Clinical leadership and management: developing world ENT

BY JOHAN FAGAN

I have been asked to share some of the initiatives I have been involved with to address ENT-related challenges in Africa and the developing world. Developing countries constitute the majority of the world's landmass (Figure 1), are home to >50% of its people, and has the greatest burden of ENT disease. Cancer is a major health crisis: developing countries accounted for >50% of newly diagnosed cancers in 2010; it is projected to increase to 70% by 2030 (Figure 2) [1]; and there is a wide disparity in cancer-related fatality which is aligned with income levels (Figure 3) [1]. Of 360million people in the world with disabling hearing loss, the prevalence is greatest in South Asia, Asia Pacific and Sub-Saharan Africa [2]. Yet there is a severe shortage of ENT surgeons, audiologists and speech therapists (Malawi has only one resident ENT surgeon for 14 million people), equipment and infrastructure, managerial skills and leadership in much of the developing world [3].

It is therefore apparent to me that the major and immediate ENT challenges reside not in developed, but in developing countries, and that it is essential that clinical expertise, resources, teaching, innovation and research be redirected to the developing world. I therefore initiated a number of projects to start addressing some of these challenges.

Specialist training

I favour training as opposed to clinical outreach, as it makes a *sustainable difference* to ENT services and training. The University of Cape Town ENT department trains three *supernumerary (unpaid) registrars* from other countries at any one time. We also instituted a 1-year *Clinical Fellowship in Advanced Head and Neck Surgery* funded by *Karl Storz*. Fellows are selected in an attempt to strategically distribute highly trained head and neck surgeons throughout Sub-Saharan Africa. Past and present fellows hail from Uganda, Kenya, Senegal, Ghana (2), Nigeria, Rwanda, Malawi and Tanzania; our 10th fellow is a Zimbabwean. All have returned to teaching institutions in their own countries to practice, teach and establish new head and neck units.

Academic support

We welcome qualified specialists as *clinical observers* who attend ward rounds, tumour boards, clinics and surgery, and have run head and neck and sinus surgery cadaver dissection courses in a number of African countries.

Fostering leaders

Past trainees have assumed important leadership positions in their own countries inter alia establishing a national ENT Society (Zimbabwe), serving as president of the Pan African Federation of Otorhinolaryngology Societies (PAFOS), establishing ENT specialist training programmes in Zimbabwe and Rwanda where none had existed before; setting up a comprehensive new ENT service and training the first 12 ENT clinical officers in Malawi [4], and establishing an ENT section in College of Surgeons of East, Central and Southern Africa (COSECSA) which oversees a multi-national ENT training programme and specialist certification examinations http://www.cosecsa.org/

Standard setting

Patients in developing countries are generally dependent on state services often with poor health infrastructure and resources. Although ENT is practised differently and trainees have to adapt what they have learned in Cape Town to a lower cost, lower technology practice, exposure to a developed world practice through our registrar and fellowship training and clinical observerships is important so that clinicians in developing countries know what standards to aspire to. Standard setting is also maintained through our engagement as external examiners in specialist examinations in other African countries.

Developing world practice guidelines

Developed world practice guidelines frequently do not apply in developing world settings e.g. <50% of African countries have radiotherapy

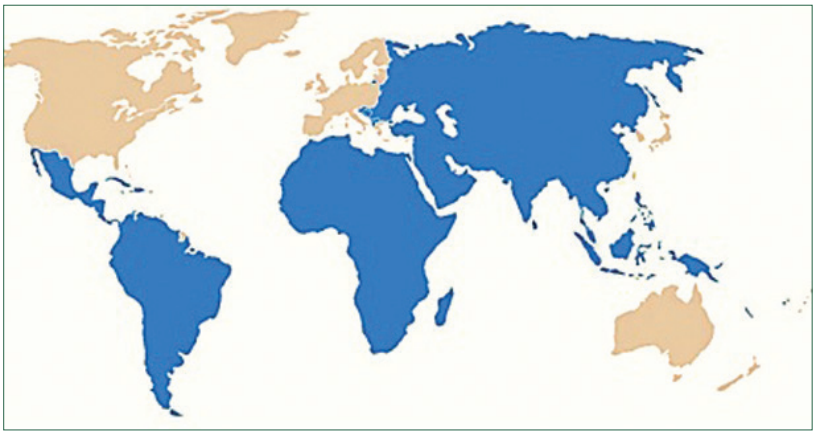

Figure 1: Developing (blue) vs. developed world (tan).

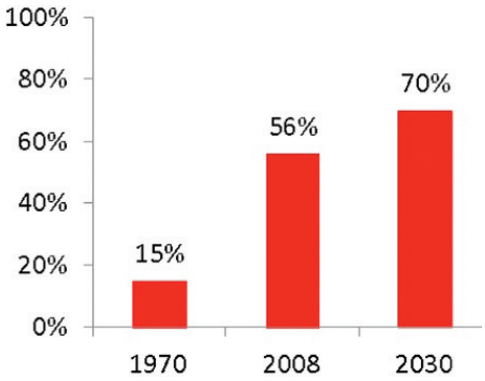

Figure 2: Increasing percentage of global burden of cancer in developing countries [1].

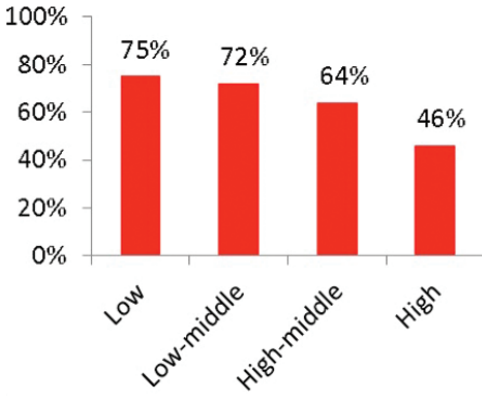

Figure 3: Case fatality from cancer according to income levels of countries [1].

facilities [5]. We therefore recently published a monograph on 'Management principles for head and neck cancer in developing countries' [5]. More research is however required to develop a stratified approach to ENT practice that is linked to availability of diagnostic and therapeutic resources, and the ethical principles relating to patient selection in resource limited settings.

Open access resources

A new set of operative surgery textbooks may cost colleagues in developing countries a month's salary, and much of which is written has limited relevance to surgical practice in a developing country. Therefore I initiated and self-published two free, open access textbooks www.entdev.uct.ac.za/guides/ i.e. *Open Access Atlas of Otolaryngology, Head & Neck Operative Surgery, and Open Access Guide to Audiology & Hearing Aids for Otolaryngologists.* The index pages are hosted on the IFOS ENT Developing World Education website www.entdev.uct.ac.za/ which I maintain. Other than editors' and writers' time, the books have not cost a cent to produce. Chapters can be accessed in the most remote places in the world on a mobile device. It is truly an international effort with chapters written by international experts for free, and with volunteers translating chapters into Portuguese, Spanish and French. Chapters have been downloaded >330,000 times, currently at a rate of >700 chapters per day. What is both remarkable and surprising is where downloads originate from; it includes both developed and developing world countries, as well as countries embroiled in civil war where access to textbooks is likely to be severely compromised (Table 1).

TABLE 1: ORIGIN OF HITS OF TOP 20 COUNTRIES IN MARCH 2014.

	1	South Africa	11	Spain
	2	USA	12	Philippines
	3	India	13	Greece
	4	UK	14	Iraq
	5	Brazil	15	Lithuania
	6	Italy	16	Argentina
	7	Saudi Arabia	17	Vietnam
	8	Sweden	18	Pakistan
	9	Malaysia	19	Germany
	10	Australia	20	Egypt

Top three tips for clinical leadership / management

Strong leadership is required in developing countries, but especially in developed countries in relation to teaching, training, provision of open access resources and academic support if we are to improve access to ENT services in developing countries. My three tips are:

1. Lead by example
2. Maintain absolute integrity
3. Advance the ambitions and careers of others.

References

1. Farmer P, Frenk J, Knaul FM, et al. Expansion of cancer care and control in countries of low and middle income: a call to action. *Lancet* 2010;**376 (9747)**:1186-93.
2. WHO: Prevention of blindness and deafness. http://www.who.int/pbd/deafness/estimates/en/ Last accessed July 2014.
3. Fagan JJ, Jacobs M. Survey of ENT services in Africa: need for a comprehensive intervention. *Global Health Action* 2009 Vol 2. http://journals.sfu.ca/coaction/index.php/gha/article/view/1932 Last accessed July 2014.
4. Mulwafu W, Nyirenda T, Fagan JJ, et al. Initiating and developing clinical services, training and research in a low resource setting: the Malawi ENT experience. *Trop Doct* 2014;**44(3)**:135-9. [Epub ahead of print]
5. Management principles for head and neck cancer in developing countries. https://vula.uct.ac.za/access/content/group/ba5fb1bd-be95-48e5-81be-586fbaeba29d/Management%20Principles%20_Guidelines_%20for%20Head%20and%20Neck%20Cancer%20in%20Developing%20Countries.pdf Last accessed July 2014.

Relevant websites

IFOS educational website for ENT surgeons in the Developing World. http://www.entdev.uct.ac.za/ Last accessed July 2014.

The Open Access Atlas of Otolaryngology, Head & Neck Operative Surgery & Open Access Guide to Audiology and Hearing Aids http://www.entdev.uct.ac.za/guides/ Last accessed July 2014.

Johan Fagan,
MBChB, FCORL, MMed,
Professor and Chairman,
Division of Otolaryngology,
University of Cape Town,
H53 OMB, Groote Schuur Hospital,
Observatory, Cape Town, 7925,
South Africa.
E: johannes.fagan@uct.ac.za

Declaration of Competing Interests
None declared