculum.⁴³ With regard to operative laparoscopy, didactic sessions including animal laboratories and simulators already form an important part of training.³ However, there may be limits to the acceptability of simulated surgical training. A survey to assess the need for additional educational tools found that surgical trainees preparing themselves for operative procedures found anatomical texts and atlases as well as case discussion with attending staff the most useful and available resources, whereas skills stations were recognized as the least valuable.⁴⁴

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GOLDEN JUBILEE CELEBRATIONS

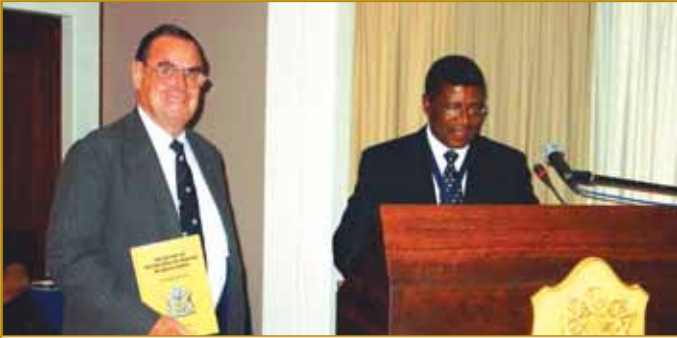
CMSA Golden Jubilee October 2005 : Presidential Dinner, Special Awards Ceremony and Graduation



President Lizo Mazwai addressing guests at the dinner.



Mr Stewart Hamilton, President RCPSC receiving a golden jubilee tie from the President.



Dr Ian Huskisson receiving the first official copy of the CMSA History of which he is the author.



CMSA staff who also celebrated the silver jubilee of the CMSA 25 years ago, receiving a copy of the CMSA History. (From left to right appear : Jane Savage, Gillian Cress, Olga Matiyase, Patricia Bredekamp, Bernise Bothma, Cathy Jordan).



Dr Vince Caruso, President RC Path (Australasia) presenting the President with a gift from his College.



Prof Neil Douglas, President RCP Edin and Mrs Sue Douglas receiving golden jubilee insignia from the President.



Prof Niall O'Higgins, President RCSI with Mrs Rosaleen O'Higgins receiving a gift from the President



Prof Osato Giwa-Osagie, Professor of Obstetrics and Gynaecology, University of Lagos and Mrs Giwa-Osagie, at the dinner with President Lizo Mazwai and the President COG(CMSA), Prof Zephne van der Spuy.



Prof Dan Ncayiyana, Dr Mamphela Ramphele and Prof Mike Sathekge at the golden jubilee graduation ceremony in the City Hall, Cape Town. Dr Ramphele received an Honorary Fellowship of the CMSA.



Profs Vivian Fritz, Chris Lundgren and Justin van Selm sharing a moment. Prof Van Selm received admission to Fellowship *ad eundem* of the College of Ophthalmologists.

GOLDEN JUBILEE CELEBRATIONS

Golden Jubilee Congress and Special Awards Ceremony at the Protea Hotel, Stellenbosch



Some of the international and local delegates at the registration cocktail function.



Prof Bongani Mayosi (*Honorary Registrar*) presents a gift to Premier Ebrahim Rasool after the official opening of the Congress. On the right appears CMSA President, Prof Lizo Mazwai.



Congress delegates.



Dr Mamphele Ramphela, *Honorary Fellow CMSA*, giving the keynote address.



Dr Johnny Meyer, one of the original Founders, participated at the congress at the age of 96! He also received a special recognition award.



Dr Peter Gordon-Smith, past President and *Honorary Fellow* of the CMSA, receiving a Golden Jubilee Award from President Lizo Mazwai. Dr Gordon-Smith died on 27 March 2006.



Prof Ralph Kirsch, immediate past President, being presented with a Golden Jubilee Award.



Prof John Terblanche, past President and *Honorary Fellow*, receiving a Golden Jubilee Award.



Prof Yackoob Seedat, *Honorary Fellow* of the CMSA receiving a Golden Jubilee Award.



Prof Ephraim Mokgokong being presented with a Golden Jubilee Award.

GOLDEN JUBILEE CELEBRATIONS

More recipients of Golden Jubilee Awards (some posthumously) and Presentation of Recognition Awards to Founders



Dr Ian Huskisson, CMSA Historian and Honorary Fellow, receiving a Golden Jubilee Award from President Lizo Mazwai.



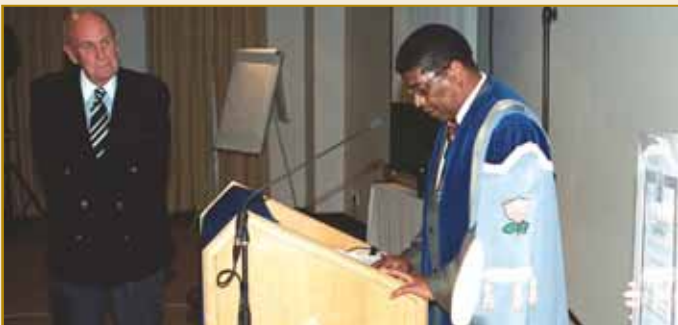
Mr Gavin Tucker and Mrs Claire Louw, receiving a Golden Jubilee Award on behalf of their father, Dr Ron Tucker, past President and Honorary Fellow of the CMSA.



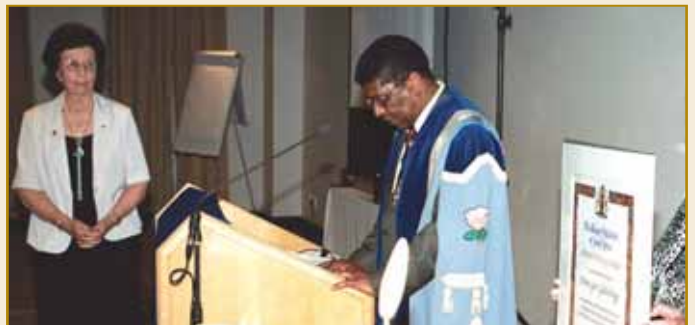
A Golden Jubilee Award was bestowed posthumously on Prof John Brock, past President. His daughter, Mrs Bridget Lubbe, received the award.



A Golden Jubilee Award was bestowed posthumously on Prof François Daubenton, past President. His widow, Mrs Joan Daubenton, received the award.



A Golden Jubilee Award was bestowed posthumously on Prof John Douglas, past President. His son, Mr Harvey Douglas, received the award.



A Golden Jubilee Award was bestowed posthumously on Prof Frans Geldenhuys, past President. His widow, Mrs Aletta Geldenhuys, received the award.



A Golden Jubilee Award was bestowed posthumously on Dr Phyllis Knocker, past President. Her brother, Mr Kenneth Knocker, received the award.



A Golden Jubilee Award was bestowed posthumously on Dr Arthur Landau, past President. His son, David Landau, received the award.



A Golden Jubilee Award was bestowed posthumously on Prof Jannie Louw, past President. His son, Mr Rob Louw, received the award.



Three of the recipients of Golden Jubilee Awards and Special Awards were (from left to right): Prof Justin van Selm, Prof Michael Gordon-Grant and Dr Julian Coller.

CMSA DATABASE INFORMATION

It would be appreciated if members of The Colleges of Medicine of South Africa could complete this form and send it to the administrative office in Rondebosch (address below).

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(State whether Prof or Dr)

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Please also advise the office if your postal address has changed:

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Surname:

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17 Milner Road, Rondebosch 7700, South Africa or Fax: (021) 685-3766

