

**INTRODUCTION:**

Influenza A (H1N1) virus is the most relevant virus in death by flu complications. Oseltamivir and zanamivir are used for influenza prophylaxis in epidemics. We aimed to evaluate the efficacy of chemoprophylaxis for influenza A (H1N1) for the Brazilian health care system.

**METHODS:**

We systematically searched the literature to identify efficacy results. Costs assessed from the system perspective were obtained from official Brazilian Ministry of Health systems, and completed from medical care at a university hospital of Campinas, Sao Paulo. Model outcomes were quality-adjusted life years (QALY) with willingness to pay BRL 30,000 (USD 8,212)/QALY and prevention of H1N1. A decision-tree model was used to calculate the incremental cost-effectiveness ratios for prophylaxis, compared to no prophylaxis. Deterministic and probabilistic sensitivity analyses were used to test robustness of the model.

**RESULTS:**

Prophylaxis had 70 percent adherence to treatment, 9 percent adverse events, effectiveness in avoiding H1N1 (relative risk = 0.43; 95% confidence interval: 0.33, 0.57); no evidence of prophylaxis efficacy for complication, hospitalization and death was found. Both scenarios had 14 percent H1N1 attack rate, 67 percent of ambulatorial consult, 43 percent of inpatient care, 14 percent of deaths in hospital, 23 percent of intensive care where death was 40 percent. Utility was 0.50 during H1N1 infection, 0.23 with hospitalization, 0.195 less with adverse events, 0 for deaths and 0.885 for healthy. Cost was BRL39 (USD 11) for chemoprophylaxis; BRL 12 (USD 4) for outpatient care; BRL 5,728 (USD 1,568) for hospital admission; BRL 19,217 (USD 5,260) for intensive care; and BRL 292 (USD 80) for adverse events. Incremental cost of prophylaxis was BRL 40 (USD 11) and utility increased 0.004, which mean saving of BRL 2,921 (USD 780)/QALY. Prophylaxis saves BRL 338 (USD 92) per H1N1 case avoided. Univariate and probabilistic sensitivity analysis assure the robustness of results, with 43 percent probability of being of lower cost and higher effectiveness.

**CONCLUSIONS:**

Prophylaxis is cost-effective from the health care system perspective using utility and avoided H1N1 cases outcomes.

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# PP140 Cancer And The Burden For Social Security System. Is It Sustainable?

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**INTRODUCTION:**

The purpose of the study is to estimate both the number of beneficiaries and the burden of the Disability Insurance (DI) benefits provided for neoplastic diseases (ND) and for five cancer types, focusing on the expenditure by the social security system.

**METHODS:**

To estimate the current DI benefits and their cost, we analyzed the databases of DI awards and the mean cost per benefit of the Italian National Social Security Institute (INPS) for two types of social security benefits: the disability benefits (DB) for people with reduced work ability and the incapacity pensions (IP) for people without work ability. A probabilistic model with a Monte Carlo simulation was developed in order to estimate the total benefits provided and costs.

**RESULTS:**

Between 2009 and 2015, a yearly average was estimated of about 122,000 beneficiaries of DI for cancer. The total estimated expenditure for ND in the seven years, supported and provided by INPS for these social security benefits, amounted to EUR 8.1 billion (corresponding to 27.4 percent of the total expenditure for disability provided by INPS) of which 66.7 percent was associated with DB and the remaining 33.3 percent with IP. The percentage increase related to the costs show that DB have the most significant increase starting from the 2013 with 11.3 percent from 2013 to 2014 and 9.7 percent from 2014 to 2015, while IP have an increase from 2009 to 2011, with a maximum during 2011, with a percentage difference of 7.6 percent.

**CONCLUSIONS:**

The incidence and the prevalence of the ND are expected to increase in the coming years in Italy. In order to minimize the consequences of this scenario, rapid access to innovative treatments would reduce the

costs borne by the social security system, accompanied by an improvement in the effectiveness of interventions and increase in quality of life for patients.

## PP142 Is Insulin Therapy Important For The Quality Of Life Of Diabetics?

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### INTRODUCTION:

Quality of life (QoL) is an important health measure and is widely used to assess the difference between treatments for Type 1 Diabetes Mellitus (T1DM) since the desirable glycemic control and the minimization of episodes of hypoglycemia are fundamental aspects for a better QoL. This study aims to identify the factors associated with QoL in patients with T1DM.

### METHODS:

A cross-sectional study (approved by ethics committee) was carried out in the state of Minas Gerais with 401 T1DM patients who used insulin glargine (GLA) selected in March 2017, and 179 patients who used insulin-neutral protamine (NPH) selected between January and February 2014, and both groups were treated by Brazilian National Health System (SUS). A questionnaire with three blocks was used: A) sociodemographic data; B) clinical data and access to the service; and C) QoL by Euroqol (EQ-5D-3L). We used multiple linear regression model by the forward stepwise method to access the correlation between the utilities of the EQ-5D-3L and all the explanatory variables (blocks A and B). We adopted the significance level and confidence interval of 95 percent (95% CI).

### RESULTS:

Of the 580 patients evaluated, 54 percent were women, 47 percent were in the age group between 18–40 years, 53 percent reported to be non-black. The EQ-5D-3L

analysis showed patients treated with insulin analogue GLA had an average utility of 0.849 and those treated with NPH insulin 0.722 ( $p < 0.000$ ). Individuals young, very good/good health self-perception, having not been bedridden in the last 15 days, zero to three medical appointments in the last year, no hospitalization in the last year, regular physical activity in the last 15 days to practice physical exercise, having between zero and three comorbidities and no severe hypoglycemia in the last 30 days were explained 41.3 percent of QoL. The type of insulin therapy, GLA or NPH, did not enter into the final multiple regression model.

### CONCLUSIONS:

The findings of this study pointed to a lack of correlation between insulin therapy and QoL of patients with T1DM. Sociodemographic and clinical factors were more important to explain the QoL of diabetics. In addition, the evidence pointed to the importance of episodes of hypoglycemia for QoL. Of the 191 episodes of hypoglycemia (non-severe and severe) reported, 66 percent were from patients treated with GLA.

## PP145 Using Health Technology Assessment To Drive Guideline Development

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### INTRODUCTION:

Clinical practice guidelines (CPGs) are a key vehicle for converting evidence into action. CPGs can be produced by various methods: de novo, adaptation, adoption, or a combination of these. Deciding whether and how to develop a guideline can be challenging. Health technology assessment (HTA) researchers from the Institute of Health Economics developed a multi-step decisional algorithm highlighting the decision nodes in the initial phase of guideline development where HTA products and expertise can be valuable in demystifying these decisions.

### METHODS:

A literature search was conducted for articles comparing methods of developing CPGs, with particular focus on