brain stem infarction or other new cerebrovascular disease. Examination of the heart showed an old intramural anterior myocardial infarction and changes consistent with cardiac resuscitation. It was presumed that the dentures were the direct cause of death from pharyngeal bleeding and inhalation of blood. Initially it was thought the dentures had become impacted at the time of his arrest; however, review of his admission chest x ray film showed that they had been present in his pharynx from at least the time of admission (figs 1 and 2). A routine posteroanterior chest x ray film

FIG 1—Admission chest x ray film showing shadowing in the right mid zone. The dentures are just visible in the neck.

FIG 2—Expanded view of the neck taken from the same chest x ray film showing the impacted dentures more clearly.

did not show the dentures because it did not include examination of the neck. After being told the diagnosis the patient's relatives said that they had brought in his spare set of dentures during the admission as they could not find the lower set at home.

Discussion

To our knowledge there have been no published reports of a similar case. It is impossible to know the sequence of events which preceded this admission because an adequate history could not be obtained. It seems likely that this patient's neurological deficit predisposed him to impaction of the dentures. In addition, the development of dysarthria, choking, and inhalation pneumonia was related to the presence of a foreign body and not to a new neurological event.

USSR Letter

Dispenserisation for all

MICHAEL RYAN

It is conventional, and perhaps even obligatory, for official accounts to affirm the superiority of the Soviet health service over systems of medical care in so called capitalist countries. Among the various organisational features cited heavy emphasis is given to the absence of payment for consultation and treatment. Another feature which also allegedly flows from the socialist character of the Soviet polity is a set of interrelated procedures which are collectively known as dispenserisation (*dispanserizatsiya*).

Defining the term

The derivation of that word can be explained by the adoption in prerevolutionary Russia of the dispensary concept as developed in Britain and France during the eighteenth and nineteenth centuries. Nevertheless, the textbooks link the abstract noun dispenserisation with the name of N A Semashko, who was the first "People's Commissar of Health Protection" in the Russian Republic. He may have coined the term, and in any event he gave it currency in publications which provided a theoretical rationale for the preventive orientation of Soviet medical practice.

But what do the Russians understand by dispenserisation? At what is now presumably an advanced stage of conceptual evolution, the term was recently defined as follows:

"Active and ongoing surveillance of the health condition of specified population contingents (healthy and sick persons); registration of these population groups with the object of achieving the early detection of illnesses and the ongoing surveillance and complex treatment of persons who are ill; undertaking measures

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aimed at making the conditions of their work and daily life more healthy, preventing the development and spread of diseases, restoring the capacity for work, and prolonging the period of active life."¹

Some indication of the existing scale of the dispenserisation programme may be gained from two measures of "throughput": firstly, the number of persons who are having continuous surveillance, and, secondly, the number who receive preventive examinations on a periodic basis. From a time series published in the current annual abstract of statistics it may be learnt that the first category more than doubled between 1970 and 1982, rising from 26 789 200 to 53 303 700 in the union as a whole. Numbers in the second category rose from 101 281 100 to 115 109 700. The small percentage increase in this case may be explained by the fact that during the period in question no additions were made to the list of "target groups": this covers various categories of

At the work place

One major theme to emerge from the interview is that dispenserisation, as now conceived, requires a strategy of reaching out into the local community. As the minister crisply explains: "The patient does not go to the doctor but the doctor goes to the patient; that is to say, it is envisaged that medical care will be brought as close as possible to the population." Later on, as an example of progressive organisation, he cites the experience of two district polyclinics, one in Moscow and the other in Leningrad. A group of their specialists—rheumatologist, urologist, endocrinologist, gynaecologist, cardiologist, and others—have a regular schedule of visits to local enterprises, where they "hold consultations or prescribe treatment, follow up workers with chronic diseases, and elucidate the causes of and links between conditions of work, daily life, and the individual's behaviour pattern."

Preventive examinations by republic

	Persons receiving examinations in thousands			As a percentage of those liable for examination		
	1970	1980	1982	1970	1980	1982
USSR	101281.1	112547.4	115109.7	94.3	95.6	95.9
Russian SFSR	50529.4	54607.9	55939.7	93.9	95.6	96.1
Ukrainian SSR	21336.6	22065.7	21881.8	97.2	98.0	97.9
Belorussian SSR	3480.6	4046.5	3965.1	96.9	98.0	98.4
Uzbek SSR	6395.5	8583.5	9217.8	94.3	93.1	93.6
Kazakh SSR	6010.3	7195.7	7255.6	91.6	92.6	93.2
Georgian SSR	2429.9	2283.9	2367.9	96.8	97.6	97.3
Azerbaijani SSR	1967.8	2485.3	2665.7	92.0	97.8	98.1
Lithuanian SSR	1186.4	1430.7	1497.5	97.7	99.0	99.4
Moldavian SSR	1704.4	1881.5	1916.5	95.4	97.3	97.7
Latvian SSR	921.4	1067.7	1067.5	99.0	99.5	99.4
Kirgiz SSR	1261.8	1877.1	1982.1	89.2	93.5	95.1
Tadzhik SSR	1036.5	1599.9	1772.0	73.0	80.3	82.4
Armenian SSR	1432.4	1380.6	1406.1	95.5	94.8	95.5
Turkmen SSR	1093.4	1401.7	1520.4	83.3	86.7	88.0
Estonian SSR	494.7	639.7	654.0	96.2	97.6	94.6

Figures refer to the system controlled by the USSR Ministry of Health. (Source: *Nar khoz* 1982:506.)

employees in industrial enterprises (having regard to conditions of work), employees in establishments such as children's homes and health service units, and children and adolescents.

In the table the data on preventive examinations are especially useful because they indicate the extent to which the health service of each republic has managed to meet its obligations. By 1982, as may be seen, all but two of the union republics were examining at least 90% of the relevant population, and even the laggard republics, Tadzhikistan and Turkmenistan, had examined over 80%. Incidentally, suspicions of overreporting may have some justification, but it would be misplaced scepticism to view the series as fundamentally misleading.

A giant step forward

The fact that this series appears for the very first time in the current statistical yearbook may be interpreted as evidence of the authorities' confidence that the health service has the capability to make dispenserisation available to everyone. At any rate, in June 1983, a policy decision to that effect was taken by the Plenum of the Central Committee. Interestingly enough, it implemented a commitment announced some two decades before in the *Programme of the Communist Party of the Soviet Union*, a lengthy and in places utopian document which was adopted by the 22nd Congress of the CPSU in October 1961.

Without making the matter unequivocally clear, some official comment suggests that implementation of the 1961 pledge had merely to await the growth of facilities and increase in personnel to the levels which now obtain. Certainly, that is the impression conveyed by one passage in an interview given early in 1984 by the USSR's Health Minister, S P Burenkov, to the newspaper *Sovetskaya Rossiya*. Nevertheless, the main interest of the interview resides in the minister's explanation of what dispenserisation for all will entail—both for patients and for health service staff; the remainder of this article is based largely on the information which he gave.²

Endorsed by the minister as realistic and capable of being adopted successfully elsewhere, this practice seems likely to become far more widespread. The value of health care at the place of work is well understood, according to Burenkov, by the managers of many industrial combines, plants, collective farms, and state farms. "At their initiative," he continued, "and with their assistance, factory hospitals and sanatoria-prophylactoria are being constructed." This trend is entirely consistent with the objective of "restoring capacity for work," which figured in the definition of dispenserisation given earlier.

A second theme to emerge from the interview is the sheer magnitude of the task which the health service must fulfil. The number of preventive examinations conducted in 1982, huge as it was, would have to more than double if each person in the Soviet Union was to be given an annual check. So, not surprisingly, the planners decided to introduce dispenserisation for all on the basis of two phases, the first to start in 1984 and scheduled to run for three to four years. In this stage the initial objective is to undertake "personal registration" of the entire population. "Already today," the minister says, "the general physicians of many polyclinics, ambulatories, and feldsher-midwife points are ascertaining who their patients will be." Incidentally, the "general list" prepared by units answerable to the Health Ministry of the USSR—that is, the overwhelming majority—will exclude persons, such as employees of the railway system, for whom separate departmental health services are provided.

Manpower implications

To recognise that the Soviet Union has achieved an exceptionally generous ratio of doctors to population does not preclude posing hard questions about the availability of personnel to conduct the requisite number of health checks. Nevertheless, the minister sounds confident that the service could cope: estimates showed that in urban areas the ambulatory outpatient establishments contained sufficient general physicians, obstetrician-

gynaecologists, stomatologists, and paediatricians. Additional surgeons will be supplied by the hospitals. A more complex state of affairs exists in rural areas, and they will require the help of regional centre and town hospitals, in the form of visiting teams supplied with the necessary equipment and means of transport. Specifically in connection with dispenserisation a substantial increase will occur in the contingents of newly qualified doctors who are directed to work in rural localities. All the same, it is envisaged that the range of specialties represented in the examinations held there will be more limited than in the towns—at least until 1988.

By the end of 1987, Burenkov predicts, the "first results" of the programme will be coming through—a somewhat obscure statement which he qualifies by saying that not until the end of this decade would there be a full picture of the health of the entire population. But the most important practical achievement will be that everyone in the country will be subject to medical surveillance. Changes in the people's state of health will be recorded in special documents and as a consequence "it will be possible to prevent many diseases or to detect and cure them at an early stage."

Range of investigations

But what precisely will an examination entail: how exhaustive will it be? Having explained that the specific instructions had not yet been finalised, the minister outlines one possible variant.

"First of all a nurse will measure your height, weight, and chest; she will test your sight and hearing and make a preliminary evaluation of your physical and psychological development. Then you will give samples for analysis, your blood pressure will be measured, you will learn your blood group and rhesus factor and you will visit the x ray, ECG, and other rooms. However, the obligatory component of the investigations will depend on your age and the group into which you fall, as well as on the results of an examination by the general physician."

It emerges that, despite the scheme's multispecialist character, its main figure will be the *terapevt*—the general physician. This observation turns on the fact that, for all except children, a consultation with the *terapevt* will be compulsory. So he will decide whether to activate the other specialists, so to speak, by referring patients to them as he thinks necessary or appropriate. It seems fairly certain, however, that self referral to those specialists will continue to be possible for patients who present with an illness or injury.

When Burenkov came to refer to the second phase of dispenserisation, he disclosed few details and, justifiably, observed that accumulating experience might result in modifications to the programme. For example, the scope and content of the examination might be varied according to climatic conditions and risk factors in a specific region. To judge from what the minister said, the second phase will differ from the first only in two main respects: the frequency of annual examinations will become uniform in urban and rural areas, and "more complex investigations, using the latest apparatus, will be added as compulsory for many age groups."

Comment

Given the number of key points made in the minister's interview, it seems appropriate to draw attention to some striking omissions. Firstly, Burenkov gives no indication that the decision to introduce dispenserisation for all had been validated by cost benefit analysis of any sort. Secondly, he does not refer to the danger of a doctor's clinical judgment becoming blunted through having to examine so many healthy persons. Thirdly, he fails to indicate whether the health service would have to bear an opportunity cost in the sense that the hospitals would suffer. Responding to a question which in effect raised that point, he falls back on the vague formula: "Here a great deal depends on proper organisation." Even so, his intention to use numbers of hospital surgeons for health checks can hardly help to reduce the long waiting lists for routine admissions, which were mentioned by the interviewer.

Moreover, Burenkov appears to propound a crude conception of medical care provision which envisages an eventual contraction of the resources allocated to curative medicine. Thus, the minister expects, the numbers of patients requiring treatment will increase in the immediate future, owing to the early identification of disease. "But after that," he roundly declares, "healthy people, as is well known, do not need hospitals and medicines." Similar views were expressed in Britain when the National Health Service was being set up, but experience soon disproved the predictions. It remains to be seen whether the Soviet experience will be different.

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Traditionally the 50 g glucose tolerance test has been performed during pregnancy or within 24 hours postpartum in order to detect as many prediabetic mothers as possible. Has the introduction of the 75 g glucose load World Health Organisation glucose tolerance test improved the detection of prediabetes in pregnancy and the puerperium? Is it still critical when the glucose tolerance test is performed in pregnancy and the puerperium with the 75 g glucose load test? Has the 75 g test superseded the cortisone augmented test?

In 1980 a World Health Organisation expert committee recommended for non-pregnant patients a glucose tolerance test using a 75 g glucose load, but the committee made no specific recommendations about the diagnosis of diabetes in pregnancy.¹ There is little consensus on the ideal glucose tolerance test for pregnant women. In the United States the standard test uses a glucose load of 100 g,² but some regard a 50 g load as a satisfactory alternative. In Britain a 50 g load is generally used,^{3,4} as originally recommended by the World Health Organisation and the British Diabetic Association. There is now a trend towards the 75 g test, though pregnant women may be unable to consume more than 50 g glucose without vomiting. Modifications of the standard oral glucose tolerance test have been suggested—for example, the intravenous test, the steroid augmented oral test, or the use of amino acid infusions—but there is no agreement on which is best,⁴ and these tests may be unphysiological. The criteria for diagnosing diabetes (the term "prediabetes" is best avoided) by an oral glucose tolerance

test depend on several variables: the glucose load, whether venous or capillary blood is analysed, the biochemical method, the woman's diet in the days preceding the test, and the stage of pregnancy at which the test is performed. Glucose tolerance alters progressively during pregnancy, with the insulin response becoming steadily greater and the peak blood glucose concentration progressively more delayed.^{4,5} After delivery the insulin response returns to normal within 48 hours but the glucose response takes several weeks to return to normal.⁴ The indications for a glucose tolerance test in pregnancy are far from clear. Traditional criteria such as glycosuria, a family history of diabetes, or the delivery of a baby weighing more than 4500 g have been questioned,⁴ and it may be more useful to screen all pregnant women using a single blood glucose estimation after an oral glucose load, proceeding to an oral glucose tolerance test if an abnormal response is obtained.³—JAMES OWEN DRIFE, senior lecturer in obstetrics and gynaecology, Leicester.

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