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SCREENING IN AUSTRIA

The Cases of Mammography, PSA Testing, and Routine Use of Ultrasound in Pregnancy

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Abstract

Objective: To study cases of screening in Austria to learn about national strategies to handle the health policy challenge of early detection of widespread diseases and about the outcome of those strategies. The article describes three healthcare interventions (mammography, PSA testing, and routine use of ultrasound in pregnancy) and the instruments of Austrian health policy that are used—with or without explicit intention—to enforce or to control the widespread use of (early) diagnoses.
Methods: Data and information collection on healthcare services, their accessibility, rate of use, expert consensus, and official regulations. For all three case studies, expert interviews were carried out with main actors.
Results: Risk-group screening is not a priority in Austrian federal health policy. Although health promotion and prevention is a national task, examinations for early detection of specific diseases (i.e., carcinoma) are left to the health insurance funds, which delegate the decision to offer early diagnoses to their contracted physicians. In this opportunistic screening, general practitioners or specialists are encouraged by their health insurance funds or motivated by professional guidelines to offer certain examinations.
Conclusions: Screening is a coordinated effort to acquire a grasp of a common disease at an early stage in a specified population. To achieve this objective, a culture of coordination and centralization has to be implemented. The collection of data is an essential element in coordination of decentralized medical interventions as much as quality control is an essential task in looking at and comparing the outcome of interventions. In the three case studies, neither of these two essential criteria were met. Evaluations and scientific evidence on the effectiveness of interventions were not used.

Keywords: Screening, Health policy, Mammography, PSA, Ultrasound

The objective of this study was to examine cases of screening in Austria to learn about national strategies to handle the health policy challenge of early detection of widespread diseases and the outcome of those strategies. This article aims at giving a systemic insight into how and why the screening "tools" of mammography, PSA testing, and ultrasound in pregnancy are applied as they are. This paper describes the use of these three healthcare interventions and examines the instruments of health policy that are used—with or without explicit intention—in Austria to enforce or control the widespread use of (early) diagnoses.

In Austria only a few screening programs have been set up. The general health examination for all adults, aimed at detecting early common diseases and such as arterioscleroses, cardiac diseases, and high blood pressure diabetes, receives a participation of only 8%. It

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can be stated that risk group screening is not a priority to Austrian federal health policy. The cause can be found in the healthcare system and its financing.

THE HEALTHCARE SYSTEM

The Austrian healthcare system is insurance based and can best as described as highly decentralized. The federal state provides the legal framework, and the nine autonomous provinces are responsible for administering health care and social services. While services delivered in private practice are reimbursed on a fee-for-service basis by the health insurance funds, hospital care is (partly) paid by federal/communal funds. Of all healthcare expenses, 59% are covered by the compulsory social security scheme, 20% by taxes, and 21% by private resources (12). Although health promotion and prevention is a national task, the payment for preventive measures and early detection of specific diseases (i.e., carcinoma) is left to the health insurance funds, which delegate the decision to offer early diagnoses to their contracted physicians. In this opportunistic screening, general practitioners or specialists are encouraged (or discouraged) by their health insurance funds or motivated by professional guidelines to offer certain examinations. For this reason, the implementation and the use of diagnostic examination vary strongly between regions and medical professionals.

HEALTH TECHNOLOGY ASSESSMENT

Within the Austrian healthcare system, decisions on the management of diseases or reimbursement are based on medical expertise. Because of the many different actors and their different interests, no demand for the systematic, transparent, and objective evaluation of health interventions has developed. Health technology assessment (HTA) is still very rarely used to support health decisions.

POLICIES TOWARD PREVENTION AND SCREENING

In the federal program of health promotion and disease prevention, only a few general screening activities for age groups have been set up and are covered by the health insurance funds. While almost all primary and secondary schoolchildren (6 to 15 years), and 60% of adolescents (15 to 19 years) make use of such screening (10), only about 8% of adults (19 and above) participate in a program called health examination. This program aims at detecting early common diseases such as arterioscleroses, cardiac diseases, high blood pressure, diabetes, diverse carcinomas, diverse metabolic diseases, and chronic diseases of the respiratory organs.

Since 1974 the screening of a risk group, namely expectant mothers and newborns, has been included in the benefit package of all health insurance funds. The Mother-and-Child Health Card (partly co-paid by the Federal Family Burden Equalization Fund) includes monthly check-ups during pregnancy and of the newborn baby, but also includes examinations of the young child up to the fourth year. Since 90% of expectant mothers participate in the program, the Mother-and-Child Health Card is considered (though never evaluated) as highly effective and was therefore copied by the neighboring countries, Croatia and Slovenia.

Other risk group screenings aimed at the early detection of diseases are only offered on a highly individualistic level and can be called opportunistic screening. The decisions to offer certain examinations are left to general practitioners or specialists or to informed patients. Since there is no general screening culture established in Austria, very little research (see case studies) or evaluations (HTA) have been carried out on mass screening.

Table 1. Breast Cancer: Number of New Cases (Incidence) and Number of Deaths (Mortality) by Year

Year	1989	1990	1991	1992	1993	1994	1995	1996
Incidence	4.167	3.856	4.046	4.162	4.429	4.267	4.344	4.570
Mortality	1.669	1.736	1.671	1.746	1.743	1.728	1.737	1.712

Source: ÖSTAT (cancer statistics, ICD-code 174) (19).

THE CASE STUDIES

Mammography

Epidemiologic Data. As in most Western countries, breast cancer is the most common cancer occurring in women in Austria. The incidence in relative figures amounts to 69.3/100,000 women, or in absolute figures 4,570 new cases per year (1996) (Table 1). Twenty-three percent of cancer morbidity and 18% (4% of all fatalities) of cancer mortality is caused by this tumor. In the age group of women age 25 to 45, it is the most frequent cause of death. Little information is available on the morbidity caused by breast cancer. The rising age-standardized incidence of breast cancer during the last 10 years (+25%) and the rising age-standardized mortality (+9%) are alarming. One of the main researchers in breast cancer epidemiology (23; 24; C. Vutuc, personal communication, 1997) reflected that "there is possibly a slightly positive development in the correlation between incidence and mortality in recent years." There are no prevalence data available.

Mammography Screening: The service. Mammography is not offered as screening, i.e., in a systematic way, offered to all women in a defined age group. Mammography is offered—in a decentralized, opportunistic manner—by all radiologists with mammography devices either in hospitals or in private practice. The density of the provision of the service (all of Austria) amounts to 14.7 devices per 100,000 women with a variance of 11.8 and 16.2 in different regions (2;11). In calculations (carried out by radiologists) for a possible screening of all Austrian women between the ages of (50 and 60 in 1-year intervals and all women between the ages of 40 and 50 and 60 and 70 in 2 year intervals, based on the recommendations of the Austrian mammography consensus report (1993), the radiological capacities—purely quantitatively—would be sufficient. Since decentralization of mammography examinations makes quality control very difficult, the Austrian Society of Radiologists released guidelines for quality standards (13). The voluntary quality control sets standards on technical aspects. It does not deal with organizational matters such as continued education of personnel, consulting with colleagues, report conferences, and reporting. No coordinated quality control program has been established.

The health authorities in Vienna, in cooperation with the main regional health insurance, started a mammography screening initiative in early 2000 in Vienna, inviting all 50 to 69-year-old women by letters. The pilot project was planned as a singular event, aiming at offering a basal mammography to all those women who never had a mammography before (defined as risk group). Of the invited women, 18% were expected to come. No successive invitation is planned, with follow-up left to the women's initiative.

Accessibility of Procedure and Compliance Rate. Since mammography is covered, following the recommendations of the consensus report (3;17), either in the offered prevention program (compliance, 8%) or through referrals of gynecologists or other specialists, mammography is, theoretically, accessible to all women above 35 with indications or if requested for (women at risk) even beyond. Nevertheless, since there is no formal

screening program, women have to rely on media information, leaflets from Cancer Aid in physicians' practices, or on physicians' advice.

The most frequent publicized information leaflet on mammography (16), published by Cancer Aid, states:

> Mammography is the only method to identify breast cancer in an early stage when it is neither palpable nor shows any symptoms... if changes of the breast are palpable, mammography can differentiate benign and malign tumors with high diagnostic safety....(16)

A representative survey (24) shows that almost 60% of all Austrian women have never had a mammography, in urban areas four times more often than in rural areas. Within the age group of women above 50, only 52% have ever had a mammography (12%, once; 25%, 2–3 times; 9%, 4–6 times; and 6%, more often). No data on the actual use of mammography are available.

One can conclude that mammography is not a very widespread form of early detection of breast cancer. Since the reduction of mortality caused by cancer was defined as a major goal in Austrian health policy, an information campaign is intended to reduce knowledge deficits. The year 1997 was devoted to many activities, such as press conferences, posters, and information leaflets. The information campaign, launched by the Austrian Cancer Aid, will probably change the figures given.

Recent Policy Papers and Regulation. In 1993 a consensus report (3) with recommendations on prevention, early detection and diagnosis, pathology, therapy, and rehabilitation of breast cancer was released. The consensus group, consisting only of clinicians (e.g., oncologists), recommended:

- Self-palpation once a month after the age of 25, with additional examination by a physician twice a year;
- A basal mammography between 35 and 40;
- Mammography every 1 to 2 years between 40 and 50; and
- Mammography one a year after the age of 50.

Based on the consensus report, all mammographies must be reimbursed by the compulsory health insurance, which covers 99% of all citizens, either as part of the offered prevention program or after the referral from a specialist (gynecologist, internist) to a radiologist.

Involvement: Clinicians and Interest Groups. Breast cancer policy is entirely defined by clinicians. In addition to formulating the recommendations, clinicians function as mediators in spreading the information of the consensus recommendation in clinical journals (2;8;20).

The only nonmedical group taking a standpoint on mammography is the Women's Health Centre (WHC) in Graz, which counsels women in various health matters, including breast examinations. The WHC is very critical of the use of mammography in women under the age of 50 years. Although there is no proof that mammography affects outcome, the WHC advocates widespread screening for women above the age of 50, because of the proven reduction of mortality of 30%. In Austria the WHC criticizes mainly (5):

- Lack of scientific evidence of reduction of mortality in women below 50 years;
- Technical deficiencies/insufficiencies (lack of technical quality control);
- Diagnostic deficiencies/insufficiencies such false-positive and false-negative results; and
- Psychological distress for women because of many detected benign conditions.

Contrary to the opinion of radiologists, the WHC states that Austrian radiologists would be overtaxed with a screening program. Peer reporting as a quality control measure and mammography expert centers are proposed.

Table 2. Prostate Carcinoma: Number of New Cases (Incidence) and Number of Deaths (Mortality) by Year

Year	1989	1990	1991	1992	1993	1994	1995	1996
Incidence	2.446	2.386	2.403	2.477	2.710	2.973	3.429	3.690
Mortality	1.058	1.110	1.206	1.139	1.117	1.088	1.202	1.170

Source: ÖSTAT (cancer statistics, ICD-code 185) (19).

Summary of Mammography in Austria. The discussion on mammography as a method to identify breast cancer in early stages is led by the Austrian Cancer Aid, which relies mainly on the knowledge and experiences of oncologists and other specialists. Since the Cancer Aid as a patients' interest group is the main mediator for rising public awareness and releasing information, the media and the public are exclusively informed by them. Public opinion is molded by their recommendations of a basal mammography between the ages of 35 and 40 years, with a mammography every 1 to 2 years for women between the ages of 40 and 50 years, and once a year after the age of 50. Since 1997 federal health policy has emphasized informing the public about early detection of breast cancer, but it does not explicitly encourage mammography for women in specified age groups. According to the recommendations of the consensus report, mammography is covered by the health insurance funds. In early 2000, a mammography screening program in Vienna invited women aged 50–69 years, aiming to reach those women who had never a mammography before.

PSA Testing

Epidemiologic Data. As in most Western countries, prostate carcinoma is one of the leading causes of cancer in males in Austria. Following lung cancer, prostate cancer is the second leading cause of death from cancer, and in men age 70 to 90 years, it is the most frequent cause of death from cancer. The incidence in relative figures is to 88/100,000 of the male population, increasing with age. For men age 55 the incidence is 20 per 100,000; for men age 70 to 90 years, 500 per 100,000. In absolute figures 3,690 new cases (1996) were registered (Table 2). Mortality has increased 3% in the last 10 years. Because of higher life expectancy and improved diagnostic methods, morbidity increased 69%.

The prevalence of prostate carcinoma (latent prostate carcinoma) amounts to 440 to 1,300 per 100,000 each year. Based on autopsy studies, the figures show that 30% to 40% of men above the age of 50 years live with a latent prostate carcinoma without symptoms.

PSA Testing: The Service. PSA testing is not offered as screening, i.e., offered systematically to all men in a defined age group. PSA is offered—in a decentralized, opportunistic manner—by all urologists in hospitals or in private practice. Preceding the PSA test, a rectal palpation is routine, carried out either in connection with the prevention program by a general practitioner or by a urologist. If symptoms or indications have been found by a general practitioner, a referral is made to a urologist. Only the urologist is authorized to prescribe a PSA test and to send the patient to a laboratory.

Rectal palpation as the preceding diagnostic method is in most cases carried out by general practitioners. According to urologists the detection rate of 1:100 is so low "because the palpation is carried out by an unexercised finger," while if the urologists would do it, the detection rate would be 2.8:100, and with an additional PSA test, 4.2:100 (G. Struhal, personal communication, 1997).

The PSA test is carried out by laboratories, which use 38 different methods (1;21). For this reason, the PSA test results are hardly comparable. The Austrian Society of Urologists has demanded a reduction in the numerous different tests to force laboratories to carry out the PSA test with only two methods (according to U.S. Food and Drug Administration

guidelines). There is only one specialized laboratory for PSA tests in Styria (a region of Austria). Usually PSA tests are carried out as an addition to other tests in all laboratories.

Accessibility of Procedure and Compliance Rate. Since PSA is covered (by some but not all health insurance funds) along the recommendations of the consensus report (4;15), either in the offered prevention program or through referrals by urologists, the PSA test is recommended annually for men between the ages of 50 and 74 years and for those 75 and older with indications. The PSA test must be prescribed by a urologist; no other physicians' group is entitled to do so. Access is therefore limited to those with insurance covering the PSA test and with a referral by authorized specialists.

Nevertheless, since there is no formal screening program, men have to rely on media information, leaflets from Cancer Aid in physicians' practices, or on physicians' advice. The Cancer Aid distributes leaflets, but is not preparing the PSA test. The most widely distributed leaflet on early detection of prostate cancer, published by Cancer Aid, recommends rectal palpation annually for all men above the age of 45 years (14). The PSA test is not mentioned in information for the general public, and no statistical data on the rate of use of PSA is available.

Recent Policy Papers and Regulation. In 1994 a consensus report with recommendations on early detection and diagnosis, pathology, therapy, and rehabilitation of prostate carcinoma was released (4). The consensus group, consisting only of urologists and oncologists, recommended:

- Rectal palpation for all men during preventive examinations; and
- Rectal palpation and PSA test annually for men between the ages of 50 and 74 years with a life expectancy of at least 10 years.

Based on the consensus report, all rectal palpations are reimbursed by the compulsory health insurance funds, and PSA tests are covered after the referral from an urologist by most insurers.

Involvement: Clinicians and Interest Groups. Prostate cancer policy is entirely defined by clinicians. In addition to formulating the recommendations, the clinicians function as mediators in spreading the information of the consensus recommendation in clinical journals. No public involvement such as a patient group exists.

Summary of PSA Testing in Austria. Although urologists recommend PSA testing annually for all men between the ages of 50 and 74 with a life expectancy of at least 10 years, the test is not carried out on a large scale. Access to the PSA test is controlled, and the numerous test methods used by the laboratories complicate testing and make the interpretation of results in successive years difficult. There is no public discussion on early detection of prostate cancer. The PSA test is not promoted, neither through Cancer Aid as a patients' interest group nor by policy/regulations. There have been no studies on cost-effectiveness or efficacy and no scientific discussion on these matters.

Routine Use of Ultrasound in Pregnancy

Epidemiological Data. Infant mortality, the death of infants within the first year of life, is a visible issue to health politicians, since in Austria more infants die, even after the introduction of the Mother-and-Child Health Card in 1974, than in most other European countries. With a rate of 6.3 (in 1994, of 1,000 living newborns) Austria is behind all Scandinavian countries (Sweden, 4.4; Finland, 4.7; Norway, 5.2) and some other European countries (France, 6.1; Germany, 5.6; the Netherlands, 5.5; Switzerland, 5.1). While the mortality of infants in the first week of life and of stillborn infants has decreased, a growing proportion of infant mortality is caused by very low-birth-weight infants. According to

Table 3. Infant Mortality (Under 1 Year): Causes of Death, 1972–96 (in % of All Dead Infants)

Cause of death	1972	1977	1982	1987	1992	1993	1994	1995	1996
Infectious diseases	0.9	1.0	0.8	0.6	1.3	0.3	1.0	0.5	1.6
Diseases of respiratory organs	8.5	7.7	6.8	3.8	1.4	2.2	1.2	2.3	0.2
Diseases of digestive organs	6.7	5.4	3.7	1.9	0.3	0.6	1.0	1.2	0.2
Innate malformations	14.9	24.6	27.7	28.1	34.0	28.5	31.7	32.2	33.9
Birth injuries	15.6	14.5	12.4	12.2	3.5	1.5	1.2	2.1	2.7
Twin/multiple birth	3.2	2.0	0.5	1.3	0.8	1.3	0.2	0.6	0.2
Not defined immaturity	21.2	13.2	8.2	4.7	24.2	27.3	32.2	28.1	32.4
Other perinatal causes of death	19.0	19.4	25.1	22.6	12.5	11.5	10.9	15.0	11.6
Violent death causes	3.6	3.3	3.9	3.4	2.5	2.3	2.4	2.5	2.2
SIDS	–	0.1	4.9	16.6	14.9	18.0	12.5	11.9	11.8
All other causes of death	6.3	8.9	5.9	4.8	4.6	6.6	5.5	3.3	3.3

Source: ÖSTAT (18).

the World Health Organization recommendations for calculating infant mortality, Austria's infant mortality is lower (4.6 in 1994) than the figures quoted above. In other words, premature infants with a weight below 1.0 grams accounted for 25% of the stillborn infants or 40% of those that died in the first week of life.

A recent study looked more closely at infant mortality in Austria (7). It found, as other epidemiologists found previously, that there is a strong correlation between the age of the mother, qualification, and succession of birth (e.g., first-or secondborn baby). For the relatively higher infant mortality rates in Vienna, the authors found low birth weight—as an intermediate factor between socio-demographic variables and the risk of a death within the first year of life—responsible.

The duration of life gives hints concerning the medical/clinical causes leading to the death of an infant. Endogenous factors (such as premature birth or innate malformations) determine the cause of death in the period right after birth, while exogenous factors (such as infectious diseases, sudden infant death syndrome, accidents, respiratory diseases, or diseases of the digestive organs) are responsible for infant mortality in the period after the first month of life. As Table 3 shows, most infants (66%) die because of endogenous factors (premature birth or innate malformations). While innate malformations are increasingly a major cause for infant mortality in relation to other death causes, in absolute terms (recognized) innate malformations are decreasing. Looking more closely at the changes within the groups of diagnoses, fewer infants with Down syndrome were born (1987, 38; 1996, 16 = −58%).

Altogether it can be concluded that the reduction of the endogenous factors for infant mortality and more attention to the prepartal phase of the defined risk groups (mothers under the age of 19 or above the age of 37, low education, or first pregnancy) are matters for Austrian health policy.

Routine Use of Ultrasound in Pregnancy Screening: The Service. In order to decrease the (relatively high) infant mortality in Austria, in 1974 the Mother-and-Child Health Card was introduced as a screening program for pregnant women and newborns. Covered by the social security agencies and the Family Burdens Equalisation Fund, the health card includes not only monthly check-ups during pregnancy and of the newborn baby, but also examinations of the young child up to the fourth year. This system, which is used by 85-90% of all expectant mothers, helped decrease infant mortality from 14.3 per 1,000 live births in 1980 to 6.3 per 1,000 in 1994.

Within these examinations two ultrasonographies are covered: one during the 16th to 20th week and one during the 30th to 34th week. In practice women ask for and/or get

many more ultrasonographies (22). While the two ultrasonographies are recommended but not compulsory with the health card, further ultrasonographies may be requested or ordered to check indications. The average pregnant woman receives three to nine ultrasonography examinations.

Ultrasonography is carried out in the private practices of gynecologists, in outpatient stations of specialized birth clinics, or in hospitals. Midwives play no role at all during pregnancy or the examinations preceding birth.

Formal Assessment and Research. No formal assessment of evidence on efficacy (and effectiveness) or of evidence on cost-effectiveness has been carried out. No data have been collected and no quality control is enforced. In 1988 a research team proposed a reform of the Mother-and-Child Health Card. The authors examined infant mortality and connected infant mortality to the given system of care for pregnant women (6). In an evaluation (efficacy and cost-effectiveness) of some health card examinations (screening for metabolic anomalies/phenylketonuria, ultrasonography, compulsary maximum amount of examinations), they came to the conclusion that within the given system there is no room or attention given to a social history, but only to medical data and risks of mother or child. Since the risk factors for infant mortality are mostly an expression of social disadvantages and individual risks, the authors proposed to reform the Mother-and-Child Health Card toward more specified offers of care. On ultrasonography the authors made the following criticisms: a) although there is no proof of significant effects on perinatal morbidity or mortality, no evaluation study (a randomized clinical trial) was carried out before introducing ultrasonography screening in the Austrian Mother-and-Child; Health Card; and b) the lack of therapeutic possibilities following ultrasonography.

Another study questioning the necessity of ultrasonography for all pregnancies, because of unnecessary distress for women and lack of therapeutic options, states that - according to the Austrian Family Report 10% to 15% (in 1996, of 87,521 newborns about 8,752 to 13,128 are infants at risk) of all infants are at risk during pregnancy or shortly after birth (9). Of this proportion, about one-third are high risk and have to be transferred to a perinatal clinic/station; the rest are low-risk infants.

A recent master thesis in psychology described the psychological effects of ultrasonography on pregnant women (22). The author looked at the variables of high feedback (much information) and low feedback (little information) in correlation to feelings of insecurity/reassurance, attitude toward pregnancy, attitude toward ultrasonography, relationship to the infant, and anxiety of giving birth. She found that women with a higher qualification do ask for or receive fewer ultrasonographies (5.35) than those less qualified (8.8), depending strongly on the place where giving birth. Most ultrasound examinations are carried out in inpatient stations of general hospitals (average, 9). The number of ultrasound examinations are also high in birthing clinics (7.2 to 7.5) and in a private (alternative) home, where the women are cared for by midwives (3 ultrasonographies).

Accessibility of Procedure, Compliance Rate, Rate of Use of Service, and Social Attitude. About 90% of all pregnant women had all examinations of both mother and child specified by the Health Card. On ultrasonography "the pregnant women's attitude might be defined as very positive, if not to say happy," not critical, since "ultrasonography establishes a relation to the unborn infant" (A. Staudach, personal communication, 1997). No pros and cons of ultrasonography are discussed in the media.

Recent Policy Papers and Regulation. Since January 1987, two ultrasonographies (16th to 20th week and 30th to 34th week) have been part of the Mother-and-Child Health Card. This decision was made following a previous German decision. The many additional ultrasonographies, based on women's wishes and gynecologists' indications, are not paid by insurance funds. No policy papers exist on this topic. Nevertheless, the recent

German decision to include another (a third) ultrasonography in its pregnancy care package will not be imitated in Austria.

Involvement: Clinicians and Interest Groups. Pregnancy is cared for by gynecologists almost exclusively. Midwives play a role during delivery or if a woman decides to give birth at home (very rare). According to the head of the Austrian Society of Gynecologists, the two ultrasonographies are justified, because of the psychological effects for the women. "The women complain that two are too few and want more" (A. Staudach, personal communication, 1997). The alternative women's health center Nanaya is counseling—in birth preparation courses—against extensive ultrasonography in pregnancy. Nevertheless, the same client receives an average of three ultrasonographies in normal pregnancy (22).

Summary on Routine Use of Ultrasound in Pregnancy in Austria. In the Austrian system using the Mother-and-Child Health Card, two ultrasonographies (16th to 20th and 30th to 34th week) are covered. Many more ultrsosonographies (average, 3 to 9) are carried out but not reimbursed. There is no discussion on limiting the insurance coverage of ultrasonography in any phase of pregnancy. There is a very limited discussion in "alternative" circles, but those women too receive/ask for a minimum of three ultrasonographies. The psychological positive effects of reassurance and establishing a relationship—not clinical/medical reasons—are arguments for the extensive use of ultrasonography. Even if there is no proof of clinical necessity, the many ultrasonographies seem to be based on the patient's choice and therefore broadly accepted.

DISCUSSION

Risk-group screening is not a priority to Austrian health policy. Although health promotion and prevention is a national task, there is little evidence of specific interest on the part of policy makers.

Screening programs are a coordinated effort to acquire a grasp of a common disease at an early stage in a specified population. To achieve this objective, a culture of coordination and centralization has to be implemented. The collection of data is an essential element in coordination of decentralized medical interventions and for evaluating the cost-effectiveness as much as quality control is an essential task in looking at, comparing, and guiding the outcome of interventions. In three case studies, neither of the two essentials criteria were met:

- In the national risk-group screening of expectant mothers and newborn babies (participation 90%), no data on the different examinations are collected and consequently evaluated either centrally or provincially. A cost-effectiveness assessment looking for the evidence of changed outcome because of routine use of ultrasound in pregnancy would have to rely on a general analysis of newborn babies, diagnosis of anomalies, etc. Since the acceptance of the mothers is high, there is no will or demand for evaluations.
- With the growing impetus to offer mammography screening—nowadays carried out in an opportunistic way—to specific age groups of women, the main task in setting up such a screening will be to assure the effectiveness in implementing (technical and organizational) quality control and monitoring measures. As the recent example in Vienna illustrates, the reimbursers of screening (health insurance funds) do not favor a widespread use of mammography.
- With PSA testing, an assessment would have to focus on the evidence of effectiveness of actions, following the many different tests and, as a measure of quality control, to standardize the tests for comparability of test results over specified time periods.

HTA or evidence-based medicine are in general not methods referred to for decision making on healthcare interventions in Austria. Therefore, it is not surprising that there is essentially no HTA interaction with policy nowadays. On a continuum of healthcare strategies to handle

early detection of widespread diseases, the national Austrian policy is to support participation in screening programs by information campaigns and media coverage on the importance and effectiveness of a specific intervention for early detection, thereby encouraging individuals to ask for as well as physicians to offer early detection interventions. At the other end of the continuum is the access control through specialists to certain examinations that are not considered effective. The judgments on the effectiveness of interventions still rely on expert opinions. Cost-effectiveness is not discussed. Objective scientific evidence on the effectiveness of the three interventions were not used, neither before implementation nor as a monitoring instrument.

CONCLUSION

Opportunistic screening is based on the decisions of individual physicians and the demand of informed patients. It is and will always be biased in favor of the more motivated and better informed socioeconomic population groups. Opportunistic screening leads to social inequalities. If there is not an outspoken political will combined with a budget that is not bound to changes of interests, the organization of a risk-group screening seems nearly impossible in insurance-based systems, since the actors and their motives are contradictory. Their aims are set up in different time horizons. In the present health system in Austria, effective implementation of mass screening programs can only come after actions taken in federal health policy.

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