

diseases of domperidone treated patients were similar, but the number of co-prescriptions of interacting medication to domperidone decreased ($P < 0.001$). **Conclusions:** After the 2014 safety letter was released, the pattern of prescribing domperidone in pediatrics has become safer in of prescriptions, maximum duration of domperidone uses, and the prescription of drugs that interact with domperidone.

PDG31

THE PRICING AND SPENDING TRENDS OF ULTRA-EXPENSIVE DRUGS IN MEDICARE PART D PROGRAM

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Objectives: To examine the pricing and spending trends of ultra-expensive drugs, focusing on Medicare Part D drugs from 2012 through 2017. **Methods:** This was a descriptive retrospective analysis using Medicare Part D Prescription Drug Event data from 2012 to 2017. Based on the annual average spending per beneficiary per drug, we stratified drugs into four cost categories. These were drugs costing: 1) more than the annual gross domestic product per capita ("ultra-expensive drugs"); 2) more than the annual average social security benefits of all retired workers; 3) more than the Medicare Part D spending threshold for specialty tier; and 4) others. We estimated the change in the number of drugs, beneficiaries, mean spending per beneficiary per drug, and total spending on drugs for each cost category. **Results:** Between 2012 and 2017, the number of ultra-expensive drugs identified went from 23 (1.1% of the total number of drugs covered by Medicare Part D in that year) to 110 (3.8%). The number of beneficiaries using these drugs grew from 12,906 (0.005% of the total beneficiaries) in 2012 to 267,934 (0.07% in 2017, and total spending on these drugs jumped from \$874 million (1.1% of the total Part D spending) in 2012 and \$21,940 million (14.5%) in 2017. In comparison to the 25-fold increase in spending on ultra-expensive drugs between 2012 and 2017, spending on non-specialty drugs increased 1.4-fold (2.6-fold in drugs costing more than average social security benefit; 2.8-fold in specialty tier). Thirty-eight drugs (35%) out of 110 ultra-expensive drugs in 2017 became ultra-expensive through price increases. **Conclusions:** The growth in ultra-expensive drugs dwarfed the growth of other drugs in Medicare Part D utilization and spending metrics. Although fewer than 0.1% of Medicare Part D enrollees used ultra-expensive drugs, spending on these drugs accounted for nearly 15% of total Medicare Part D spending in 2017.



PDG32

GAME-THEORETICAL ANALYSIS OF NETFLIX PAYMENT MODEL FOR HEPATITIS C TREATMENT

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Objectives: Several state governments (e.g. Louisiana and Washington) recently entered into Netflix-style contracts with drug manufacturers (Gilead and AbbVie), where the state Medicaid programs make a fixed lump-sum payment to a drug manufacturer in exchange for unlimited access of hepatitis C virus (HCV) drugs for its Medicaid patients. We analyzed this novel Netflix-style payment model for pharmaceutical treatments and characterized the conditions under which such a contract would be beneficial to manufacturer or payer. **Methods:** We formulated a game-theoretical model to analyze the Netflix-style contract from a mechanism design perspective. Specifically, this mechanism solves for the optimal subscription price of the pharmaceutical company, which simultaneously minimizes the total cost of care of the state governments and ensures their participations. Model was populated with data from all 50 states on HCV epidemiology and patient demographics, and we simulated the disease progression using a validated microsimulation model. **Results:** Our results showed that a comprehensive screening program is the key to the success of Netflix-style contracts, which implied that only those states with comprehensive screening programs in place should switch to Netflix-style contracts, while the rest would be better-off with the traditional volume-based contracts. Furthermore, by offering both Netflix-style contracts and volume-based contracts, pharmaceutical companies can tailor their pricing decisions to states with different screening programs. Consequently, introducing Netflix-style contracts into the pharmaceutical market leads to higher treatment rates at lower costs. The simulation section of this study provided further numerical evidence in support of these findings, as well as a ranking indicating the readiness of 50 states to adopt Netflix-style contracts. **Conclusions:** This study shows that the emergence of Netflix-style contracts improves the overall efficiency of pharmaceutical market. However, only those states with comprehensive HCV screening programs in place should considering switching to Netflix-style contracts.



PDG33

CHANGES IN SCHEDULE II ORAL OPIOID VOLUME DISPENSED IN A PRIVATE PAYER FOLLOWING FLORIDA'S ACUTE PAIN OPIOID RESTRICTION LAW

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Objectives: We aimed to assess the impact of the 3 days' supply acute pain prescription restriction law implemented in Florida (House Bill 21 [HB21], effective July 2018) on the total volume dispensed of Schedule-II opioids in oral formulations. We evaluated the change from before to after the law in: 1) total number of opioid units dispensed per month, and 2) total morphine milligram equivalent (MMEs) dispensed per month. **Methods:** Pharmacy claims from July 2017 to June 2019 were analyzed from a health plan serving a large Florida employer. We restricted the analysis to Schedule-II oral opioids. We summed the number of units and the total MMEs dispensed for each month. Units were defined as the total quantity of tablets/capsules dispensed for each prescription. We used interrupted time series (ITS) models accounting for autocorrelation to determine any immediate change after the policy implementation and to estimate trends before and after the policy. **Results:** After the implementation of HB21, there were immediate decreases of 4,250 opioid units (95% CI -8,487, -13) and 55,499 MMEs (95% CI -111,848, 850) dispensed to plan enrollees. There was a significant decline in the total number of opioid units dispensed over the entire study period (-533 units per study-month, 95% CI -106, -960). There were no significant changes in the slopes of the trends for total number of opioid units and total MMEs dispensed after HB21. **Conclusions:** The immediate reduction in total opioid units and total MMEs dispensed in the 1-year following the implementation of HB21 suggests effective policy in Florida. Our findings can inform other private health plans and health care systems on the potential effect of such restrictive laws and policies in other states. Future studies are needed to evaluate long-term intended and unintended consequences resulted from this type of restrictive laws.

PDG34

RISK SHARING AGREEMENTS: A POTENTIAL SOLUTION TO IMPROVE MARKET ACCESS TO INNOVATIONS IN ALGERIAN HOSPITAL SECTOR

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Objectives: To determine the advisability of setting up Risk Sharing Agreements (RSA) in the Algerian hospital market in order to improve patient access to innovative medicines. **Methods:** Analysis of expenditure on drugs of the Central Hospitals Pharmacy (PCH) on the years 2016, 2017 and 2018, according to the therapeutic classes with a projection on the three years to come, an analysis of the times of access to the market of therapeutic innovations in Algeria, and conduct a simulation of the profits to be made thanks to RSA. **Results:** PCH spending over the last three years on drugs shows that the Oncology class consumes nearly 400 million USD or more than 40% of the global budget intended for pharmaceutical products, this spending will increase to 470 M USD in 2022 according to the projection of the PCH, the hematology class for its part represents more than 150 M USD, which is about 20% of the global budget, with a projection on 2022 of more than 200 M USD. The analysis of the times of access to the market of therapeutic innovations show that it is getting slower and slower, the results of our study show that this is mainly due to the need for health authorities to control spending on drugs; an analysis of the financial impact generated by risk-sharing contracts in France and Canada has shown that the sums recovered by payers represent rates of 0.1% and 0.2% of health expenditure respectively. **Conclusions:** The efforts made by the Algerian health authorities in terms of cost control are not sufficient, moreover, patients' access to therapeutic innovations is greatly affected, an extrapolation on the savings that can be made while allowing better access to therapeutic innovation shows that the RSA could constitute a rational and just solution, remains to put the regulatory framework to implement them.



PDG35

EFFECT OF THE IMPLEMENTATION ON THE REGULATION OF DIRECT CONTROL OF MEDICINE'S PRICES IN COLOMBIA

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Objectives: Analyze the sales impact for laboratories that are under drug price regulation. Considering the increase in prices and quantities, both of its regulated and non-regulated medicines, based on the laboratories reports after the implementation of the direct price control scheme in Colombia. **Methods:** Five laboratories were selected among 28 laboratories with medicines regulated by its global cost share, for 2013. With the purpose to obtain the annual growth rates, the total sales (Multiplication between the price and quantity reported), total quantities and average prices were calculated for each year and laboratory. Prices and reference units were taken from the laboratory report at the institutional channel of SISMED price data base with a time horizon from 2012 to 2017. **Results:** After the regulation from 2014 to 2017, concerning the price regulated medicines, the reported quantities decreased 4.9% annually and their average prices had an annual growth of 2.4%; resulting in an annual decrease in sales of 14.7%. Regarding to non-regulated medicines, the quantities reported had an annual growth of 45.9% and their average prices increased 23.5% annually. Therefore, laboratories had an annual growth in sales of 22.2%. **Conclusions:** The inclusion of some medicines into the direct price control scheme does not affect the sales growth strongly among the selected laboratories. Since, the perceived losses by the laboratories are compensated by an increase in the regulated medicines quantities or by an increase in the non-regulated medicines prices. In total, laboratories, with and without regulated medicines, grew 17.3%, that is, 4% more than the annual growth for all laboratories (13%).

