

efforts, complex manufacturing process and higher distribution costs) were found to be the key influencing factors when determining biologics' prices. Since these characteristics vary significantly depending on the type of biologics, the important ratios used in the pricing formula like "SG&A/sales ratio," "yield rate," "profit rate (innovation-based)," "distribution mark-ups," "VAT rate" and "differentiation mark-up (quality-based)" have to be determined on a case by case basis. Using blood products as an example, three differentiation factors (clinical efficacy, gold standard finish product assessment and overall manufacturing process evaluation) are key to achieve differential pricing. **CONCLUSIONS:** "Differential pricing" should be included in the biologics pricing system. Ratios in the existing pricing formula like "yield rate," "distribution mark-up," "profit rate" and "differentiation mark-up" should be adjusted to reflect the differences between biologics and chemicals. Differentiating criteria should be carefully chosen to reflect the value of biologics thus to develop the biopharmaceutical industry.

PHP7

PROSPECTIVE ENCOUNTER STUDY ON PATIENT CARE INDICATORS IN HEALTH-CARE FACILITIES

Hettihewa LM, Amarasinghe I, Subasinghe S

University of Ruhuna, Galle, south, Sri Lanka

OBJECTIVES: Our main objective was to investigate the degree of adherence of WHO recommended patient care indicators in health-care facilities operating in Galle Sri Lanka. **METHODS:** A total of 422 patients attending to the Outpatient Department in selected Hospitals in Galle district in Southern Province. Average Dispensing Time (ADT), Percentage of Drugs Actually Dispensed (PDAD), Percentage of Drugs Adequately Labeled (PDAL) and Patients Knowledge on Correct Dosage (PKCD) were compared in these selected Teaching, General and District Hospitals in Galle. **RESULTS:** ADT in DH (1.16 min) and GH (1.07 min) were high when compared to ADT in TH (0.81 min). PDAD was 100% in DH, 97.79% in GH and lowest in TH (94.64%). PDAL was highest in 22.66% in TH, 17.57% in GH and lowest in DH (1.57%). PKCD was 100% in GH and lowest in DH (0%) and only 50% in TH in Galle District. We noted that there was a significant difference in ADT, PKCD and average number of drugs labeled in all three categories ($P < 0.05$). But there was no significant difference in average no of drugs prescribed and dispensed in three categories of these hospitals. We noted that dispensers spend only short dispensing time and there was a tendency for dispensing errors. We found that PDAL was very low in all Hospitals but PDAD was significantly high. Even though the ADT was high in DH, PKCD was 0% due to unorganized dispensing practices. We also noted 100% PKCD only in GH due to practice of well prepared correct labeling system. **CONCLUSIONS:** Therefore we suggest to implementing proper dispensing techniques by introducing well prepared printed drug labeling system and commencement of recorded announcements to improve patient's knowledge on drug administration.

PHP8

DRUG USE PATTERN IN OVER 60-YEAR-OLD POPULATION OF TEHRAN IN 2007 IRAN

Soleymani F

Tehran University of Medical Science, Tehran, Iran

OBJECTIVES: Elderly are prone to many acute and chronic age related diseases which needed multiple drug usage. Therefore medicine use evaluation pattern in this group is very important and a significant part of public health system policy **METHODS:** In a cross sectional household survey, 20 clusters were selected from the post office sampling frame in Tehran. Each cluster consists of 40 households who had at least 1 person over the 60 years old. Questionnaire of the study was completed for all of the members over 60 and information about their medicine consumption was gathered. Data was analyzed by the prescription analyzer and SPSS soft wares. **RESULTS:** A total of 1054 men and women over 60 were enrolled to the study; 49.4% were male and 50.6% were female; 69% of the study population used at least one medicine per day regularly and 7.6% used at least one medicine none daily regularly; 46.2% used to consume medicines as self-medication. Mean items per prescription was 3.57 for patients who used medicines regularly everyday. In this group of patients, 58% used more than two medicines per day (poly pharmacy). Cardiovascular and central nervous system medicines were the most frequent medicines. Aspirin 80 mg, Atenolol and Calcium-D were the most frequent medicines used regularly but not daily. Acetaminophen 325 mg and acetaminophen codeine were the most frequent self medications. **CONCLUSIONS:** Our study showed that mean drug use in elderly is nearly same the mean of total population. This group of society is very vulnerable because of aging processes and multiple comorbidities. They must take many different drugs of variable groups which have interaction with each other. For minimizing these effects, physicians must be very precise in taking drug history of these patients before the drugs prescription.

PHP9

PUBLIC PREFERENCES TOWARD ORAL SOLID DOSAGE FORMS

Ibrahim IR¹, Izham M², Al-Haddad MS¹

¹Universiti Sains Malaysia, Gelugor, Penang, Malaysia; ²Universiti Sains Malaysia, Pinang, Palau Pinang, Malaysia

OBJECTIVES: To investigate and cluster the Universiti Sains Malaysia (USM) market in terms of the preferred OSDF and the form that seems easy in swallowing; to determine how consumers manage their choice regarding the physical characteristics like size, shape, color, and taste. Gender and ethnic groups were the possible factors that

associated with public preferences of OSDF and their different physical characteristics. **METHODS:** A self-administered questionnaire were distributed in a cross-sectional design to 200 individuals at the main campus of Universiti Sains Malaysia and 100 individuals outside the campus. A diagram of different oral solid dosage forms (capsule, tablet, caplet, and soft gelatin) was provided during the answering session. Data from 300 individuals were presented by frequencies and percentages for categorical variables and were analyzed by chi-square test. **RESULTS:** Capsule was the most preferred OSDF and the easiest form in swallowing. Males prefer OSDF to be in blue color while female prefer pink. Most respondents prefer OSDF to be without taste, small in size, and round in shape. The preferred physical characteristics was size followed by taste, shape, and color respectively. A significant difference ($P < 0.05$) was found between gender and ethnic groups toward the preferred OSDF. **CONCLUSIONS:** Based on the result of this study, public have their preferences toward a particular OSDF and a particular physical characteristics. Size is the most important physical characteristics for the public to manage their choice regarding OSDF, followed by taste, shape, and color.

HEALTH CARE USE & POLICY STUDIES – Equity and Access

PHP10

USING ASSET INDEX FOR MEASURING HOUSEHOLD LIVING STANDARDS AND MONITORING HEALTH EQUITY IN THAILAND

Prakongsai P, Tisayatikom K

International Health Policy Program (IHPP), Nonthaburi Province, Thailand

OBJECTIVES: To explore potential use of the asset indexes for measuring household living standards, and monitoring equity in the distribution of government subsidy for health among different socio-economic groups of Thais. **METHODS:** The principal components analysis (PCA) is used to compute the weight or "factor score" of each household asset in the nationally representative household socio-economic surveys (SES) 2000, 2004, and 2006. Households categorized into different socio-economic groups between using money metric measures (income & expenditure) and the asset indexes were compared. Differences in the distribution of government subsidy for health in 2006 between using household income and the asset indexes were also explored. **RESULTS:** Households in higher asset quintiles frequently owned assets with a high factor score and low availability in most households, while households in lower quintiles did not. The assets with the top-three factor scores in 2000 and 2004 were washing machine, telephone, and refrigerator, while those in 2002 were washing machine, telephone, and video recorder. In all 3 years, households in the first asset quintile (the poorest) had neither air conditioner nor computer, while 48% of households in the richest quintile owned air conditioners in 2000, and increasing to 49% in 2002 and 61% in 2004. The correlations between household quintiles classified by the asset index and by household income/expenditure ranged from 0.47 to 0.54. The distribution of government subsidy on health in 2006 between using household income and asset indexes is similar. **CONCLUSIONS:** The asset index can be used as an alternative tool to classify socio-economic groups of Thai households and monitoring health equity. Revisit of questions on assets in the household surveys can improve the ability of the asset index to reflect household living standards.

PHP12

THE PUBLIC'S PREFERENCE ON THE PRIORITIES IN HEALTH CARE

Bae EY¹, Lim MK², Choi SE³, Lee TJ²

¹Sangji University, Wonju, Kangwon province, South Korea; ²Seoul National University, Seoul, South Korea; ³College of Pharmacy, Seoul National University, Seoul, South Korea

OBJECTIVES: This study investigates the public opinion on the issues of distributive justice in health care. From the literature, we can ascertain several principles outlining priority setting decisions—health maximization, fair distribution, and equity. This study aims to identify the principles the public considers important, and the trade-offs between different values in resource allocation practices. **METHODS:** Two Focus groups were created and discussed a variety of issues on resource allocation in health care. Participants in the groups were introduced to the objective of the project and problems at hand. To facilitate the group discussion, a simple ranking task and a series of pair-wise choice practices were implemented. In the choice scenario, the severity of diseases was represented as both the quality of life and life-years remained. All participants were expected to choose one scenario, and explain the underlying reason for their choice. Group discussions were recorded and later analyzed by researchers. **RESULTS:** Severity of disease was the most important criteria of priority setting for participants. The majority supports the idea that the most disadvantaged should have the highest priority, even though their health gain is less than others. Rare diseases were given high priority because of their severity, not their rareness. Through the focus group interview, we could find a strong public support for the equal opportunity principle. Next to severity of disease, socio-economic status was found to be an important consideration in resource allocation decision. **CONCLUSIONS:** The findings from the group discussions indicate that the severity of disease and the socio-economic status of the patient is the most important priority setting criteria in the national health insurance setting. To further these results, a discrete choice experiment with ordinary people will be conducted and discussed.