

## PIN84

## GENERAL PRACTITIONERS PERCEPTIONS ABOUT FINANCIAL AND NON-FINANCIAL INCENTIVES TO IMPROVE INFLUENZA VACCINATION COVERAGE RATES IN FRANCE

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**OBJECTIVES:** Despite the existence of recommendations to vaccinate high risk-groups against influenza, vaccination coverage rates (VCR) are insufficient and/or decreasing in Europe. In France, general practitioners (GPs) are key vaccinators and influence patients on vaccine uptake decisions; but physicians' doubts about vaccine effectiveness are currently increasing. To encourage physicians to recommend vaccination, authorities can offer different incentives. We conducted a pilot-study to analyse the perceptions of French GPs about financial incentives and non-financial incentives to improve VCR. **METHODS:** We prepared an online-questionnaire consisting of four parts: the characteristics of GPs and their medical practice, seasonal influenza vaccination activities, perceptions of financial and non-financial incentives, satisfaction about the influenza vaccination program. Two GPs validated the questionnaire and minor changes were made. GPs members of the Regional Groups for Influenza Observation (GROG network) were invited by e-mail to complete the online questionnaire. The descriptive and econometric analyses were performed with Stata®; the categorical and the ordered answers provided by physicians were modelled using ordered logit regression. **RESULTS:** Eighty-nine GPs (19% response-rate) completed the questionnaire. Their motivation was greater for non-financial than for financial incentives. Most important non-financial incentives were related to (1) evidence on vaccine effectiveness, (2) strong communication from authorities to support the vaccination program and (3) electronic medical records to monitor vaccination status of patients. Interest in financial incentives seems to be greater for respondents living in areas with higher GP density, where physicians' incomes are probably lower. **CONCLUSIONS:** The findings of our pilot-study regarding influenza vaccination strengthen the need for an Action Plan to reform the French vaccination policy announced by the Ministry of Health in January 2016. To confirm our findings, we will undertake a survey of a larger sample of French GPs, and compare with European surveys. This will help authorities to reinforce communication with GPs, in order to enhance VCR.

## PIN85

## REDUCING DISPARITIES IN U.S. VACCINATION THROUGH SENIOR CENTERS: A COMPARISON OF THREE EDUCATIONAL MODELS FOR OLDER AFRICAN AMERICANS

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**OBJECTIVES:** Vaccination for preventable diseases is a high-value healthcare intervention, yet rates remain below US Centers for Disease Control and Prevention benchmarks, especially among minorities. The complex American healthcare system is difficult to navigate, contributing to underuse of vaccination. Decreased trust in the system resulting from a history of discrimination further exacerbates low vaccination rates (VR) among African Americans (AA) in particular. Senior centers (SC) are an accessible, trusted venue for AA, presenting an opportunity to increase VR. Objective was to develop models of delivering vaccination education with a nationally accredited Philadelphia SC. **METHODS:** Model development was guided by a focus group (8 older AA, 2 SC leaders, 3 pharmacists) that evaluated the literature and constructed 3 models. Each model centered on vaccine-preventable diseases and vaccines (pneumonia, influenza, and zoster); goal was improving participants' knowledge and building supportive beliefs. **RESULTS:** The first model (PHARM) combines a pharmacist-led didactic lecture and AA peer video clips. The second (PEER) utilizes older AA peer educators to educate small groups using skits where participants roleplay discussing vaccination with a provider. The third (PHARM+PEER) is a hybrid approach with a pharmacist-delivered lecture, a skit and song performed by a peer actor group, and small groups wherein pharmacists help participants develop vaccination plans. These models differ in complexity and resource requirements, but all target education to AA at risk for nonvaccination in a familiar, trusted, and accessible environment. Focus group input indicates that intervention quality and participants' receptivity is maximized by including components developed and/or delivered by AA peers. **CONCLUSIONS:** Operationalizing vaccination education through SC is a novel approach which US healthcare policymakers should consider to increase VR. PHARM, PEER, and PHARM+PEER represent novel, culturally appropriate educational interventions that draw on SC strengths to reach an older AA population. Future research will measure comparative effectiveness and cost of these approaches.

## PIN86

## LENGTH OF STAY, COSTS AND MORTALITY ATTRIBUTABLE TO CLOSTRIDIUM DIFFICILE INFECTIONS IN 13 BELGIAN HOSPITALS

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**OBJECTIVES:** To assess the length of stay and costs attributable to Clostridium difficile infection (CDI, as primary and secondary diagnostic) in Belgian hospitals, from the perspective of the publicly funded healthcare system (INAMI-RIZIV). **METHODS:** Hospital stays with a CDI as a primary or secondary diagnosis were selected from a hospital invoicing and minimum clinical overview database of 13 Belgian hospitals in 2012. For both primary and secondary diagnostic, were collected and summarized: distribution of age, APR-DRGs and severity index associated, length of stay, costs for the Social Security (broken down by medical procedure, laboratory testing, drug acquisition and other costs), use of antibiotics and death. Moreover, the increase in

length of stay and costs associated with a CDI was calculated. **RESULTS:** 96 hospital inpatient stays had a CDI as primary diagnostic (group 1) and 313 stays had a CDI as secondary diagnostic (group 2). In group 1, most patients (65.6%) are above 65 years old, 95.8% of all stays had an "other digestive system diagnostic", 74% have a severity index moderate or severe. In group 1, the average length of stay (standard deviation) is 12.54 days (11.73) (among which 0.51 days (2.57) in intensive care unit) and the average overall cost for the healthcare system is €4,727.65 (9,165.24). An increased cost is observed in patients aged of 65 or more (€5,737.55). 51.0% of patients were prescribed metronidazole and 29.2% vancomycin. 7.3% of patients died during their stay. Depending on the APR-DRG, having a CDI as secondary diagnostic increased the length of stay by 13.91 days and incurred an additional cost of €5,010.00 compared to not having CDI. **CONCLUSIONS:** In 2012, Clostridium difficile infections as primary or secondary diagnostic in Belgian hospitals incurred substantial costs, lengths of stay and mortality, especially in the 65+ population. This reflects the importance of preventing first and recurrent CDI.

## PIN87

## DIRECT COSTS ASSOCIATED TO MENINGOCOCCAL DISEASE AND RELATED SEQUELAE IN CHILDREN - ANALYSIS BASED ON THE BRAZILIAN PUBLIC HEALTH SYSTEM PERSPECTIVE

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**OBJECTIVES:** to estimate the direct medical costs, under the Brazilian Public Health System (SUS) perspective, associated to invasive meningococcal disease (IMD) in 0-to-1-year-old children and the related main sequelae tracked until they turned 18 years old. **METHODS:** a cost-of-illness study was conducted to estimate the SUS expenditure with treatment of IMD acute stage (diagnosis, inpatient treatment and chemoprophylaxis for contacts). During the period of 2007 to 2015, a total of 2,651 notified cases of 0-to-1-year-old children in Brazil were considered. The costs related to the sequelae treatment tracked until they turned 18 years old were calculated using the procedures packages based on the sequelae management recommended by SUS. The assumed sequelae frequency was 23.9% for the occurrence of at least one sequel, the most common being deafness (28%), epilepsy (28%), amputation (9%) and skin necrosis (9%). Brazilian public databases were used to identify the procedures and medications costs. **RESULTS:** the estimated SUS expenditure on acute stage treatment of IMD was USD 456 per patient (1USD = 3.63BRL, March-May 2016), reaching USD 1.1 million for cases in the period of 2007 to 2015. The expenditure related to the main sequelae treatment in the following 17 years was USD 2.1 million, 66% of this value being related to deafness, followed by 20% to amputation, 12% to epilepsy and 2% to skin necrosis. **CONCLUSIONS:** the increase of healthcare expenditures reinforces the considerable economic impact of IMD. It is worth emphasizing that the direct costs in this study were estimated in a conservative approach, representing the minimal expenditures associated to IMD in Brazil. It is important to mention that direct medical costs represent only a part of IMD-associated costs. There is a need to conduct other studies that also estimate the indirect costs.

## PIN88

## VALUE OF EXPANDING HCV TREATMENT CAPACITY IN GERMANY THROUGH NOVEL, EFFECTIVE AND SHORTER DURATION THERAPIES

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**OBJECTIVES:** Introduction of direct-acting antivirals in treatment of chronic hepatitis C virus (HCV) was a significant medical advance. Today, interferon-free treatment regimens with sustained virologic response (SVR) rates of >90%, a favorable toxicity profile and shorter treatment duration, allow most patients to achieve cure. Aim of the study was to understand how the introduction of shorter-duration treatment regimens for HCV will impact the capacity for treatment and value to society. **METHODS:** A Markov model of HCV transmission and progression was constructed, incorporating nationally representative data on HCV prevalence, incidence, and progression; mortality, treatment costs, medical expenditures, employment probabilities, and disability payments in Germany. The model is stratified by HCV genotype and exposure route (one-time healthcare exposure, injection drug use, and sexual activity). Treatment scenarios were based on German treatment guidelines and projected treatment capacity. The impact of different treatment scenarios on disease transmission and prevalence, quality-adjusted life years (QALYs), treatment costs, medical expenditures, employment and disability expenditures was calculated. **RESULTS:** Depending on their adoption profile, new treatment regimens and protocols introduced over the next several years will increase HCV treatment capacity in Germany by 8-30%, reducing disease transmission and prevalence, increasing QALYs, and adding €94-310 million in discounted social value (QALYs plus medical savings net of treatment costs) over a 30-year horizon. Additional social value in the form of higher employment and lower disability would also result. While these results are specific to Germany, similar results may be expected in other countries facing capacity constraints in treating HCV patients. **CONCLUSIONS:** The introduction of shorter HCV treatment regimens and the resulting increased treatment capacity in Germany would result in large gains to society by reducing disease transmission and prevalence plus reducing end stage liver diseases, thus resulting in longer, healthier, more productive lives for current and future generations.

## PIN89

## ESTIMATING THE VALUE OF A NEW ANTIBIOTIC: A NOVEL APPROACH USING ESBL AS A CASE STUDY

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**OBJECTIVES:** Develop a model capable of estimating the value of a new antibiotic for use in treating last-line patients not eligible for, or having failed on, all currently