stage and eminently curable. That picture does not entirely explain the deaths in very young women under 25 years of age. Until a close study of their case histories has been carried out and the histological diagnosis of tumour type is known, however, it would be premature to complicate screening policies to try to anticipate the possibility of a rapidly progressing variant of cervical cancer.

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- ¹ Advisory Committee on Cancer Registration. *Report of Advisory Committee on Cancer Registration. Cancer registration in the 1980s, England and Wales*. London: HMSO, 1981:39. (Acheson Committee.)
- ² Miller AB, Lindsay J, Hill GB. Mortality from cancer of the uterus in Canada and its relationship to screening for cancer of the cervix. *Int J Cancer* 1976;17:602-12.
- ³ Hakama M, Räsänen-Virtanen V. Effect of a mass screening program on the risk of cervical cancer. *Am J Epidemiol* 1976;103:512-7.
- ⁴ Macgregor JE, Teper S. Mortality from carcinoma of cervix uteri in Britain. *Lancet* 1978;ii:774-6.
- ⁵ Adelstein AM, Husain OAN, Spriggs AI. Cancer of the cervix and screening. *Br Med J* 1981;282:564.
- ⁶ Vessey MP, McPherson K, Yeates D. Mortality in oral contraceptive users. *Lancet* 1981;i:549-50.
- ⁷ Dunn JE, Schweitzer V. The relationship of cervical cytology to the incidence of invasive cervical cancer and mortality in Alameda County, California, 1960 to 1974. *Am J Obstet Gynecol* 1981;139:868-76.
- ⁸ Macgregor JE. Cancer of the cervix and screening. *Br Med J* 1981;282:734.
- ⁹ Berkeley AS, Li Volsi VA, Schwartz PE. Advanced squamous cell carcinoma of the cervix with recent normal Papanicolaou tests. *Lancet* 1980;iii:375-6.
- ¹⁰ Clarke EA, Anderson TW. Implications of cervical dysplasia. *Lancet* 1980;ii:1420.
- ¹¹ Albert A. Estimated cervical cancer disease state incidence and transition rates. *JNCI* 1981;67:571-6.
- ¹² Richart RM, Barron BA. A follow-up study of patients with cervical dysplasia. *Am J Obstet Gynecol* 1969;105:386-93.
- ¹³ Fidler HK, Boyes DA, Worth AJ. Cervical cancer detection in British Columbia. *Journal of Obstetrics and Gynaecology of the British Commonwealth* 1968;75:392-404.
- ¹⁴ Burghardt E, Holzer E. Treatment of carcinoma in situ. Evaluation of 1609 cases. *Obstet Gynecol* 1980;55:539-45.
- ¹⁵ Kinlen LJ, Spriggs AI. Women with positive cervical smears but without surgical intervention. A follow-up study. *Lancet* 1978;ii:463-5.
- ¹⁶ Husain OAN, Butler EB, Evans DMD, Macgregor JE, Yule R. Quality control in cervical cytology. *J Clin Pathol* 1974;27:935-44.
- ¹⁷ Anonymous. Quality of performance in pathology laboratories. *Lancet* 1981;ii:599.
- ¹⁸ Macgregor EJ. Misleading exfoliative cytology (titled incorrectly Drug therapy and cancer diagnosis). *Br Med J* 1964;ii:754-5.
- ¹⁹ Prendiville W, Guilleband J, Bamford P, Beilby J, Steele SJ. Carcinoma of cervix with recent normal Papanicolaou tests. *Lancet* 1980;ii:853-4.

Career guidance by computer

In the past 10 years or so a complex organisation has grown up to oversee doctors' training needs both in hospitals and latterly in general practice. After preregistration experience, which is the responsibility of the medical school, posts suitable for general professional training (senior house officer and registrar) are approved by the royal colleges and faculties, and the senior registrar posts suitable for higher professional training are dealt with by joint committees on higher training on the recommendation of specialist advisory committees, which visit posts. Unfortunately, inspection and assessment take time, at present posts are approved for a maximum of five years, and the approving bodies differ in the way they carry out their functions. As a result co-ordinating information has proved difficult and the whole exercise is expensive. What information does become available is eventually disseminated

to the DHSS, the councils for postgraduate education, regional postgraduate organisations, and area health authorities and districts. A recent request from the General Medical Council to regions for information on the training role of senior house officer and registrar posts, however, showed how difficult it was to discover which posts had been visited and approved or turned down.

Some form of flexible and easily accessible information service is needed, so that people such as postgraduate deans and clinical tutors can provide up-to-date information about training not only for statutory bodies but also—and more important—for junior doctors who come to them in increasing numbers for advice. A valuable report (*Training doctors: a study of information needs*) by J C C Smith, commissioned by the Chief Medical Officer to the Department of Health, has been circulated recently though not published. This looks at the feasibility of a co-ordinated system based on regions using computers to provide instant information about training posts throughout the country. The regional computer systems that already exist are concerned largely with manpower, planning, and payrolls. The only system purely devoted to careers is the Medical Education Information and Career Service (MEDICS) developed by the South-west Thames region. Though funds have been provided by the region, the system itself is run from the regional dean's office of the British Postgraduate Medical Federation and such is its flexibility—it relies on a microcomputer with printers and visual display units—that it can be used on the spot and has spare capacity which could be extended to include all four Thames regions. Its value has been shown in the exercise to establish the role of training posts referred to above.

Smith emphasises that service and training needs cannot be separated—indeed they should not be—and the DHSS already publishes annual manpower statistics from which information can be obtained about career opportunities in the different specialties. Unfortunately these appear only annually, and they are presented in indigestible tables, difficult to interpret. Smith proposes a Medical Manpower and Training Information System (MATRIS) which would eventually link regional and district users. He rejects the mainframe computer system in operation at present in favour of free-standing, user-oriented systems based on 16-bit microprocessors. Their advantages are flexibility; accessibility; ease of use with minimal training, cheapness, and availability of hardware; and initially at least considerable spare capacity. Since it will take time to develop a national network he suggests a pilot study which would be particularly concerned with validating methods for capturing data. DHSS finance should surely be available for one or more such studies; the cost does not look formidable.

Doctors in training need to know where approved posts are available in different specialties and different parts of the country; expected future vacancies; how long people are staying in various grades in the different specialties; and what are the long-term prospects for consultant appointments. Answers to these and many other questions could be provided reasonably soon and probably quite cheaply. A computer-based system would also help the authorities by providing printouts of posts that require reinspection, rotation of senior registrars, years of service in different grades and specialties, and so on. In the fullness of time such a system might even be able to contribute to correcting the imbalance between junior and senior medical staff.

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