Both quantitative and qualitative approaches were employed. A census of 25 radiation therapy units (both public and private facilities) and 72 radiation therapists around the country were carried out. Semi-structured interviews with 1500 sampled cancer patients and in-depth interviews with 12 purposively selected radiation therapists were conducted. RESULTS: Lacking of vital human resources, both radiation therapists and medical physicists, is a serious and urgent problem of the radiation therapy services under the Ministry of Public Health (MOPH). There was no public facility under MOPH passing the minimum standard in terms of the appropriate amount of radiation therapists, whilst only 20% of them passed the minimum standard for medical physicists. Mal-distribution of radiation therapy facilities favoring Bangkok and big cities, inability to pay for traveling costs and lacking of health insurance among poor cancer patients were crucial factors influencing equitable access to radiation therapy services. Interviews from radiation therapists support that there is an urgent need to solve the shortage of human resources for radiation therapy services and improve the quality of care. CONCLUSIONS: Factors of both demand and supply sides influence the problems of inequitable access to radiation therapy in Thailand. The removal of financial barriers under universal coverage can not solely solve the problem of inequitable access to such expensive health services. Effective short-term and long-term measures require actively participation and concerted efforts of various stakeholders.

BOWEL CANCER SCREENING. BALANCING COST, EFFECTIVENESS AND AFFORDABILITY
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OBJECTIVE: To estimate the short-term impact of adopting the UK bowel cancer screening programme on cost and outcomes.
METHODS: The UK National Health Service (NHS) recently announced a bowel cancer screening programme consisting of biennial faecal occult blood testing (FOBT) to be phased in starting April 2006 (25% of the potential population screened in years 1 and 2 and 50% in year 3). Selection of this screening strategy was based on an independent economic evaluation (Tappenden 2004) that ranked it fourth out of five alternative strategies in terms of cost effectiveness. We fitted a Bayesian autoregressive age-period-cohort model to data of bowel cancer incidence in the UK 1993–2004/5 to estimate the cost savings and impact on outcomes resulting from phased implementation, and from choosing a less expensive, less cost-effective screening programme. UK costings were derived from the previous Tappenden 2004 analysis. RESULTS: We estimate that in the period 2006–2009, phased implementation of the chosen biennial FOBT programme will save £146 million compared to full implementation, but will also result in 2440 fewer bowel cancer cases detected. Adoption of the most cost-effective screening strategy would increase the number of cancers detected by 737, and would cost £149 million less to implement than the chosen option at the governmental phased rates in this three-year period. When compared to no screening, it costs £23,679 to detect a bowel cancer case using biennial FOBT in the age group 60–69. In the same age group, using the more cost-effective strategy of FSIG plus biennial FOBT it costs £18,534 to detect a bowel cancer case. CONCLUSION: Affordability and service impact appeared to be more important factors than cost effectiveness in selecting a bowel cancer-screening program for the UK.

PHYSICIAN AND PATIENT CHARACTERISTICS ASSOCIATED WITH OUTPATIENT BREAST CANCER SCREENING RECOMMENDATIONS: ANALYSIS OF US OUTPATIENT DATA 1996–2004
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OBJECTIVE: The primary goal of breast cancer screening tests is to find cancer at an early stage before a person has any symptoms. Evidence suggests that screening examinations such as mammography and clinical breast examinations (CBE) are effective in early detection of breast cancer. Physician recommendations are an important reason many women undergo screening. This study examined the physician and patients related factors associated with physician recommendations for breast cancer screening in the United States (US) outpatient settings.
METHODS: This cross-sectional study used data from the National Ambulatory Medical Care Survey (NAMCS) from 1996 C2004. Women aged ≥40 years were included in the study sample. Multivariate logistic regression analyses were used to study the outcomes. RESULTS: Weighted analysis indicated that physicians performed 198 million CBEs and made 110 million mammography recommendations over the study period (1996–2004). Patients’ age, duration of visits, history of previous breast cancer diagnosis, and source of insurance were significant predictors of screening recommendations in this population. Obstetricians and gynecologists were more likely to perform a CBE and recommend mammography than other specialty physicians. CONCLUSIONS: These findings indicated that there were certain disparities regarding the physician recommendations of breast cancer screening for women in the US outpatient settings.

SCREENING RATE IN THE HUNGARIAN ORGANIZED NATIONWIDE CERVICAL CANCER SCREENING PROGRAMME
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OBJECTIVES: Organized nationwide screening programme for cervical cancer was introduced in Hungary in 2003. Women between the ages 25–65 are invited by a personal letter and a 3 years screening interval has been applied. Before the implementation of organized screening programme there was an opportunistic screening. The aim of this study is to analyse both the annual and three year screening rate (attendance) of the organized programme.
METHODS: The data derive from the financial database of the National Health Insurance Fund Administration (OEP) of Hungary covering the period of 2000–2005. First we calculated the annual screening rate than we compared the three-year screening rate of two periods: 2000–2002 without and 2003–2005 with organized screening programme. Screening is defined with cytological examination of cervical sample. Multivariate logistic regression analyses were used to study the outcomes resulting from phased implementation, and from choosing a less expensive, less cost-effective screening programme. UK costings were derived from the previous Tappenden 2004 analysis. RESULTS: We estimate that in the period 2006–2009, phased implementation of the chosen biennial FOBT programme will save £146 million compared to full implementation, but will also result in 2440 fewer bowel cancer cases detected. Adoption of the most cost-effective screening strategy would increase the number of cancers detected by 737, and would cost £149 million less to implement than the chosen option at the governmental phased rates in this three-year period. When compared to no screening, it costs £23,679 to detect a bowel cancer case using biennial FOBT in the age group 60–69. In the same age group, using the more cost-effective strategy of FSIG plus biennial FOBT it costs £18,534 to detect a bowel cancer case. CONCLUSION: Affordability and service impact appeared to be more important factors than cost effectiveness in selecting a bowel cancer-screening program for the UK.
introduction of organized screening programme. CONCLUSIONS: The introduction of organized cervical screening programme resulted in a 4.2% increase in screening rate in the target age group of women aged 45–64 years. The effect of organized cervical screening on screening rate (attendance) was very low. In order to reduce cervical cancer mortality, screening rate (attendance) must be increased.

OBJECTIVES: Organized nationwide screening programme for cervical cancer was introduced in Hungary in 2003. Women between the ages 25–65 are invited by a personal letter and a 3 years screening interval has been applied. The aim of this study is to analyse the three year screening rate (attendance or coverage) of the organized programme according to the age-group of target population. METHODS: The data derive from the financial database of the National Health Insurance Fund Administration (OEP) of Hungary covering the period of 2000–2002 and 2003–2005. We calculated the three-year screening rate for 2003–2005 according to the age-group of women. Screening is included all smears taken either within or outside of the organization (OEP) of Hungary covering the period of 2000–2002 and 2003–2005. We calculated the three-year screening rate for 2003–2005 according to the age-group of women. Screening is defined with cytological examination of Papanicolaou smear and includes all smears taken either within or outside of the organized programme. RESULTS: The three-year screening rate of women aged 25–64 years increased from 48, 45% in 2000–2002 without organized screening programme to 52, 63% in 2003–2005 following the introduction of organized screening programme. METHODS: The three-year screening rate of women aged 25–64 years increased from 48, 45% in 2000–2002 without organized screening programme to 52, 63% in 2003–2005 following the introduction of organized screening programme. The three-year screening rate was the following in 2003–2005 according to the age-groups: 25–29 years: 64, 24%; 30–34 years: 66%; 35–39 years: 60, 89%; 40–44 years: 55, 34%; 45–49 years: 50, 44%; 50–54 years: 49, 23%; 55–59 years: 39, 74%; 60–64 years: 31, 80%. CONCLUSIONS: After the introduction of organized cervical screening programme we found the highest screening rate in the age-group 30–34 years followed by a gradually decreasing screening rates in the higher age-groups. In order to achieve the expected mortality decline from cervical cancer, the screening rate (attendance) of women 40–64 should be increased.

OBJECTIVE: Estimating the number of cervical cancer cases and mortality expected in Poland and Mexico, using the cross-sectional approach to determine the number of cervical cancer cases and mortalities expected to occur, both with and without HPV-16/18 vaccination in two countries having diverse risk factors for HPV infection and progression to cervical cancer. METHODS: A previously developed Monte Carlo Discrete Event model that uses population data to estimate the expected age-specific number of HPV infections, cervical cancer cases and deaths, we examined the challenges of using cross-sectional epidemiological data vs. following a cohort of women hypothetically over their lifetime. The model estimated the cancer cases and mortality avoided in the presence of vaccination (base-case: 100% vaccine uptake; no waning of protection; 95.1% lifetime efficacy against HPV 16/18). RESULTS: The number of cervical cancer cases predicted using the cohort approach were 4584 in Poland and 37,935 in Mexico, whereas the number of cervical cancer cases predicted using the cross-sectional approach were 4358 in Poland and 11,059 in Mexico. Following vaccination in each country, the number of predicted cervical cancer cases averted would differ, depending on which method was used, between 3201 (cohort) and 3043 (cross-sectional) in Poland, and between 22,452 (cohort) and 6545 (cross-sectional) in Mexico. CONCLUSION: In modeling the natural history of HPV infection and cervical cancer, one must consider whether the number of cervical cancer cases is expected to remain stable (in line with current population epidemiology and risk factors for HPV infection and development of cervical cancer) in light of expected changes over time in risk factors for the disease, including sexual behaviour, population demographics and screening programs. In addition, all model assumptions and limitations should be clearly stated.

OBJECTIVE: A Markov model simulating the long term prevention effects against cervical cancer (CC) of an HPV-vaccine has been calibrated for France. With this model we particularly assess the difference in impact of a 20 year HPV vaccination campaign of girls when starting vaccination with a different age-cohort. METHODS: The Markov model was built in Microsoft®Excel software. It replicates the natural history of HPV infection to CC over lifetime of a particular age-cohort of girls. The model simulates the effect of adding vaccination to the current screening program in terms of number of CC cases and CC deaths avoided. All transition probabilities of the natural history of HPV-infection to CC and the screening patterns were obtained from literature review, expert opinion and official French statistics. Screening coverage is maintained constant over time in the model (~60% of the French women screened every 3 years from the age of 25 to 60). Two base-case scenarios (starting vaccination with different age-groups (11 to 13 versus 15 to 17-year-old + a catch up to the age of 25-year-old) were compared with 100% vaccine coverage on 1st year at starting age + each year thereafter over a period of 20 years. Extensive sensitivity analysis was performed on vaccine coverage, HPV-prevalence, vaccine efficacy. RESULTS: With 100% vaccine coverage the model predicts a 76% reduction in CC cases (122,441 cases avoided over lifetime) and the same reduction in CC mortality (39,422 deaths avoided) when starting the vaccination at the age of 11–13. With a vaccination at the age of 15–17 the reduction is reduced to 68%. CONCLUSIONS: In both scenarios a substantial reduction in cancer cases and mortality due to vaccination will occur while keeping the current screening strategy. However, early vaccination will lead to a higher public health impact.