Medicine in Germany

SIR—Your country profile of German medical care and research (Dec 14, p 1631),[1] notwithstanding some of the criticisms made, may have painted too rosy a picture. Lorenz chooses the euphemism of "different" to describe the quality of German clinical research, and notes that only two of 32 German fifth-year medical students could correctly identify *The Lancet*, citing this as justification for the publication of research in the German language. Rather than being support for German language publication, it seems an indication of how poor at least some aspects of German medical training are (given that *The Lancet* has the second highest scholarly impact of any medical journal[2,3]). Perhaps German students and physicians would be best served by gaining access to the best contemporary medical literature, which is published in English, the *lingua franca* of modern science.

Lorenz notes that German clinical researchers have the impression that their work will not be accepted by the well-known journals, and therefore submit to specialist journals. He claims that in a Marburg research group's case, journals were chosen on the basis of having impact factors (IF) of greater than 1, and "the presence of individuals on the editorial board who can testify to the authors' credibility". IF, which would be an objective criterion for journal quality,[2,3] is not fulfilled in the German language journals listed by Lorenz, which have IF of less than 0·7.[3] If they had had IF greater than 1 at the time of the Marburg group's publication, the subsequent shrinkage speaks to their declining impact.

Rothmund aptly notes the destructive influence of contemporary so-called Green politics on medical advances. What is not noted in the country profile is the lingering effect of the 1932–33 German elections, which led to the removal of the best scientists in Germany, their replacement with loyal party members (who set the tone for succeeding generations), and an exacerbation of the rigid autocratic approach.[4] Authoritarian and political goals continue to triumph over quality, and new ideas, by dint of their divergence being intrinsically suspect, are often crushed, precluding scientific advances.[4]

The 50th anniversary of the doctors' trial at Nuremberg should remind us that German medicine has a murderous past (most German physicians were Nazi party members), so the reported reluctance of many Germans to be research subjects should not be surprising. It is noteworthy that the crimes which masqueraded as investigations were not only extraordinarily vicious—they were also often so poorly designed as to yield useless data.[5]

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1 Selbmann HK, Flöhl R, Volk H-D, et al. Country profile: Germany. *Lancet* 1996; **348:** 1631–39.
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SIR—Clinical research in Germany is obviously in a desolate state,[1] and distinguished German scientists continue to work abroad. However, the dilemma begins when medical trainees are first faced with whether to pursue a career in academic medicine. By contrast with many other western countries there are no career structures or training schemes for academic medicine, and careers in clinical and academic medicine often run along side each other for years, without distinction. Good scientific practice such as basic research techniques, statistics, epidemiology, and presentation skills are rarely taught and often not required for MD or PhD programmes. Requirements for senior lecturer posts (Privat Dozent) vary among federal states and even among universities, and are sometimes poor by comparison with international standards. Of course not all is golden in the Anglo-American systems, which have similar financial constraints, but a more clear-cut separation between clinical and academic medicine and the development of career structures give these countries a clear advantage.

Not all is lost for the scientific tradition of Germany. The recent introduction of interdisciplinary research units by the DFG (Deutsche Forschungsgemeinschaft) is the right way forward to provide a thriving environment in which clinical research can once more prosper.

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1 Selbmann HK, Flöhl R, Volk H-D, et al. Country profile: Germany. *Lancet* 1996; **348:** 1631–39.

SIR—In their review of the German health care system, Selbmann and colleagues[1] lament the fact that Germany is no longer in the lead in medical research. Various reasons are offered, yet the most important is not mentioned: the enormous brain drain that happened during the Third Reich. Thousands of Jewish doctors either left the country or perished in concentration camps in this era.[2] The medical elite of that time was dominated by Jews. In some medical schools, about 80% of the staff had to go.[3] A loss of this magnitude cannot be sustained without severe and long-term effects on the quality of research.

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1 Selbmann HK, Flöhl R, Volk H-D, et al. Country profile: Germany. *Lancet* 1996; **348:** 1631–39.
2 Kuter MH. Doctors under Hitler. Chapel Hill, NC: University of North Carolina Press, 1989.
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Declining cancer mortality in European Union

SIR—After steady rises registered since early this century, and a peak rate in 1990, age-standardised cancer mortality rates in the USA declined by 3·1% in both sexes combined, between 1990 and 1995. About half the decline was attributed to levelling of the lung and other tobacco-related cancer epidemic, and the remaining proportion to several factors, including reduced exposure to occupational carcinogens, prevention and early diagnosis, and improved treatment.[1,2]

Monitoring of a corresponding trend for Europe is also important.[3] We updated analyses for the European Union on the basis of death certificates issued and population estimates for the 15 countries of the Union obtained from the WHO database.[4] Age-standardised and sex-standardised mortality rates for all neoplasms, lung, and stomach cancers are shown in the table, together with mortality from all causes and the proportion of cancer deaths. Mortality from all causes declined steadily by 38% between 1960 and 1992. Total cancer mortality rates in both sexes combined have increased by 44% since 1960, to reach a peak in 1988. Thereafter, they declined by 2·8% in 1992. Likewise, lung cancer rates in both sexes combined increased by 58·5% between 1960 and 1988, and declined by 3·9% in 1992. Thus, almost a third of the decline was accounted for by lung cancer alone, and probably about a half by the complex of tobacco-related neoplasms.[5] By comparison with the USA, the evolution of the tobacco-related lung

	All causes	All cancers	Lung cancer	Stomach cancer	Other cancers	CPM* %
Year						
1960	824·2	140·5	19·5	24·9	96·1	17·7
1970	737·5	145·0	25·2	19·3	100·5	19·5
1980	635·2	146·1	29·7	13·7	102·7	21·9
1985	581·5	146·0	30·4	11·6	104·0	23·1
1988	541·9	146·7	30·9	10·6	105·2	24·7
1989	533·5	145·5	30·5	10·1	104·9	24·8
1990	526·2	143·9	30·2	9·9	103·8	24·7
1991	519·3	143·8	30·2	9·6	104·0	24·9
1992	507·6	142·6	29·7	8·7	104·2	25·2
1993†	539·1	140·6	27·6	10·0	103·0	23·8
Change in rate, 1988–92	–34·3 (–6·3%)	–4·1 (–2·8%)	–1·2 (–3·9%)	–1·9 (–17·9%)	–1·0 (–1·0%)	

*CPM, cancer proportional mortality. †Data only for Austria, Denmark, Finland, Germany, Greece, Luxembourg, Netherlands, and Portugal.

Table: **Age-standardised and sex-standardised mortality rates per 100 000 (world standard population) from selected causes in European Union, 1960–92**

cancer epidemic is still in its early phase in European women.[5] About half of the decline in total cancer mortality not attributable to tobacco includes a continuing fall in deaths from gastric cancer.

Although data for 1993 were only available for eight countries, the downward trend since 1988 for cancer mortality was confirmed.

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Balloon ripening of the cervix

SIR—Many young physicians believe that nearly everything we know in obstetrics and gynaecology was discovered in recent decades. However, some of the so-called recent breakthroughs were described long ago. For example, Richard Lower (1631–91) was the first person to show interest in blood transfusion; the first transfusion was done by him in 1665, with sheep's blood. The first abdominal operation for ectopic pregnancy was performed in 1759 by John Bard (1716–99), and salpingectomy for ectopic pregnancy was achieved by Lawsen Robert Tait (1845–99) in 1884. Epidural analgesia for labour pain was introduced by Walter Stoeckel (1871–1961) in 1909; he achieved immediate and total anaesthesia of the lower body in six parturients by subarachnoid injection of cocaine.

It is generally accepted[1] that use of inflated balloons to induce cervical ripening and labour was first described by Embrey and Mollison in 1967,[2] and modified by Atad and colleagues in 1991.[3] However, the use of these balloons was first described by Barnes in April, 1861, in *Obstetrical Transacricus* volume III.[4] Barnes used a rubber balloon, filled with water; the induction-to-delivery interval was 3–4 h,[5] which is impressive compared with 6–24 h reported in a recent review.[1] Corner[5] noted: "I may briefly mention what struck me particularly in the use of these instruments: the ease with which they were introduced within the os . . . : the absence of complaint on the part of the patient; and their speedy action in dilating the parts and inducing natural expulsive pains".

Even more fascinating is comparison of the hypothesis of Barnes's time with that of today on how the balloon exerts its effect. At the beginning of the century, the mechanism of induction of labour was thought not to be purely by mechanical dilation of cervix: a foreign-body effect on the cervix was also considered to stimulate uterine contraction. Modern belief holds that the basic mechanism of cervical ripening by balloon seems to be direct pressure and overstretching of the lower uterine segment and cervix,[1] and that overstretching results in increased prostaglandin concentrations in the amniotic fluid and maternal plasma; on release, the prostaglandins are involved in cervical softening and subsequent uterine contractions.

After more than 100 years the story of ripening the unfavourable cervix with a balloon mechanism seems to have found a beginning, middle, and end. However, perhaps, the description of yet another substance may in the future elucidate more accurately the biochemical mechanism involved in cervical ripening .

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Use of unlicensed nitric oxide in Austria

SIR—The alert given by Warren and Higgenbottam[1] on the benefits and risks of nitric oxide (NO) inhalation is a reminder of the possible adverse consequences of the use of an unlicensed medicine. Generally, the distribution of NO for medical purposes accords with the ethical rules for experimentation with drugs, but less restrictive controls seem to exist when the medical authorities allow compassionate use of NO in life-threatening conditions, without permission of an ethical committee or documentation. Joannidis and colleagues (Nov 23, p 1448)[2] report one lethal complication, and another with a serious outcome, which caution against use of inhaled NO in intensive care under certain conditions. The European Medical Product Agency guidelines[3] and guidelines from a sponsor of NO clinical trials[4] mention bleeding disorders as possible side-effects of NO therapy. However, these guidelines may not be known to all compassionate users.

We were surprised to learn that NO-containing cylinders could be directly purchased from the Austrian subsidiary of a transnational company as a "technical-gas specialty", which ignores the experimental drug status of NO and