# DOHMH/GRAPH Project, Piece 1

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## Timeline of Deliverables

1. DALYs Estimation (now - 03/27)
2. Cost Estimation (now - 03/27)
3. CEA Model Building (03/27 - 04/10)

## Description of Deliverables

### 1. DALYs Estimation

#### Data Collection (now - 03/13)

The DALY is a year of life lived in perfect health and consists of two elements: 1) YLL (years of life lost) and 2) YLD (years lost to disability). Data will be provided by the DOH and will be updated using the 2010 Global Burden of Disease (GBD) estimates.

For YLL, we will obtain the following data from NYCDOHMH:

* Disease prevalence
* Age-, gender-, and race-specific mortality rates for New York City (2013)
* Age-, gender-, and race-specific mean age of onset for each condition

For YLD, we will obtain 2010 disability weights from the GBD data, which also has the following elements:

* Duration stratified by sex and age groups (national and GBD study)
* RR mortality stratified by sex and age groups (national and GBD study)
* Remission rate (national and GBD study)
* Case fatality (national and GBD study)
* Disability weight used in the GBD 2010 study

#### Calculations (03/13 - 03/27)

The NYCDOHMH previously estimated YLD based mainly on national rates where:

1. YLD = (YLD/YLL from national study) \* (YLL from NYC mortality data)
2. YLD = (YLD/YLL from national study) \* (NYC population)

We will repeat this with 2013 mortality data and 2010 rates. Where we can find them, we will also modify the prevalence data and other data elements for NYC.

### 2. Cost Estimates

#### Data Collection (now - 03/13)

The following cost data will be collected from literature reviews to estimate economic losses due to mental illness in NYC:

* Lost productivity and leisure time
* Medical system costs
* Criminal justice system costs/social service costs

The Uniform Crime Reports has the total costs of incarceration. We need to figure out the percentage of these are linked to mental illness/substance abuse from the literature.

We need to get an estimate of social service utilization. I believe we can get these from Robin Hood.

#### Standardization (03/13 - 03/27)

To standardize these, we need to do the following:

* Extract the total lost productivity and leisure time losses for active disease
* Multiply above by median local wage for New York City and by the duration of the disease from the GBD study
* Adjust costs to 2014 dollars using the consumer price index

*Special Note*: Medical costs need to be separately extracted and adjusted to reflect NYC costs. We need to be careful to separate out studies that use charges from those that use costs. Those that use charges need to be adjusted to costs. Peter’s textbook has the relevant tables in the back.

#### Prevention Effectiveness (now - 03/27)

We need to obtain the cost of prevention programs and their impact on the duration of illness from Rufina Lee. We can’t get estimates of impacts on YLLs. In our opinion, we should assume that these are between zero and 100% and report them as a sensitivity analysis.

### 3. Model Building

Once DALY calculations and cost estimates have been validated with the rest of the DOHMH and GRAPH team, we will begin the model building process.