



This is visually demanding and tiring work, and it would not be possible for any one person to do this work for more than 2 - 4 hours each day. The possibility is therefore for an argon laser machine in use for 15 - 20 hours each week in each health district, with the treatments being administered by a team of medical officers working 2 - 4-hour shifts, and with the machine receiving timeous and efficient servicing and maintenance to avoid down-time from breakages.

This cross-sectional study highlights the deficiencies that exist in the current screening and management of diabetic patients, and highlights the need to include diabetic retinopathy as a priority in our Vision 2020 programme.

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References

1. World Health Organization. *State of the World's Sight. Vision 2020 – The Right to Sight*. Geneva: WHO, 2005.
2. South African Department of Health. *National Guideline – Prevention of Blindness in South Africa*. Pretoria: DOH, 2002.
3. ETDRS Study Group. Photocoagulation for diabetic macular edema. Early Treatment Diabetic Retinopathy Study Report Number 1. *Arch Ophthalmol* 1985; 103: 1796.
4. Chow SP, Aiello LM, Cavallerano JD, et al. Comparison of non mydriatic digital retinal imaging versus dilated ophthalmic examination for nondiabetic eye disease in persons with diabetes. *Ophthalmology* 2006; 113: 833-840.
5. Fong D, Aiello L, Gardner T, et al. Diabetic retinopathy. *Diabetes Care* 2003; 26: 226-229.
6. Cook C, Murdoch I, Kennedy C, Taylor P, Johnson K, Godoumov R. TeleOphthalmology and Vision 2020 in South Africa. *S Afr Med J* 2004; 94: 750-751.

Health and demographic surveillance sites contribute population-based data on maternal deaths in rural areas

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To the Editor: Maternal mortality remains an important public health challenge in South Africa despite government initiatives to monitor and reduce maternal deaths.¹ In particular, the mandatory notification of maternal deaths, with rigorous investigation through the National Committee on Confidential Enquiries into Maternal Deaths, has been an important national intervention to quantify the problem and monitor trends. However, this system of enquiry is fundamentally health service-based, and data are collected largely through record review and notification forms submitted from the health facility where the death occurred.² The vital registration system offers another source of maternal death data, but reporting of deaths, particularly in rural under-resourced areas, is incomplete. While death registration has increased nationally from 54% in 1990 to 89% in 2000, only 78% of deaths were

registered in rural Limpopo province in 2002.^{3,4} In contrast, health and demographic surveillance sites (HDSSs), which collect household-level data on all births and deaths in a defined population, are able to identify maternal deaths that occur in the community. Moreover, this system provides an opportunity to interview those close to the deceased, using the verbal autopsy method, to gain an understanding of possible causes, as well as contributory and avoidable factors that led to the death.⁵

The Agincourt HDSS, located in the rural north-east of South Africa, is 1 of 3 such sites in the country (Dikgale DSS, University of Limpopo, and Africa Centre DSS, University of KwaZulu-Natal, are the other 2 sites). A review of maternal deaths occurring at this site between 2000 and 2005 indicates that 6 of the 26 deaths occurred outside of the health system/ at home, and hence might have been missed by the existing notification system. This is a much higher proportion than the 2.8% reported nationally, albeit for a different time period.⁶ Given that women with least access to services are likely to be those whose deaths go undetected, the factors contributing to their deaths are likely also to go undocumented – and thus fail to inform local practice. Hence, the HDSS provides an additional source of data on maternal deaths that complements national facility-based data by offering a population-based perspective. High-quality data on maternal deaths from rural areas is especially important, given that these areas have the

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highest burden of mortality and the least reliable information.⁷ Health and demographic surveillance sites are able to capture this community experience effectively so that barriers to health service access, such as transport, finance and local culture, can be better understood and addressed in South Africa's rural areas.

References

1. Speech by the Minister of Health on the *Saving Mothers Report on Confidential Enquiries into Maternal Deaths in South Africa*. <http://www.doh.gov.za/docs/sp/2006/sp0919.html> (last accessed 14 November 2006)
2. Pattinson B, ed. *Saving Mothers: Report on the Confidential Enquiry into Maternal Deaths in South Africa*. Pretoria: Department of Health, 1998.
3. Dorrington RE, Bourne D, Bradshaw D, Laubscher R, Timmaeus IM. *The Impact of HIV / AIDS on Adult Mortality in South Africa*. Technical Report. Cape Town: Burden of Disease Unit, Medical Research Council, 2001.
4. Kahn K. *Dying to make a fresh start. Mortality and health transition in a new South Africa*. PhD thesis, Umea University Medical Dissertations, 2006.
5. Ronsmans C, Etard JF, Walraven G. *Verbal autopsies: learning from reviewing deaths in the community*. In: Lewis G, ed. *Beyond the Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer*. Geneva: World Health Organization, 2004: 43-55.
6. Makhubalo L, Mulumba, Mahlasela, Pattinson. *Epidemiology*. In: Pattinson B, ed. *Saving Mothers: Report on the Confidential Enquiry into Maternal Deaths in South Africa*. Pretoria: Department of Health, 1998.
7. Ronsmans C, Graham WJ. *Maternal survival 1. Maternal mortality: who, when, where and why*. *Lancet* 2006; 368: 1189-1200.