 RESULTS: (2005 US dollars) of a second uSSSI antibiotic, outpatient after the index mupirocin prescription. Among those patients or 2) experienced an uSSSI-related hospitalization within 30 days if they either: 1) received a second antibiotic commonly used to sis. A patient was classified as failing treatment with mupirocin with uncomplicated skin and skin structure infections (uSSSI). The failure of initial mupirocin therapy among patients diagnosed with uSSSI patients.

CONCLUSION: The management of uSSSI is costly when initial pharmacologic therapy fails.

SKIN—Health Care Use & Policy Studies

PSK4

FREQUENCY AND COST CONSEQUENCES ASSOCIATED WITH FAILURE OF MUPIROCIN AMONG UNCOMPPLICATED SKIN AND SKIN STRUCTURE INFECTIONS (USSSI)
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OBJECTIVES: To derive the frequency and costs associated with failure of initial mupirocin therapy among patients diagnosed with uncomplicated skin and skin structure infections (uSSSI).

METHODS: A retrospective observational analysis was conducted using data obtained from the Integrated Health care Information Systems (IHIS) database which contains nationally representative managed care claims data. This analysis utilized medical, pharmacy, and enrollment records between January 1, 2003 and April 30, 2006. Patients with a mupirocin prescription and a corresponding ICD9 code for an uSSSI up to 15 days prior to their index mupirocin prescription were eligible for the analy sis. A patient was classified as failing treatment with mupirocin if they either: 1) received a second antibiotic commonly used to treat uSSSI 5-30 days after their index mupirocin prescription or 2) experienced a uSSSI-related hospitalization within 30 days after the index mupirocin prescription. Among those patients that were defined as mupirocin failures the frequency and costs (2005 US dollars) of a second uSSSI antibiotic, outpatient encounter, and hospitalization was derived. RESULTS: A total of 160,445 mupirocin prescriptions associated with an uSSSI were dispensed during the study timeframe. Of those prescriptions 12,650 (7.0%) resulted in failure. Among failures 93.8% (11,867) required a second antibiotic contributing a mean cost of $62 per prescription. Outpatient encounters were required (11,867) required a second antibiotic contributing a mean cost of $6597 per hospitalization. This translates into an expected cost of $740.95 per mupirocin failure result in a mean cost of $6597 per hospitalization. This translates into an expected cost of $740.95 per mupirocin failure. Outpatient encounters were required (11,867) required a second antibiotic contributing a mean cost of $62 per prescription. Outpatient encounters were required by 40.3% (4782) of failures with a mean cost of $221 per encounter. Only 9.0% of failures required a hospitalization, but resulted in a mean cost of $6597 per hospitalization. This translates into an expected cost of $740.95 per mupirocin failure among uSSSI patients. CONCLUSION: The management of uSSSI is costly when initial pharmacologic therapy fails.

PSK5

QUALITY OF DERMATOLOGIC CARE DELIVERED BY PHYSICIAN ASSISTANTS: AN ANALYSIS OF CLOTRIMAZOLE/BETAMETHASONE PROPIONATE PRESCRIPTIONS
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OBJECTIVES: The quality of dermatologic care provided by physician assistants has not been well documented. This study characterized the use of potentially inappropriate combination medication clotrimazole/betamethasone dipropionate (a proxy for potentially inappropriate care) by physician assistants compared to dermatologists and primary care physicians.

METHODS: Data obtained from the National Ambulatory Medical Care Survey (1990–2000) were used to determine practitioner factors associated with a prescription for clotrimazole/betamethasone dipropionate. For each visit sampled that resulted in a dermatologic diagnosis, a patient log was completed to include demographic data, reasons for patient visits, physician diagnoses, services provided, and referral practices. For each year, we assessed patient visits to include twenty highest dermatology-related primary field diagnoses (using ICD-9 codes) at which clotrimazole/betamethasone dipropionate was mentioned. Practitioners were grouped as dermatologists, dermatology PAs, primary care providers, and primary care PAs, other specialty physicians and other specialty PAs. One-way ANOVA and multivariate logistic regression analyses using STATA 9.0 were tested the study objectives. RESULTS: PAs, regardless of specialty, were more than four times as likely (OR: 4.3, 95%CI: 0.7, 25.6) to prescribe clotrimazole/betamethasone dipropionate when they were the sole provider of care compared to when under direct supervision by a physician (OR: 1.8, 95%CI: 0.4, 8.0). Dermatology PAs prescribed clotrimazole/betamethasone dipropionate at a rate of 3.8%, compared to the PCP prescription rate of 4.9% and the dermatologist prescription rate of 0.2%. The highest rate of clotrimazole/betamethasone dipropionate prescription was seen in PAs practicing under PCPs, 16.9%.

CONCLUSION: The quality of dermatologic care provided by dermatology physician assistants is closer to that of primary care physicians than that of dermatologists, evidencing a need for more extensive training for these practitioners. However, the use of closely supervised PAs may help provide more accessible and higher quality dermatologic care to all patients than provided by primary care practitioners.

PSK6

THE IMPACT OF PSORIASIS ON HEALTH CARE COSTS AND WORK LOSS
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OBJECTIVES: To determine the incremental direct health care and indirect work loss costs experienced by employer-payers for patients diagnosed with psoriasis (PS). METHODS: A de-identified claims database consisting of 5.1 million covered lives from 31 Fortune 500 self-insured employers over the period 1998–2005 was used. Each PS patient was matched with three controls based on age and gender. The average monthly direct health care costs (i.e., medical & pharmaceutical costs) were computed for the respective groups. For the subset of patients who were active employees, the indirect costs of lost work time were calculated for each group, as measured by employer disability payments and sick leave time multiplied by the employee’s wage. In addition, a multivariate two-part regression was used to isolate the cost increase attributable to PS by controlling for age, gender, year, comorbidities, and organ transplantation. RESULTS: The univariate analysis showed that the PS patients (N = 10,325) were associated with higher medical and pharmacy costs than the control group (N = 30,975) by an average of $136 and $129 per person per month, respectively (medical: $439 vs. $43, p < 0.0001; pharmacy: $209 vs. $81, p < 0.0001), bringing the total increase in health care costs to $285 per person per month ($648 vs. $364, p < 0.0001). In the subset of active employees, the PS group (N = 25,272) was associated with a higher indirect work loss cost of $81 per person per month ($164 vs. $83, p < 0.0001) than the control group (N = 6573). For each cost category, a statistically significant cost increase for PS patients was confirmed through the multivariate analysis (adjusted incremental direct cost = $77, p = 0.024; adjusted incremental indirect cost = $43, p = 0.022). CONCLUSIONS: PS was associated with a statistically significant increase in health care and work loss costs. The multivariate analysis indicated that
the total direct and indirect cost increase was approximately $120 per person per month.

SMOKING—Cost Studies

A LONG TERM COST-EFFECTIVENESS ANALYSIS MODEL FOR SMOKING CESSATION IN MEXICO

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OBJECTIVES: Smoking is associated with several acute and chronic diseases in adult population that generate high medical costs in the Mexican Health System. The purpose of the study was to model the long term economic and health consequences of two smoking cessation interventions (SCI) in Mexican smokers attempting to quit from the health care payer’s perspective. METHODS: A cost-effectiveness assessment was developed using a Markov modeling approach adapted to the Mexican smoker population. The model simulates costs and effectiveness outcomes in a twenty-year period (1-year cycle) and includes four potential comorbidities: chronic obstructive pulmonary disease, lung cancer, coronary heart disease and stroke. Comparators were: varenicline vs. nicotine patches, both in a twelve-week treatment. Transition probabilities were obtained according to Mexican epidemiologic data. Quit successful rates, smoking relapses rates and relative risk of smoking associated to the mentioned comorbidities were obtained from clinical trials published in the literature. Effectiveness measure was the number of life-years gained (LYG). Resource use and costs data was obtained from representative published Mexican institutional databases (only direct medical costs were included). Costs and effectiveness measures were discounted 3% annually. Probabilistic sensitivity analysis was performed and acceptability curves were constructed. RESULTS: Varenicline, in a 20-year period analysis, showed that could generate 132,304 more quitters (4.9%); 4905 less subjects with comorbidities (1.5%); 3333 deaths avoided; and 22,598 LYG in comparison to the treatment with nicotine patches. Also, varenicline was in the long term a cost-saving strategy (expected cost reduction of US$10.6 million—CI 95%: US$9.8–US$11.7 millions). Results were robust to Monte Carlo second order sensitivity analysis and acceptability curves showed the same results with a mean of 70% of certainty. CONCLUSION: Despite its higher cost in the Mexican market, varenicline was the SCI most cost-effective in the long term for the management of patients attempting to quit.

SMOKING—Methods & Concepts

ESTIMATING THE INCIDENCE AND PREVALENCE OF SMOKING RELATED MORBIDITIES USING PROXY VALUES

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OBJECTIVES: To estimate the incidence and prevalence of the most burdensome smoking related morbidities in the US population as part of the Benefits of Smoking Cessation on Outcomes (BENESCO) model. METHODS: We have developed a microsimulation Markov model to estimate the outcomes and costs of a hypothetical cohort of US current smokers, a proportion of whom (25%) will make a single attempt to quit smoking in the first year of a lifetime model. The BENESCO model estimates the incidence and prevalence of smoking related diseases by using the relative risks for mortality of the diseases as a proxy. The hazard ratios from the Cancer Prevention Study II (Thun 2000) were used as the basis for the required transformations. The incidence and prevalence of the following smoking related diseases were included in the model: lung cancer, chronic obstructive pulmonary disease (COPD), coronary heart disease (CHD), stroke and asthma exacerbations (attributed to smoking). Although the model includes smokers aged 18 years and older, no excess events were assumed to occur before the age of 35. RESULTS: Of the morbidities modelled, COPD was found as the most prevalent [peak estimates of individuals affected at model entry point] disease among smokers [2.89 million], followed by CHD [1.8 million], stroke [449,991], asthma exacerbations [395,829] and lung cancer [68,348]. Incidence rates at model entry followed a similar pattern to prevalence. The morbidities, which were modelled, were more prevalent overall in female smokers than their male counterparts. CONCLUSION: The estimates of the incidence and prevalence of smoking related diseases in the US population rely on methodology, which has been used elsewhere in published, validated models (Orme 2001, Hoogenboom 2003) and use underlying hazard ratios from a large, independent US public health study. As such it could be expected that the external validity of the estimates in the BENESCO model is acceptable.