**Article title:** The Feedback Loop Between the Demand for Voluntary Private Insurance and the Burden of Healthcare System: An Explanatory System Dynamics Model of Hong Kong

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**Supplementary file 2.** Full Documentation of the Model Using SDM-Doc

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### Model Assessment Results

| Model Information | Result |
|-------------------|--------|
| Total Number Of Variables | 34|36 |
| Total Number Of State Variables | 4 (11.8%)|6 (16.7%) |
| Total Number Of Stocks | 3 (8.8%)|3 (8.3%) |
| Total Number Of Exogenous Variables | 23 (67.6%)|23 (63.9%) |
| Total Number Of Endogenous Variables | 11 (32.4%)|13 (36.1%) |
| Total Number Of Feedback Loops No IVV (Maximum Loop Length: 5) \([2, 5]\) | 6 \([1,5],[0]\) |
| Total Number Of Feedback Loops With IVV (Maximum Loop Length: 5) \([0, 0]\) | 0 \([0,0],[0]\) |
|                             |                                               |
|-----------------------------|------------------------------------------------|
| **Total Number Of Causal**  | **55 (26|15|14)67 (36|17|14)**  |
| **Links**                   |                                               |
| **Total Number of Rate-to-**| **0**                                         |
| **rate Links**               |                                               |
| **Number Of Units Used In** | **2/1**                                       |
| **The Model (Basic/Combined)**|                                               |
| **Total Number Of**         | 0 (0.0%)0 (0.0%)                              |
| **Equations Using Macros**  |                                               |
| **Variables With Source**   | 0 (0.0%)0 (0.0%)                              |
| **Information**             |                                               |
| **Dimensionless Unit**      | 0 (0.0%)0 (0.0%)                              |
| **Variables**               |                                               |
| **Variables without**       | 34 (100.0%)36 (100.0%)                        |
| **Predefined Min or Max**   |                                               |
| **Values**                  |                                               |
| **Function Sensitivity**    | 0 (0.0%)0 (0.0%)                              |
| **Parameters**              |                                               |
| **Data Lookup Tables**      | 0 (0.0%)0 (0.0%)                              |
| **Time Unit**               | Day                                           |
| **Initial Time**            | 733500                                        |
| **Final Time**              | 737426                                        |
| **Reported Time Interval**  | TIME STEP                                     |
| **Time Step**               | 1                                              |
| **Model Is Fully Formulated**| Yes                                           |
| **Model Defined Groups**    | No                                            |

| **Warnings**               | **Result**                                    |
|-----------------------------|------------------------------------------------|
| **Number Of Undocumented Variables** | 37 (108.8%)39 (108.3%)                        |
| **Equations With Embedded Data** | 5 (14.7%)7 (19.4%)                            |
| **Variables Not In Any View** | 4 (11.8%)4 (11.1%)                            |
Nonmonotonic Lookup Functions | 7 (20.6%)/7 (19.4%)
---|---
Cascading Lookup Functions | 0 (0.0%)/0 (0.0%)
Non-Zero End Sloped Lookup Functions | 1 (2.9%)/1 (2.8%)
Equations With If Then Else Functions | 0 (0.0%)/0 (0.0%)
Equations With Min Or Max Functions | 0 (0.0%)/0 (0.0%)
Equations With Step Pulse Or Related Functions | 0 (0.0%)/0 (0.0%)
Equations With Unit Errors Or Warnings | 26 (76.5%)/28 (77.8%)

| Potential Omissions | Result |
|---|---|
| Unused Variables | 5 (14.7%)/5 (13.9%)
| Supplementary Variables | 0 (0.0%)/0 (0.0%)
| Supplementary Variables Being Used | 0 (0.0%)/0 (0.0%)
| Complex Variable | 3 (8.8%)/5 (13.9%)
| Complex Stock | 0 (0.0%)/0 (0.0%)

Variable Types

| L: Level (3 / 3)* | SM: Smooth (0 / 0)* | DE: Delay (2 / 18)*† | LI: Level Initial (0) | I: Initial (0 / 0) |
|---|---|---|---|---|
| C: Constant (11 / 11) | F: Flow (5 / 5) | A: Auxiliary (20 / 22) | Sub: Subscripts (0) | D: Data (0 / 0) |
| G: Game (0 / 0) | T: Lookup (10 / 10)*†† |

* (State Variables/Total Stocks) † Total Stocks Do Not Include Fixed Delay Variables. †† (Lookup Tables).
Views

**View: View 1 (30 Variables)**

Groups

| .Control (4) | Core insurance model 0331 (30) |
|--------------|---------------------------------|
|              |                                 |

Quick Links: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

(All) Variables (34 Variables)

| Group                  | Type | Variable Name And Description                                                                 |
|------------------------|------|---------------------------------------------------------------------------------------------|
| Core insurance model 0331 | #1   | Actual percentage of HI () = Actual percentage of HI _SDMlookup( Time)                       |
|                         | A    | Present In 1 View:                                                                        |
|                         |      |   • View 1                                                                               |
|                         |      | Used By                                                                                 |
|                         |      | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]                                         |

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| Core insurance model 0331 | #3 | Actual Private Hospital Use (pt) = Actual Private Hospital Use _SDMlookup( Time) Present In 1 View: |
|---------------------------|----|-------------------------------------------------------------------------------------------------|
|                           | A  | • View 1                                                                                         |
|                           |    | Used By Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]                                        |

| Core insurance model 0331 | #5 | Actual Private Occupancy () = Actual Private Occupancy _SDMlookup( Time) Present In 1 View: |
|---------------------------|----|-------------------------------------------------------------------------------------------------|
|                           | A  | • View 1                                                                                         |
|                           |    | Used By Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]                                        |

| Core insurance model 0331 | #7 | Actual Public Hospital Use (pt) = Actual Public Hospital Use _SDMlookup( Time) Present In 1 View: |
|---------------------------|----|-------------------------------------------------------------------------------------------------|
|                           | A  | • View 1                                                                                         |
|                           |    | Used By Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]                                        |

| Core insurance model 0331 | #9 | Actual Public Occupancy () = Actual Public Occupancy _SDMlookup( Time) Present In 1 View: |
|---------------------------|----|-------------------------------------------------------------------------------------------------|
|                           | A  | • View 1                                                                                         |
|                           |    | Used By Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]                                        |

| Core insurance model 0331 | #11| Average Length of Stay (Day) = Average Length of Stay _SDMlookup( Time) Present In 1 View: |
|---------------------------|----|-------------------------------------------------------------------------------------------------|
|                           | A  | • View 1                                                                                         |
|                           |    | Used By Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]                                        |

   Discharged or dead from Private Hospitals
   Discharged or dead from Public Hospitals
| Core insurance model 0331 | #12 | Average Premium Ratio ()
  = 0.85
  Present In 1 View:
  * View 1
  Used By
  * Tax Savings
  Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #13 | Baseline HI ()
  = 0.222392
  Present In 1 View:
  * View 1
  Used By
  * Percentage of HI
  Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #14 | \( \text{Daily getting ill (pt)} \)
  = \( \int (\text{Daily number of potentially get ill} - \text{Getting sick and use private hospital} - \text{Getting sick and use public hospital}) \, dt + 0.0 \)
  Present In 1 View:
  * View 1
  Used By
  * Getting sick and use private hospital
  * Getting sick and use public hospital
  Feedback Loops: 2 (33.3%) (+) 0 [0,0] (-) 2 [2,2] |
| Core insurance model 0331 | #16 | Daily number of potentially get ill ()
  = Daily number of potentially get ill \_SDMlookup( Time)
  Present In 1 View:
  * View 1
  Used By
  * Daily getting ill
  Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #17 C | Delay in Perception and Purchase (Day)  
= 365  
Present In 1 View:  
  • View 1  
Used By  
  • Percentage of HI  
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #18 A | Diff in Occupancy ()  
= Pu Occupancy- Pr Occupancy  
Description: previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy)  
Present In 1 View:  
  • View 1  
Used By  
  • Percentage of HI  
Feedback Loops: 2 (33.3%) (+) 1 [5,5] (-) 1 [5,5] |
| Core insurance model 0331 | #19 F,A | Discharged or dead from Private Hospitals (pt/Day)  
= In Private Hospitals/ (Average Length of Stay* SeverityFtr)  
Present In 1 View:  
  • View 1  
Used By  
  • In Private Hospitals  
Feedback Loops: 1 (16.7%) (+) 0 [0,0] (-) 1 [2,2] |
| Core insurance model 0331 | #20 F,A | Discharged or dead from Public Hospitals (pt/Day)  
= In Public Hospitals/ Average Length of Stay  
Present In 1 View:  
  • View 1  
Used By  
  • In Public Hospitals  
Feedback Loops: 1 (16.7%) (+) 0 [0,0] (-) 1 [2,2] |
| Core insurance model 0331 | #22 F,A | Getting sick and use private hospital ()  
= (Daily getting ill* Percentage of HI* Use HI+ Daily getting ill*(1- Percentage of |
| Core insurance model 0331 | #23 | Getting sick and use public hospital () |
|--------------------------|-----|----------------------------------------|
|                          | F,A | = ((Daily getting ill* Percentage of HI*(1- Use HI) + Daily getting ill*(1- Percentage of HI)*(1- Self pay))/1 |
| Feedback Loops:          |     | 2 (33.3%) (+) 1 [5,5] (-) 1 [2,2] |

| Core insurance model 0331 | #24 | In Private Hospitals (pt) |
|--------------------------|-----|--------------------------|
|                          | L   | = ∫ Getting sick and use private hospital- Discharged or dead from Private Hospitals dt + 0.0 |
| Feedback Loops:          |     | 2 (33.3%) (+) 0 [0,0] (-) 2 [2,5] |

| Core insurance model 0331 | #25 | In Public Hospitals (pt) |
|--------------------------|-----|--------------------------|
|                          | L   | = ∫ Getting sick and use public hospital- Discharged or dead from Public Hospitals dt + 0.0 |
| Feedback Loops:          |     | 2 (33.3%) (+) 1 [5,5] (-) 1 [2,2] |
| Core insurance model 0331 | #28 C | Format | Feedback Loops: 2 (33.3%) (+) 0 [0,0] (-) 2 [2,5] |
|--------------------------|-------|--------|------------------------------------------|
|                          |       | Pu Occupancy |                                      |
|                          |       | Feedback Loops: 2 (33.3%) (+) 0 [0,0] (-) 2 [2,5] |
| Core insurance model 0331 | #29 DE,A | Percentage of HI () | Present In 1 View: |
|                          |       | Baseline HI+DELAY3(( Diff in Occupancy-0.055)* Occupancy to Demand, Delay in Perception and Purchase)+DELAY3(( Tax Savings/2876)* Tax Saving to demand, Delay in Perception and Purchase) | |
|                          |       | Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #30 A | Pr Occupancy () | Present In 1 View: |
|                          |       | In Private Hospitals/ Private hospital beds | |
|                          |       | Feedback Loops: 2 (33.3%) (+) 1 [5,5] (-) 1 [5,5] |
| Core insurance model 0331 | #32 A | Private hospital beds (pt) | Present In 1 View: |
|                          |       | SDMlookup( Time) | |
|                          |       | Feedback Loops: 1 (16.7%) (+) 1 [5,5] (-) 0 [0,0] |

Used By:
- Getting sick and use private hospital
- Getting sick and use public hospital

**Feedback Loops:**
- 2 (33.3%) (+) 0 [0,0] (-) 2 [2,5]
- 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]
- 1 (16.7%) (+) 1 [5,5] (-) 0 [0,0]
| Core insurance model 0331 | #33 | Pu Occupancy () = In Public Hospitals/ Public hospital beds |
|--------------------------|-----|------------------------------------------------------------|
|                          |     | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]           |
|                          | A   | **Present In 1 View:**                                     |
|                          |     | • View 1                                                   |
|                          |     | Used By                                                    |
|                          |     | • Diff in Occupancy previously: PULSE(2009, 0.125)*0.055 + |
|                          |     | PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy)             |
| Core insurance model 0331| #35 | Public hospital beds (pt) = Public hospital beds .SDMlookup( Time) |
|                          | A   | Description: 1 bed = 1 pt                                |
|                          |     | **Present In 1 View:**                                     |
|                          |     | • View 1                                                   |
|                          |     | Used By                                                    |
|                          |     | • Pu Occupancy                                             |
| Core insurance model 0331| #37 | Self pay () = 0.06                                        |
|                          | C   | **Present In 1 View:**                                     |
|                          |     | • View 1                                                   |
|                          |     | Used By                                                    |
|                          |     | • Getting sick and use private hospital                   |
|                          |     | • Getting sick and use public hospital                    |
| Core insurance model 0331| #38 | SeverityFtr () = 0.39                                     |
|                          | C   | **Present In 1 View:**                                     |
|                          |     | • View 1                                                   |
|                          |     | Used By                                                    |

**Feedback Loops:**

- **Core insurance model 0331 #33 Pu Occupancy**
  - Pr Occupancy
  - Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

- **Core insurance model 0331 #35 Public hospital beds (pt)**
  - Pu Occupancy previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy)
  - Feedback Loops: 1 (16.7%) (+) 0 [0.0] (-) 1 [5.5]

- **Core insurance model 0331 #37 Self pay**
  - Self pay previously: 0.06
  - Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

- **Core insurance model 0331 #38 SeverityFtr**
  - SeverityFtr previously: 0.39
  - Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]
| Core insurance model 0331 | #40 A | Discharged or dead from Private Hospitals

**Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

| Core insurance model 0331 | #41 C | Tax Incentive ()

$\text{Tax Incentive} = \text{Tax Incentive}_{SDMlooku} (\text{Time})$

**Present In 1 View:**

- View 1

**Used By**

- Tax Savings

**Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

| Core insurance model 0331 | #42 A | Tax Savings ()

$\text{Tax Savings} = \text{Tax Incentive} \times \text{Average Premium Ratio} \times 0.06$

**Present In 1 View:**

- View 1

**Used By**

- Percentage of HI

**Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

| Core insurance model 0331 | #45 C | Use HI ()

$\text{Use HI} = 0.57$

**Present In 1 View:**

- View 1

**Used By**

- Getting sick and use private hospital
- Getting sick and use public hospital

**Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]
| .Control | #21 | FINAL TIME (Day) | 737426 |
|          |     | Description: The final time for the simulation. |
|          |     | Present In 0 Views: |
|          |     | Used By |
|          |     | Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| .Control | #26 | INITIAL TIME (Day) | 733500 |
|          |     | Description: The initial time for the simulation. |
|          |     | Present In 0 Views: |
|          |     | Used By |
|          |     | Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| .Control | #36 | SAVEPER (Day) |
|          |     | = TIME STEP |
|          |     | Description: The frequency with which output is stored. |
|          |     | Present In 0 Views: |
|          |     | Used By |
|          |     | Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| .Control | #43 | TIME STEP (Day) | 1 |
|          |     | Description: The time step for the simulation. |
|          |     | Present In 0 Views: |
|          |     | Used By |
|          |     | • SAVEPER The frequency with which output is stored. |
|          |     | Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |

(View) Not in View (4 Variables)
.Control #26 C
INITIAL TIME (Day) = 733500
Description: The initial time for the simulation.
Present In 0 Views:
Used By
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

.Control #36 A
SAVEPER (Day) = TIME STEP
Description: The frequency with which output is stored.
Present In 0 Views:
Used By
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

.Control #43 C
TIME STEP (Day) = 1
Description: The time step for the simulation.
Present In 0 Views:
Used By
• SAVEPER The frequency with which output is stored.
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

(View) View 1 (30 Variables)

| Group            | Type | Variable Name And Description                                     |
|------------------|------|-------------------------------------------------------------------|
| Core insurance   | #1   | Actual percentage of HI () = Actual percentage of HI _SDMlookup( Time) |
| model 0331       | A    |                                                                  |

(View) View 1 (30 Variables)
| Core insurance model 0331 | #3 | Actual Private Hospital Use (pt) | \[= \text{Actual Private Hospital Use}_\text{SDMlookup}(\text{Time})\] |
|-------------------------------|---|----------------------------------|-------------------------------------------------------------------------------------------------|
| Present In 1 View:            |   |                                  | • View 1                                                                                         |
| Used By                      |   |                                  | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]                                                  |
| Core insurance model 0331 | #5 | Actual Private Occupancy ()      | \[= \text{Actual Private Occupancy}_\text{SDMlookup}(\text{Time})\]                            |
| Present In 1 View:            |   |                                  | • View 1                                                                                         |
| Used By                      |   |                                  | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]                                                  |
| Core insurance model 0331 | #7 | Actual Public Hospital Use (pt)  | \[= \text{Actual Public Hospital Use}_\text{SDMlookup}(\text{Time})\]                            |
| Present In 1 View:            |   |                                  | • View 1                                                                                         |
| Used By                      |   |                                  | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]                                                  |
| Core insurance model 0331 | #9 | Actual Public Occupancy ()       | \[= \text{Actual Public Occupancy}_\text{SDMlookup}(\text{Time})\]                            |
| Present In 1 View:            |   |                                  | • View 1                                                                                         |
| Used By                      |   |                                  | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]                                                  |
| Core insurance model 0331 | #11| Average Length of Stay (Day)     | \[= \text{Average Length of Stay}_\text{SDMlookup}(\text{Time})\]                            |
| Present In 1 View:            |   |                                  | • View 1                                                                                         |
| Used By                      |   |                                  | • Discharged or dead from Private Hospitals                                                        |

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| Core insurance model 0331 | #12 C | Discharged or dead from Public Hospitals |
|--------------------------|-------|----------------------------------------|
| Feedback Loops: | 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |

| Core insurance model 0331 | #13 C | Average Premium Ratio () |
|--------------------------|-------|--------------------------|
| Present In 1 View: | | View 1 |
| Used By | | Tax Savings |
| Feedback Loops: | 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |

| Core insurance model 0331 | #14 L | Baseline HI () |
|--------------------------|-------|----------------|
| Present In 1 View: | | View 1 |
| Used By | | Percentage of HI |
| Feedback Loops: | 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |

| Core insurance model 0331 | #16 F,A | Daily number of potentially get ill () |
|--------------------------|--------|----------------------------------------|
| Present In 1 View: | | View 1 |
| Used By | | Daily getting ill |

\[ \text{Daily number of potentially get ill} = \text{Daily number of potentially get ill}_{-}\text{SDMlookup}(\text{Time}) \]

\[ \text{Daily getting ill} (\text{pt}) = \int \left( \text{Daily number of potentially get ill} - \text{Getting sick and use private hospital} \right) - \text{Getting sick and use public hospital} \, dt + 0.0 \]

\[ \text{Baseline HI} = 0.222392 \]
| Core insurance model 0331 | #17 | Delay in Perception and Purchase (Day) = 365  
Present In 1 View:  
- View 1  
Used By  
- Percentage of HI  
Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |
|--------------------------|-----|---------------------------------------------------------------|
| Core insurance model 0331 | #18 | Diff in Occupancy ()  
= Pu Occupancy - Pr Occupancy  
Description: previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy)  
Present In 1 View:  
- View 1  
Used By  
- Percentage of HI  
Feedback Loops: 2 (33.3%) (+) 1 [5.5] (-) 1 [5.5] |
| Core insurance model 0331 | #19 | Discharged or dead from Private Hospitals (pt/Day)  
= In Private Hospitals / (Average Length of Stay * SeverityFtr)  
Present In 1 View:  
- View 1  
Used By  
- In Private Hospitals  
Feedback Loops: 1 (16.7%) (+) 0 [0.0] (-) 1 [2.2] |
| Core insurance model 0331 | #20 | Discharged or dead from Public Hospitals (pt/Day)  
= In Public Hospitals / Average Length of Stay  
Present In 1 View:  
- View 1  
Used By  
- In Public Hospitals  
Feedback Loops: 1 (16.7%) (+) 0 [0.0] (-) 1 [2.2] |
| Core insurance model 0331 | #22 | Getting sick and use private hospital () | \(= \) ( Daily getting ill* Percentage of HI* Use HI+ Daily getting ill*(1- Percentage of HI)* Self pay)/1 | **Present In 1 View:**  
  - View 1  
 **Used By:**  
  - Daily getting ill  
  - In Private Hospitals  
 **Feedback Loops:** 2 (33.3%) (+) 1 [5.5] (-) 1 [2.2] |
|--------------------------|-----|------------------------------------------|-----------------------------------------------------------------|---------------------------------|--------------------------|--------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Core insurance model 0331 | #23 | Getting sick and use public hospital () | \(= (( \text{Daily getting ill} \times \text{Percentage of HI}) \times (1- \text{Use HI})+ \text{Daily getting ill} \times (1- \text{Percentage of HI}) \times (1- \text{Self pay}))/1\) | **Present In 1 View:**  
  - View 1  
 **Used By:**  
  - Daily getting ill  
  - In Public Hospitals  
 **Feedback Loops:** 2 (33.3%) (+) 0 [0.0] (-) 2 [2.5] |
| Core insurance model 0331 | #24 | In Private Hospitals (pt) | \(= \int \text{Getting sick and use private hospital- Discharged or dead from Private Hospitals} \, dt + 0.0\) | **Present In 1 View:**  
  - View 1  
 **Used By:**  
  - Discharged or dead from Private Hospitals  
  - Pr Occupancy  
 **Feedback Loops:** 2 (33.3%) (+) 1 [5.5] (-) 1 [2.2] |
| Core insurance model 0331 | #25 | In Public Hospitals (pt) | \(= \int \text{Getting sick and use public hospital- Discharged or dead from Public Hospitals} \, dt + 0.0\) | **Present In 1 View:**  
  - View 1  
 **Used By:** |
| Core insurance model 0331 | #28 | Occupancy to Demand ()
|--------------------------|-----|------------------------
|                         | C   | Present In 1 View:      |
|                         |     | • View 1               |
|                         |     | Used By                |
|                         |     | • Percentage of HI     |

| Core insurance model 0331 | #29 | Percentage of HI ()
|---------------------------|-----|-----------------------
|                           | DE.A| Present In 1 View:     |
|                           |     | • View 1              |
|                           |     | Used By               |
|                           |     | • Getting sick and use private hospital |
|                           |     | • Getting sick and use public hospital |

| Core insurance model 0331 | #30 | Pr Occupancy ()
|---------------------------|-----|---------------------
|                           | A   | Present In 1 View:   |
|                           |     | • View 1            |
|                           |     | Used By             |
|                           |     | • Diff in Occupancy previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*((Pu Occupancy-Pr Occupancy) |

| Core insurance model 0331 | #32 | Private hospital beds (pt)
|--------------------------|-----|--------------------------
|                           | A   | Present In 1 View:       |
|                           |     | • View 1                |
|                           |     | Used By                 |

- **Discharged or dead from Public Hospitals**
- **Pu Occupancy**

**Feedback Loops:**

- Core insurance model 0331: 2 (33.3%) (+) 0 [0.0] (-) 2 [2.5]
- Core insurance model 0331: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]
- Core insurance model 0331: 2 (33.3%) (+) 1 [5.5] (-) 1 [5.5]
- Core insurance model 0331: 1 (16.7%) (+) 1 [5.5] (-) 0 [0.0]
| Core insurance model 0331 | #33 A | **Pu Occupancy** ()  
= In Public Hospitals/ Public hospital beds  
Present In 1 View:  
  • View 1  
Used By  
  • **Diff in Occupancy** previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy)  
**Feedback Loops:** 1 (16.7%) (+) 0 [0.0] (-) 1 [5.5] |
| Core insurance model 0331 | #35 A | **Public hospital beds (pt)**  
= Public hospital beds, SDMlookups (Time)  
Description: 1 bed = 1 pt  
Present In 1 View:  
  • View 1  
Used By  
  • **Pu Occupancy**  
**Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |
| Core insurance model 0331 | #37 C | **Self pay** ()  
= 0.06  
Present In 1 View:  
  • View 1  
Used By  
  • **Getting sick and use private hospital**  
  • **Getting sick and use public hospital**  
**Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |
| Core insurance model 0331 | #38 C | **SeverityFtr** ()  
= 0.39  
Present In 1 View:  
  • View 1  
Used By |
| Core insurance model 0331 | #40 A | Tax Incentive () = Tax Incentive _SDMlookup( Time) Present In 1 View: |
|--------------------------|------|----------------------------------------------------------|
|                          |      | - View 1 Used By                                         |
|                          |      | - Tax Savings                                           |
| Core insurance model 0331| #41 C| Tax Saving to demand () = 0.138 Present In 1 View:         |
|                          |      | - View 1 Used By                                         |
|                          |      | - Percentage of HI                                      |
| Core insurance model 0331| #42 A| Tax Savings () = Tax Incentive * Average Premium Ratio*0.06 Present In 1 View: |
|                          |      | - View 1 Used By                                         |
|                          |      | - Percentage of HI                                      |
| Core insurance model 0331| #45 C| Use HI () = 0.57 Present In 1 View:                       |
|                          |      | - View 1 Used By                                         |
|                          |      | - Getting sick and use private hospital                  |
|                          |      | - Getting sick and use public hospital                   |
### (Group) .Control (4 Variables)

| Group | Type | Variable Name And Description |
|-------|------|--------------------------------|
| .Control | #21 C | FINAL TIME (Day)  
= 737426  
Description: The final time for the simulation.  
Present In 0 Views:  
Used By  
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| .Control | #26 C | INITIAL TIME (Day)  
= 733500  
Description: The initial time for the simulation.  
Present In 0 Views:  
Used By  
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| .Control | #36 A | SAVEPER (Day)  
= TIME STEP  
Description: The frequency with which output is stored.  
Present In 0 Views:  
Used By  
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| .Control | #43 C | TIME STEP (Day)  
= 1  
Description: The time step for the simulation.  
Present In 0 Views:  
Used By  
- SAVEPER The frequency with which output is stored.  
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |

### (Group) Core insurance model 0331 (30 Variables)

| Group | Type | Variable Name And Description |
|-------|------|--------------------------------|
| Core insurance model 0331 | #1 A | Actual percentage of HI ()  
= Actual percentage of HI_SDMlookup( Time)  
Present In 1 View:  
- View 1  
Used By  
Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
Core insurance model 0331  #3 A Actual Private Hospital Use (pt)  
= Actual Private Hospital Use _SDMlookup( Time)  
Present In 1 View:  
  • View 1  
Used By  
Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

Core insurance model 0331  #5 A Actual Private Occupancy ()  
= Actual Private Occupancy _SDMlookup( Time)  
Present In 1 View:  
  • View 1  
Used By  
Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

Core insurance model 0331  #7 A Actual Public Hospital Use (pt)  
= Actual Public Hospital Use _SDMlookup( Time)  
Present In 1 View:  
  • View 1  
Used By  
Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

Core insurance model 0331  #9 A Actual Public Occupancy ()  
= Actual Public Occupancy _SDMlookup( Time)  
Present In 1 View:  
  • View 1  
Used By  
Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

Core insurance model 0331  #11 A Average Length of Stay (Day)  
= Average Length of Stay _SDMlookup( Time)  
Present In 1 View:  
  • View 1  
Used By  
  • Discharged or dead from Private Hospitals  
  • Discharged or dead from Public Hospitals  
Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]
| Core insurance model 0331 | #12 | **Average Premium Ratio** ()
= 0.85

Present In 1 View:
  - View 1

Used By
  - Tax Savings

**Feedback Loops**: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #13 | **Baseline HI** ()
= 0.222392

Present In 1 View:
  - View 1

Used By
  - Percentage of HI

**Feedback Loops**: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #14 | **Daily getting ill (pt)**

= $\int (\text{Daily number of potentially get ill} - \text{Getting sick and use private hospital}) - \text{Getting sick and use public hospital} \, dt + 0.0$

Present In 1 View:
  - View 1

Used By
  - Getting sick and use private hospital
  - Getting sick and use public hospital

**Feedback Loops**: 2 (33.3%) (+) 0 [0,0] (-) 2 [2,2] |
| Core insurance model 0331 | #16 | **Daily number of potentially get ill**

= **Daily number of potentially get ill** _SDMlookup_( Time)

Present In 1 View:
  - View 1

Used By
  - Daily getting ill

**Feedback Loops**: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #17 C | Delay in Perception and Purchase (Day) = 365  
| Present In 1 View:  |  
| • View 1  |  
| Used By  |  
| • Percentage of HI  |  
| *Feedback Loops*: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]  |
| Core insurance model 0331 | #18 A | Diff in Occupancy ()  
| = Pu Occupancy - Pr Occupancy  
| *Description*: previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy)  
| Present In 1 View:  |  
| • View 1  |  
| Used By  |  
| • Percentage of HI  |  
| *Feedback Loops*: 2 (33.3%) (+) 1 [5,5] (-) 1 [5,5]  |
| Core insurance model 0331 | #19 F,A | Discharged or dead from Private Hospitals (pt/Day)  
| = In Private Hospitals/ (Average Length of Stay* SeverityFtr)  
| Present In 1 View:  |  
| • View 1  |  
| Used By  |  
| • In Private Hospitals  |  
| *Feedback Loops*: 1 (16.7%) (+) 0 [0,0] (-) 1 [2,2]  |
| Core insurance model 0331 | #20 F,A | Discharged or dead from Public Hospitals (pt/Day)  
| = In Public Hospitals/ Average Length of Stay  
| Present In 1 View:  |  
| • View 1  |  
| Used By  |  
| • In Public Hospitals  |  
| *Feedback Loops*: 1 (16.7%) (+) 0 [0,0] (-) 1 [2,2]  |
| Core insurance model 0331 | #22 F,A | Getting sick and use private hospital ()  
| = (Daily getting ill* Percentage of HI* Use HI+ Daily getting ill*(1- Percentage of  |
| Core insurance model 0331 | #23 F,A | Getting sick and use public hospital ()
| | | $= ((\text{Daily getting ill} \times \text{Percentage of HI} \times (1 - \text{Use HI}) + \text{Daily getting ill} \times (1 - \text{Percentage of HI}) \times (1 - \text{Self pay}))/1$
| Feedback Loops: | 2 (33.3%) (+) 1 [5,5] (-) 1 [2,2] |
| | | Present In 1 View:
| | | - View 1
| | | Used By
| | | - Daily getting ill
| | | - In Private Hospitals
| Core insurance model 0331 | #24 L | In Private Hospitals (pt)
| | | $= \int \text{Getting sick and use private hospital} - \text{Discharged or dead from Private Hospitals} \ dt + 0.0$
| Feedback Loops: | 2 (33.3%) (+) 0 [0,0] (-) 2 [2,5] |
| Core insurance model 0331 | #25 L | In Public Hospitals (pt)
| | | $= \int \text{Getting sick and use public hospital} - \text{Discharged or dead from Public Hospitals} \ dt + 0.0$
| Feedback Loops: | 2 (33.3%) (+) 1 [5,5] (-) 1 [2,2] |
| Model                                      | Loop ID | Loop Type | Description                                                                 |
|--------------------------------------------|---------|-----------|-----------------------------------------------------------------------------|
| Core insurance model 0331                  | #28 C   | Pu Occupancy | Feedback Loops: 2 (33.3%) (+) 0 [0,0] (-) 2 [2,5]                           |
|                                            |         | Occupancy to Demand () | Present In 1 View:                                 |
|                                            |         | = 0.5                                                    |
|                                            |         | View 1                                                   |
|                                            |         | Percentage of HI                                        |
| Core insurance model 0331                  | #29 DE,A| Percentage of HI () = Baseline HI+DELAY3(( Diff in Occupancy-0.055)* Occupancy to Demand, Delay in Perception and Purchase)+DELAY3(( Tax Savings/2876)* Tax Saving to demand, Delay in Perception and Purchase) |
|                                            |         | Present In 1 View:                                 |
|                                            |         | View 1                                                   |
|                                            |         | Getting sick and use private hospital                   |
|                                            |         | Getting sick and use public hospital                    |
| Core insurance model 0331                  | #30 A   | Pr Occupancy () = In Private Hospitals/ Private hospital beds |
|                                            |         | Present In 1 View:                                 |
|                                            |         | View 1                                                   |
|                                            |         | Diff in Occupancy previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy) |
| Core insurance model 0331                  | #32 A   | Private hospital beds (pt) = Private hospital beds SDMlookup( Time) |
|                                            |         | Present In 1 View:                                 |
|                                            |         | View 1                                                   |
|                                            |         | Diff in Occupancy previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy) |
| Core insurance model 0331 | #33 | Pu Occupancy | Pr Occupancy | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |
|--------------------------|-----|--------------|--------------|-------------------------------------------------|
|                          | A   | In Public Hospitals/ Public hospital beds | Present In 1 View: |  |
|                          |     | View 1       | Used By      |  |
|                          |     | Diff in Occupancy previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy) | Feedback Loops: 1 (16.7%) (+) 0 [0.0] (-) 1 [5.5] |  |
| Core insurance model 0331 | #35 | Public hospital beds (pt) | Public hospital beds _SDMlookup( Time) | Description: 1 bed = 1 pt |
|                          | A   | = Public hospital beds _SDMlookup( Time) | Present In 1 View: |  |
|                          |     | View 1       | Used By      |  |
|                          |     | Pu Occupancy | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |  |
| Core insurance model 0331 | #37 | Self pay | 0.06 | Present In 1 View: |
|                          | C   | = 0.06       | Used By      |  |
|                          |     | View 1       | Getting sick and use private hospital | Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |
|                          |     |  | Getting sick and use public hospital |  |
| Core insurance model 0331 | #38 | SeverityFtr | 0.39 | Present In 1 View: |
|                          | C   | = 0.39       | Used By      |  |
|                          |     | View 1       |  |
|                          |     |  |  |  |
| Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |
|---|
| **Discharged or dead from Private Hospitals** |
| **Core insurance model 0331** #40 A **Tax Incentive** () = Tax Incentive _SDMlookup( Time) **Present In 1 View:**  |
| • View 1  |
| Used By  |
| • Tax Savings  |
| **Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]** |
| **Core insurance model 0331** #41 C **Tax Saving to demand** () = 0.138 **Present In 1 View:**  |
| • View 1  |
| Used By  |
| • Percentage of HI  |
| **Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]** |
| **Core insurance model 0331** #42 A **Tax Savings** () = Tax Incentive * Average Premium Ratio*0.06 **Present In 1 View:**  |
| • View 1  |
| Used By  |
| • Percentage of HI  |
| **Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]** |
| **Core insurance model 0331** #45 C **Use HI** () = 0.57 **Present In 1 View:**  |
| • View 1  |
| Used By  |
| • Getting sick and use private hospital  |
| • Getting sick and use public hospital  |
| **Feedback Loops: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]** |
| Group                                      | Type | Variable Name And Description                                                                 |
|--------------------------------------------|------|-----------------------------------------------------------------------------------------------|
| Core insurance model 0331                  | #14  | **Daily getting ill (pt)**<br>

\[
\text{Daily number of potentially get ill} - \text{Getting sick and use private hospital} - \text{Getting sick and use public hospital} \ dt + 0.0
\]

**Present In 1 View:**<br>
- View 1

**Used By:**<br>
- Getting sick and use private hospital
- Getting sick and use public hospital

**Feedback Loops:** 2 (33.3%) (+) 0 [0,0] (-) 2 [2,2]

| Core insurance model 0331                  | #24  | **In Private Hospitals (pt)**<br>

\[
\text{Getting sick and use private hospital} - \text{Discharged or dead from Private Hospitals} \ dt + 0.0
\]

**Present In 1 View:**<br>
- View 1

**Used By:**<br>
- Discharged or dead from Private Hospitals
- Pr Occupancy

**Feedback Loops:** 2 (33.3%) (+) 1 [5,5] (-) 1 [2,2]

| Core insurance model 0331                  | #25  | **In Public Hospitals (pt)**<br>

\[
\text{Getting sick and use public hospital} - \text{Discharged or dead from Public Hospitals} \ dt + 0.0
\]

**Present In 1 View:**<br>
- View 1

**Used By:**<br>
- Discharged or dead from Public Hospitals
- Pu Occupancy

**Feedback Loops:** 2 (33.3%) (+) 0 [0,0] (-) 2 [2,5]

| Tag                                        | (Type) Smooth (0 Variables) (0/0) |
| Group | Type | Variable Name And Description |
|-------|------|------------------------------|
| Top   | (Type) Delay | #29 DE,A Percentage of HI () = Baseline HI + DELAY3(( Diff in Occupancy -0.055)* Occupancy to Demand, Delay in Perception and Purchase) + DELAY3(( Tax Savings /2876) * Tax Saving to demand, Delay in Perception and Purchase) Present In 1 View:  |
|       |      | - View 1 Used By  |
|       |      | - Getting sick and use private hospital |
|       |      | - Getting sick and use public hospital Feedback Loops: 2 (33.3%) (+) 1 [5,5] (-) 1 [5,5] |
| Top   | (Type) Level Initial | #12 C Average Premium Ratio () = 0.85 Present In 1 View:  |
|       |      | - View 1 Used By  |
|       |      | - Tax Savings Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Top   | (Type) Initial | #13 C Baseline HI () = 0.222392 Present In 1 View:  |
| Top   | (Type) Constant | #12 C Average Premium Ratio () = 0.85 Present In 1 View:  |
|       |      | - View 1 Used By  |
|       |      | - Tax Savings Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |

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| Core insurance model 0331 | #17 | Delay in Perception and Purchase (Day) |
|--------------------------|-----|--------------------------------------|
| C                        |     | Present In 1 View:                   |
|                          |     | • View 1                             |
|                          |     | Used By                              |
|                          |     | • Percentage of HI                   |
| Feedback Loops:          | 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |

| Core insurance model 0331 | #28 | Occupancy to Demand () |
|--------------------------|-----|------------------------|
| C                        |     | Present In 1 View:     |
|                          |     | • View 1               |
|                          |     | Used By                |
|                          |     | • Percentage of HI     |
| Feedback Loops:          | 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |

| Core insurance model 0331 | #37 | Self pay () |
|--------------------------|-----|-------------|
| C                        |     | Present In 1 View:|
|                          |     | • View 1     |
|                          |     | Used By      |
|                          |     | • Getting sick and use private hospital |
|                          |     | • Getting sick and use public hospital |
| Feedback Loops:          | 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |

| Core insurance model 0331 | #38 | SeverityFtr () |
|--------------------------|-----|-----------------|
| C                        |     | Present In 1 View:|
|                          |     | • View 1        |
|                          |     | Used By         |

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| Core insurance model 0331 | #41 C | Tax Saving to demand ()
| Core insurance model 0331 | #45 C | Use HI ()
| .Control | #21 C | FINAL TIME (Day)
| .Control | #26 C | INITIAL TIME (Day)
| .Control | #43 C | TIME STEP (Day )

- Discharged or dead from Private Hospitals

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

- Tax Saving to demand ()
  = 0.138
  Present In 1 View:
  - View 1
  Used By
  - Percentage of HI

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

- Use HI ()
  = 0.57
  Present In 1 View:
  - View 1
  Used By
  - Getting sick and use private hospital
  - Getting sick and use public hospital

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

- FINAL TIME (Day)
  = 737426
  Description: The final time for the simulation.
  Present In 0 Views:
  Used By
  Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

- INITIAL TIME (Day)
  = 733500
  Description: The initial time for the simulation.
  Present In 0 Views:
  Used By
  Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

- TIME STEP (Day )
  = 1
  Description: The time step for the simulation.
  Present In 0 Views:
  Used By
**SAVEPER** The frequency with which output is stored.

**Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

## (Type) Flow (5 Variables)

| Group | Type | Variable Name And Description |
|-------|------|--------------------------------|
| Core insurance model 0331 | #16  F.A | Daily number of potentially get ill () <br> = Daily number of potentially get ill _SDMlookup( Time) <br> Present In 1 View: <br> • View 1 <br> Used By <br> • Daily getting ill <br> **Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |
| Core insurance model 0331 | #19  F.A | Discharged or dead from Private Hospitals (pt/Day) <br> = In Private Hospitals/( Average Length of Stay* SeverityFtr) <br> Present In 1 View: <br> • View 1 <br> Used By <br> • In Private Hospitals <br> **Feedback Loops:** 1 (16.7%) (+) 0 [0.0] (-) 1 [2,2] |
| Core insurance model 0331 | #20  F.A | Discharged or dead from Public Hospitals (pt/Day) <br> = In Public Hospitals/ Average Length of Stay <br> Present In 1 View: <br> • View 1 <br> Used By <br> • In Public Hospitals <br> **Feedback Loops:** 1 (16.7%) (+) 0 [0.0] (-) 1 [2,2] |
| Core insurance model 0331 | #22  F.A | Getting sick and use private hospital () <br> = ( Daily getting ill* Percentage of HI* Use HI+ Daily getting ill*(1- Percentage of HI)* Self pay)/1 <br> Present In 1 View: <br> • View 1 <br> Used By |
- **Daily getting ill**
- **In Private Hospitals**

**Feedback Loops:** 2 (33.3%) (+) 1 [5,5] (-) 1 [2,2]

| Group | Type | **Variable Name And Description** |
|-------|------|----------------------------------|
| Core insurance model 0331 | #23 F,A | Getting sick and use public hospital ()

\[
= \left( \text{Daily getting ill} \times \text{Percentage of HI} \times (1 - \text{Use HI}) + \text{Daily getting ill} \times (1 - \text{Percentage of HI}) \times (1 - \text{Self pay}) \right) / 1
\]

Present In 1 View:

- **View 1**

Used By

- **Daily getting ill**
- **In Public Hospitals**

**Feedback Loops:** 2 (33.3%) (+) 0 [0,0] (-) 2 [2,5]

**Top (Type) Auxiliary (20 Variables)**

| Group | Type | **Variable Name And Description** |
|-------|------|----------------------------------|
| Core insurance model 0331 | #1 A | Actual percentage of HI ()

\[
= \text{Actual percentage of HI}_\text{SDMlookup( Time)}
\]

Present In 1 View:

- **View 1**

Used By

**Feedback Loops:** 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

| Core insurance model 0331 | #3 A | Actual Private Hospital Use (pt)

\[
= \text{Actual Private Hospital Use}_\text{SDMlookup( Time)}
\]

Present In 1 View:

- **View 1**

Used By

**Feedback Loops:** 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

| Core insurance model 0331 | #5 A | Actual Private Occupancy ()

\[
= \text{Actual Private Occupancy}_\text{SDMlookup( Time)}
\]

Present In 1 View:

- **View 1**

Used By

**Feedback Loops:** 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]
| Core insurance model 0331 | #7 | Actual Public Hospital Use (pt) = Actual Public Hospital Use SDMlookup (Time) Present In 1 View:  
| | A |  
| | | • View 1  
| | | Used By Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #9 | Actual Public Occupancy () = Actual Public Occupancy SDMlookup (Time) Present In 1 View:  
| | A |  
| | | • View 1  
| | | Used By Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #11 | Average Length of Stay (Day) = Average Length of Stay SDMlookup (Time) Present In 1 View:  
| | A |  
| | | • View 1  
| | | Used By  
| | | • Discharged or dead from Private Hospitals  
| | | • Discharged or dead from Public Hospitals  
| | | Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #16 | Daily number of potentially get ill () = Daily number of potentially get ill SDMlookup (Time) Present In 1 View:  
| | F,A |  
| | | • View 1  
| | | Used By  
| | | • Daily getting ill  
| | | Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0] |
| Core insurance model 0331 | #18 | Diff in Occupancy () = Pu Occupancy - Pr Occupancy Description: previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy-Pr Occupancy) Present In 1 View:  
| | A |  
| | | • View 1  
| | | Used By |
| Core insurance model 0331 | #19 | F,A | Discharged or dead from Private Hospitals (pt/Day) | In Private Hospitals/ (Average Length of Stay* SeverityFtr) | Present In 1 View: | Used By | In Private Hospitals | Feedback Loops: 2 (33.3%) (+) 1 [5.5] (-) 1 [5.5] |
|--------------------------|-----|-----|-----------------------------------------------|----------------------------------------------------------|----------------|---------|----------------------|-----------------------------------------------|
|                          | #20 | F,A | Discharged or dead from Public Hospitals (pt/Day) | In Public Hospitals/ Average Length of Stay | Present In 1 View: | Used By | In Public Hospitals | Feedback Loops: 1 (16.7%) (+) 0 [0.0] (-) 1 [2.2] |
|                          | #22 | F,A | Getting sick and use private hospital () | Daily getting ill* Percentage of HI* Use HI + Daily getting ill* (1 - Percentage of HI)* Self pay)/1 | Present In 1 View: | Used By | Daily getting ill | In Private Hospitals | Feedback Loops: 2 (33.3%) (+) 1 [5.5] (-) 1 [2.2] |
|                          | #23 | F,A | Getting sick and use public hospital () | ((Daily getting ill* Percentage of HI* (1 - Use HI) + Daily getting ill* (1 - Percentage of HI)*(1 - Self pay))/1 | Present In 1 View: | Used By | Daily getting ill | |
| Core insurance model 0331 | #29 DE,A |
|--------------------------|---------|
| **Percentage of HI ()** = Baseline HI + DELAY3((**Diff in Occupancy** - 0.055) * **Occupancy to Demand**, **Delay in Perception and Purchase**) + DELAY3((**Tax Savings** / 2876) * **Tax Saving to demand**, **Delay in Perception and Purchase**) |
| **Present In 1 View:** |
| *View 1* |
| **Used By:** |
| *Getting sick and use private hospital* |
| *Getting sick and use public hospital* |
| **Feedback Loops:** 2 (33.3%) (+) 0 [0.0] (-) 2 [2.5] |

| Core insurance model 0331 | #30 A |
|--------------------------|-------|
| **Pr Occupancy ()** = **In Private Hospitals** / **Private hospital beds** |
| **Present In 1 View:** |
| *View 1* |
| **Used By:** |
| **Diff in Occupancy** previously: PULSE(2009, 0.125)*0.055 + PULSE(2009.13, 20)*(Pu Occupancy - Pr Occupancy) |
| **Feedback Loops:** 1 (16.7%) (+) 1 [5.5] (-) 1 [5.5] |

| Core insurance model 0331 | #32 A |
|--------------------------|-------|
| **Private hospital beds (pt)** = **Private hospital beds**_SDMlookup( Time) |
| **Present In 1 View:** |
| *View 1* |
| **Used By:** |
| *Pr Occupancy* |
| **Feedback Loops:** 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0] |

| Core insurance model 0331 | #33 A |
|--------------------------|-------|
| **Pu Occupancy ()** = **In Public Hospitals** / **Public hospital beds** |
| **Present In 1 View:** |
| *View 1* |
| **Used By:** |
- **Diff in Occupancy** previously: $\text{PULSE}(2009, 0.125) \times 0.055 + \text{PULSE}(2009.13, 20) \times (\text{Pu Occupancy} - \text{Pr Occupancy})$

**Feedback Loops:** 1 (16.7%) (+) 0 [0,0] (-) 1 [5,5]

| Core insurance model 0331 | #35 A | Public hospital beds (pt) = Public hospital beds _SDMlookup( Time) |
|---------------------------|------|---------------------------------------------------------------|
| **Description:** | 1 bed = 1 pt |
| **Present In 1 View:** | |
| | • **View 1** |
| **Used By:** | |
| | • Pu Occupancy |

**Feedback Loops:** 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

| Core insurance model 0331 | #40 A | Tax Incentive () = Tax Incentive _SDMlookup( Time) |
|---------------------------|------|--------------------------------------------------|
| **Present In 1 View:** | |
| | • **View 1** |
| **Used By:** | |
| | • Tax Savings |

**Feedback Loops:** 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

| Core insurance model 0331 | #42 A | Tax Savings () = Tax Incentive * Average Premium Ratio*0.06 |
|---------------------------|------|----------------------------------------------------------|
| **Present In 1 View:** | |
| | • **View 1** |
| **Used By:** | |
| | • Percentage of HI |

**Feedback Loops:** 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

| Control | #36 A | SAVEPER (Day ) = TIME STEP |
|---------|------|----------------------------|
| **Description:** | The frequency with which output is stored. |
| **Present In 0 Views:** | |
| **Used By:** | |

**Feedback Loops:** 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

**Subscripts (0 Variables)
| Group | Type | Variable Name And Description |
|-------|------|------------------------------|
| Top   | (Type) Data | (0 Variables) |
| Top   | (Type) Game | (0 Variables) |
| Top   | (Type) Lookup | (10 Variables) |

| # | C or e in su ra num ber 03 31 | A ctual percentage of HI _SDMlookup () |
|---|---------------------------------|--------------------------------------|
|   | Actual percentage of HI _SDMlookup([(733500,0)- (737517,1)],(733134,0.2353),(733774,0.2511),(734474,0.2722),(735387,0.3243),(736031,0.3439),(73706,1.0,3531),(737151,0.3542),(737426,0.3677)) |

Present In 0 Views:

Used By:

- Actual percentage of HI

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]
Present In 0 Views:
Used By
- Actual Private Hospital Use

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]
Present In 0 Views:

Used By

- Actual Private Occupancy

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

| C | or | A | Actual Public Hospital Use _SDMlookup (pt) |
|---|----|---|------------------------------------------|
| e | in | T | Actual Public Hospital Use _SDMlookup([(733500,0)-|
|   |   |   | (737517,10000)],(733500,2517),(733759,2517),(733789,3011),(733819,3011),(733849,2517),(733864,25|
|   |   |   | 17),(733865,2605),(734124,2605),(734154,3117),(734184,3117),(734214,2605),(734229,2605),(734230,2|
|   |   |   | 658),(734489,2658),(734519,3181),(734549,3181),(734579,2658),(734595,2658),(734596,2726),(734855,|
|   |   |   | 2726),(734885,3261),(734915,3261),(734945,2726),(734960,2726),(734961,2726),(735220,2726),(73525|
|   |   |   | 0,3261),(735280,3261),(735310,2726),(735325,2726),(735326,2806),(735585,2806),(735615,3357),(7356|
|   |   |   | 45,3357),(735675,2806),(735690,2806),(735691,2852),(735950,2852),(735980,3412),(736010,3412),(736|
|   |   |   | 040,2852),(736056,2852),(736057,2991),(736316,2991),(736346,3578),(736376,3578),(736406,2991),(7|
|   |   |   | 36421,2991),(736422,3079),(736681,3079),(736711,3684),(736741,3684),(736771,3079),(736786,3079),(7|
|   |   |   | 36787,3062),(737046,3062),(737076,3664),(737106,3664),(737136,3062),(737151,3062),(737152,2936),(7|
|   |   |   | 37411,2936),(737441,3513),(737471,3513),(737501,2936),(737517,2936)) |
Present In 0 Views:

Used By

- Actual Public Hospital Use

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

| C | # | Actual Public Occupancy _SDMlookup 0 |
|---|---|-------------------------------------|
| 8 | Actual Public Occupancy _SDMlookup([(733500,0)-
(737157.2),(733500,0.819),(733759,0.819),(733789,0.98),(733819,0.98),(733849,0.819),(733864,0.819),
(733865,0.84),(734124,0.84),(734154,1.005),(734184,1.005),(734214,0.84),(734229,0.84),(734230,0.822),
(734489,0.822),(734519,0.983),(734549,0.983),(734579,0.822),(734595,0.822),(734596,0.874),(734855,
0.874),(734885,1.046),(734915,1.046),(734945,0.874),(734960,0.874),(734961,0.852),(735220,0.852),(735250,1.019),
(735280,1.019),(735310,0.852),(735325,0.852),(735326,0.857),(735585,0.857),(735615,1.026),(735645,1.026),
(735675,0.857),(735690,0.857),(735691,0.85),(735950,0.85),(735950,0.107),(736010,0.107),(736040,0.85),
(736056,0.85),(736057,0.871),(736316,0.871),(736346,1.042),(736376,1.042),(736406,0.871),(736421,0.871),
(736422,0.9),(736681,0.9),(736711,1.077),(736741,1.077),(736771,0.9),(736786,0.9),(736787,0.877),
(737046,0.877),(737076,1.049),(737106,1.049),(737136,0.877),(737151,0.877),(737152,0.858),
(737411,0.858),(737441,1.027),(737471,1.027),(737501,0.858),(737517,0.858)] |
Present In 0 Views:

Used By

- **Actual Public Occupancy**

**Feedback Loops:** 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]
Present In 0 Views:

Used By

- Daily number of potentially get ill

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]
Present In 0 Views:

Used By

- Private hospital beds

Feedback Loops: 0 (0.0%) (+) 0 [0,0] (-) 0 [0,0]

| C | or | e in | su | r a n c e | e m | o d | e l | 03 | 31 |
|---|---|---|---|---|---|---|---|---|---|
| 3 | # | Public hospital beds _SDMlookup (pt) | Public hospital beds _SDMlookup([(733500,0)- (737517,30000)],(733500,23046),(733864,23046),(733865,23263),(734229,23263),(734230,23286),(734595,23286),(734596,23378),(734960,23378),(734961,23686),(735325,23686),(735326,23891),(735690,23891),(735691,24161),(736056,24161),(736057,24392),(736421,24392),(736422,24621),(736786,24621),(736787,25155),(737151,25155),(737152,25661),(737517,25661)) |

Description: 1 bed = 1 pt

Present In 0 Views:

Used By
- **Public hospital beds**: 1 bed = 1 pt

**Feedback Loops**: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

| Core insurance model 0331 | # A T | Tax Incentive _SDMlookup () | Tax Incentive _SDMlookup([(733500,0), (737517,10000)],(733500,0),(737151,0),(737152,8000),(737517,8000)) |
|---------------------------|-------|----------------------------|------------------------------------------------------------------------------------------------|

**Present In 0 Views:**

**Used By**

- **Tax Incentive**

**Feedback Loops**: 0 (0.0%) (+) 0 [0.0] (-) 0 [0.0]

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**Quick Links:**

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**All Variables (30 Variables + 4 Control Variables)**

| Group | Type | Variable                           |
|-------|------|------------------------------------|
| Core insurance model 0331 | A    | Actual percentage of HI ()         |
| Core insurance model 0331 | A    | Actual Private Hospital Use (pt)   |
| Core insurance model 0331 | A    | Actual Private Occupancy ()        |
| Core insurance model 0331 | A | Actual Public Hospital Use (pt) |
| Core insurance model 0331 | A | Actual Public Occupancy () |
| Core insurance model 0331 | A | Average Length of Stay (Day) |
| Core insurance model 0331 | C | Average Premium Ratio () |
| Core insurance model 0331 | C | Baseline HI () |
| Core insurance model 0331 | L | Daily getting ill (pt) |
| Core insurance model 0331 | F,A | Daily number of potentially get ill () |
| Core insurance model 0331 | C | Delay in Perception and Purchase (Day) |
| Core insurance model 0331 | A | Diff in Occupancy () |
| Core insurance model 0331 | F,A | Discharged or dead from Private Hospitals (pt/Day) |
| Core insurance model 0331 | F,A | Discharged or dead from Public Hospitals (pt/Day) |
| Core insurance model 0331 | F,A | Getting sick and use private hospital () |
| Core insurance model 0331 | F,A | Getting sick and use public hospital () |
| Core insurance model 0331 | L | In Private Hospitals (pt) |
| Core insurance model 0331 | L | In Public Hospitals (pt) |
| Core insurance model 0331 | C | Occupancy to Demand () |
| Core insurance model 0331 | DE,A | Percentage of HI () |
| Core insurance model 0331 | A | Pr Occupancy () |
| Core insurance model 0331 | A | Private hospital beds (pt) |
| Core insurance model 0331 | A | Pu Occupancy () |
| Core insurance model 0331 | A | Public hospital beds (pt) |
| Core insurance model 0331 | C | Self pay () |
| Core insurance model 0331 | C | SeverityFtr () |
| Core insurance model 0331 | A | Tax Incentive () |
| Core insurance model 0331 | C | Tax Saving to demand () |
| Core insurance model 0331 | A | Tax Savings () |
| Core insurance model 0331 | C | Use HI () |
| Control | C | FINAL TIME (Day) |
| Control | C | INITIAL TIME (Day) |
| Control | A | SAVEPER (Day) |
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**Variable Link Detail (30 Variables + 4 Control Variables)**

| Group                         | Type      | Variable                                      | In/Out Counts | In/Out Ratio | In Links By Polarity | Out Links By Polarity |
|-------------------------------|-----------|-----------------------------------------------|---------------|--------------|----------------------|-----------------------|
| Core insurance model 0331     | InOutLinks| Percentage of H1 ()                          | 6 | 2           | 3.00               | 5| 1| 0                | 0| 2| 0                |
| Core insurance model 0331     | InOutLinks| Getting sick and use public hospital ()       | 4 | 2           | 2.00               | 1| 3| 0                | 1| 1| 0                |
| Core insurance model 0331     | InOutLinks| Getting sick and use private hospital ()      | 4 | 2           | 2.00               | 3| 1| 0                | 1| 1| 0                |
| Core insurance model 0331     | InOutLinks| Daily getting ill (pt)                        | 3 | 2           | 1.50               | 1| 2| 0                | 2| 0| 0                |
| Core insurance model 0331     | InOutLinks| In Public Hospitals (pt)                      | 2 | 2           | 1.00               | 1| 1| 0                | 2| 0| 0                |
| Core insurance model 0331     | InOutLinks| In Private Hospitals (pt)                     | 2 | 2           | 1.00               | 1| 1| 0                | 2| 0| 0                |
| Core insurance model 0331     | InOutLinks| Discharged or dead from Private Hospitals (pt/Day) | 3 | 1           | 3.00               | 1| 2| 0                | 0| 1| 0                |
| Core insurance model 0331     | InOutLinks| Average Length of Stay (Day)                  | 2 | 2           | 1.00               | 0| 0| 2                | 0| 2| 0                |
| Core insurance model 0331     | InOutLinks| Tax Savings ()                                | 2 | 1           | 2.00               | 2| 0| 0                | 1| 0| 0                |
| Core insurance model 0331     | InOutLinks| Tax Incentive ()                              | 2 | 1           | 2.00               | 2| 0| 0                | 1| 0| 0                |
| Core insurance model 0331     | InOutLinks| Public hospital beds (pt)                     | 2 | 1           | 2.00               | 2| 0| 0                | 0| 1| 0                |
| Core insurance model 0331     | InOutLinks| Pu Occupancy ()                               | 2 | 1           | 2.00               | 1| 1| 0                | 1| 0| 0                |
| Core insurance model 0331     | InOutLinks| Private hospital beds (pt)                    | 2 | 1           | 2.00               | 0| 0| 2                | 0| 1| 0                |
| Core insurance model 0331     | InOutLinks| Pr Occupancy ()                               | 2 | 1           | 2.00               | 1| 1| 0                | 0| 1| 0                |
| Core insurance model 0331 | InOutLinks   | Description                                                                 | TIME 1 | TIME 2 | Diff in Occupancy (%) | Diff in Occupancy (%) |
|--------------------------|--------------|------------------------------------------------------------------------------|--------|--------|------------------------|------------------------|
| Core insurance model 0331| Discharged or dead from Public Hospitals (pt/Day) | 2 | 1 | 2.00 | 0|0|2 | 1|0|0 |
| Core insurance model 0331| Diff in Occupancy () | 2 | 1 | 2.00 | 1|1|0 | 1|0|0 |
| Core insurance model 0331| Daily number of potentially get ill () | 2 | 1 | 2.00 | 0|0|2 | 1|0|0 |
| Core insurance model 0331| Use HI () | 0 | 2 | 0.00 | 0|0|0 | 1|1|0 |
| Core insurance model 0331| Self pay () | 0 | 2 | 0.00 | 0|0|0 | 1|1|0 |
| Core insurance model 0331| Actual Public Occupancy () | 2 | 0 | Infinite | 0|0|2 | 0|0|0 |
| Core insurance model 0331| Actual Public Hospital Use (pt) | 2 | 0 | Infinite | 0|0|2 | 0|0|0 |
| Core insurance model 0331| Actual Private Occupancy () | 2 | 0 | Infinite | 0|0|2 | 0|0|0 |
| Core insurance model 0331| Actual Private Hospital Use (pt) | 2 | 0 | Infinite | 0|0|2 | 0|0|0 |
| Core insurance model 0331| Actual percentage of HI () | 2 | 0 | Infinite | 2|0|0 | 0|0|0 |
| Core insurance model 0331| Tax Saving to demand () | 0 | 1 | 0.00 | 0|0|0 | 1|0|0 |
| Core insurance model 0331| SeverityFtr () | 0 | 1 | 0.00 | 0|0|0 | 0|1|0 |
| Core insurance model 0331| Occupancy to Demand () | 0 | 1 | 0.00 | 0|0|0 | 0|1|0 |
| Core insurance model 0331| Delay in Perception and Purchase (Day) | 0 | 1 | 0.00 | 0|0|0 | 1|0|0 |
| Core insurance model 0331| Baseline HI () | 0 | 1 | 0.00 | 0|0|0 | 1|0|0 |
| Core insurance model 0331| Average Premium Ratio () | 0 | 1 | 0.00 | 0|0|0 | 1|0|0 |
| Core insurance model 0331| TIME STEP (Day) | 0 | 1 | 0.00 | 0|0|0 | 1|0|0 |
| Core insurance model 0331| SAVEPER (Day) | 1 | 0 | Infinite | 1|0|0 | 0|0|0 |
| Core insurance model 0331| INITIAL TIME (Day) | (0|0) | Infinite | 0|0|0 | 0|0|0 |
| Core insurance model 0331| FINAL TIME (Day) | (0|0) | Infinite | 0|0|0 | 0|0|0 |
### Undocumented Variables (37 Variables + 0 Control Variables)

| Group                                      | Type | Variable                                      |
|--------------------------------------------|------|-----------------------------------------------|
| Core insurance model 0331                  | A    | Actual percentage of HI ()                   |
| Core insurance model 0331                  | A,T  | Actual percentage of HI__SDMlookup ()        |
| Core insurance model 0331                  | A    | Actual Private Hospital Use (pt)             |
| Core insurance model 0331                  | A,T  | Actual Private Hospital Use__SDMlookup (pt)  |
| Core insurance model 0331                  | A    | Actual Private Occupancy ()                  |
| Core insurance model 0331                  | A,T  | Actual Private Occupancy__SDMlookup ()       |
| Core insurance model 0331                  | A    | Actual Public Hospital Use (pt)              |
| Core insurance model 0331                  | A,T  | Actual Public Hospital Use__SDMlookup (pt)   |
| Core insurance model 0331                  | A    | Actual Public Occupancy ()                   |
| Core insurance model 0331                  | A,T  | Actual Public Occupancy__SDMlookup ()        |
| Core insurance model 0331                  | A    | Average Length of Stay (Day)                 |
| Core insurance model 0331                  | A,T  | Average Length of Stay__SDMlookup (Day)      |
| Core insurance model 0331                  | C    | Average Premium Ratio ()                     |
| Core insurance model 0331                  | C    | Baseline HI ()                               |
| Core insurance model 0331                  | L    | Daily getting ill (pt)                       |
| Core insurance model 0331                  | F,A  | Daily number of potentially get ill ()       |
| Core insurance model 0331                  | A,T  | Daily number of potentially get ill__SDMlookup () |
| Core insurance model 0331                  | C    | Delay in Perception and Purchase (Day)       |
| Core insurance model 0331                  | F,A  | Discharged or dead from Private Hospitals (pt/Day) |
| Core insurance model 0331                  | F,A  | Discharged or dead from Public Hospitals (pt/Day) |
| Core insurance model 0331                  | F,A  | Getting sick and use private hospital ()     |
| Group          | Type | Variable                                           |
|----------------|------|---------------------------------------------------|
| Core insurance model 0331 | F,A  | Getting sick and use public hospital ()           |
| Core insurance model 0331 | L    | In Private Hospitals (pt)                         |
| Core insurance model 0331 | L    | In Public Hospitals (pt)                          |
| Core insurance model 0331 | C    | Occupancy to Demand ()                            |
| Core insurance model 0331 | DE,A | Percentage of HI ()                               |
| Core insurance model 0331 | A    | Pr Occupancy ()                                   |
| Core insurance model 0331 | A    | Private hospital beds (pt)                        |
| Core insurance model 0331 | A,T  | Private hospital beds _SDMlookup (pt)              |
| Core insurance model 0331 | A    | Pu Occupancy ()                                   |
| Core insurance model 0331 | C    | Self pay ()                                       |
| Core insurance model 0331 | C    | SeverityFtr ()                                    |
| Core insurance model 0331 | A    | Tax Incentive ()                                  |
| Core insurance model 0331 | A,T  | Tax Incentive _SDMlookup ()                       |
| Core insurance model 0331 | C    | Tax Saving to demand ()                           |
| Core insurance model 0331 | A    | Tax Savings ()                                    |
| Core insurance model 0331 | C    | Use HI ()                                         |

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**Supplementary Variables (0 Variables + 0 Control Variables)**

| Group | Type | Variable |
|-------|------|----------|

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**Supplementary Variables Being Used (0 Variables + 0 Control Variables)**

| Group | Type | Variable |
|-------|------|----------|
### Unused Variables (5 Variables + 0 Control Variables)

| Group                          | Type | Variable                                      |
|-------------------------------|------|-----------------------------------------------|
| Core insurance model 0331      | A    | Actual percentage of HI ()                   |
| Core insurance model 0331      | A    | Actual Private Hospital Use (pt)             |
| Core insurance model 0331      | A    | Actual Private Occupancy ()                  |
| Core insurance model 0331      | A    | Actual Public Hospital Use (pt)              |
| Core insurance model 0331      | A    | Actual Public Occupancy ()                   |

### Stock Variables (3 Variables + 0 Control Variables)

| Group                          | Type | Variable                          |
|-------------------------------|------|-----------------------------------|
| Core insurance model 0331     | L    | Daily getting ill (pt)            |
| Core insurance model 0331     | L    | In Private Hospitals (pt)         |
| Core insurance model 0331     | L    | In Public Hospitals (pt)          |
### Equations With Embedded Data (5 Variables + 0 Control Variables)

| Group                              | Type   | Variable                                      |
|------------------------------------|--------|-----------------------------------------------|
| Core insurance model 0331          | L      | Daily getting ill (pt)                        |
| Core insurance model 0331          | L      | In Private Hospitals (pt)                     |
| Core insurance model 0331          | L      | In Public Hospitals (pt)                      |
| Core insurance model 0331          | DE,A   | Percentage of HI ()                           |
| Core insurance model 0331          | A      | Tax Savings ()                                |

### Nonmonotonic Lookup Functions (7 Variables + 0 Control Variables)

| Group                              | Type   | Variable                                      |
|------------------------------------|--------|-----------------------------------------------|
| Core insurance model 0331          | A,T    | Actual Private Hospital Use__SDMlookup (pt)   |
| Core insurance model 0331          | A,T    | Actual Private Occupancy__SDMlookup ()        |
| Core insurance model 0331          | A,T    | Actual Public Hospital Use__SDMlookup (pt)    |
| Group                        | Type   | Variable                                      | Non-Zero |
|------------------------------|--------|-----------------------------------------------|----------|
| Core insurance model 0331   | A,T    | Actual Public Occupancy _SDMlookup ()         |          |
| Core insurance model 0331   | A,T    | Average Length of Stay _SDMlookup (Day)       |          |
| Core insurance model 0331   | A,T    | Daily number of potentially get ill _SDMlookup () |          |
| Core insurance model 0331   | A,T    | Private hospital beds _SDMlookup (pt)         |          |

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**Non-Zero End Sloped Lookup Functions (1 Variables + 0 Control Variables)**

| Group                        | Type   | Variable                                      | Non-Zero |
|------------------------------|--------|-----------------------------------------------|----------|
| Core insurance model 0331   | Non-Zero | Actual percentage of HI _SDMlookup ()       | Both     |

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**Cascading Lookup Functions (0 Variables + 0 Control Variables)**

| Group | Type | Variable |
|-------|------|----------|

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**Equations With Step Pulse Or Related Functions (0 Variables + 0 Control Variables)**

| Group | Type | Variable |
|-------|------|----------|

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**Equations With If Then Else Functions (0 Variables + 0 Control Variables)**
### Equations With Min Or Max Functions (0 Variables + 0 Control Variables)

| Group          | Type       | Variable                                           |
|----------------|------------|----------------------------------------------------|

### Complex Variable (Richardson's Rule Threshold = 3) (3 Variables + 0 Control Variables)

| Group                          | Type            | Variable                                           | Complexity |
|-------------------------------|-----------------|----------------------------------------------------|------------|
| Core insurance model 0331     | Complexity      | Getting sick and use private hospital ()           | 4          |
| Core insurance model 0331     | Complexity      | Getting sick and use public hospital ()            | 4          |
| Core insurance model 0331     | Complexity      | Percentage of HI ()                                | 6          |

### Complex Stock (0 Variables + 0 Control Variables)

| Group          | Type       | Variable |
|----------------|------------|----------|

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### State Variables (4 Variables + 0 Control Variables)

| Group                        | Type | Variable                      |
|------------------------------|------|-------------------------------|
| Core insurance model 0331   | L    | Daily getting ill (pt)        |
| Core insurance model 0331   | L    | In Private Hospitals (pt)     |
| Core insurance model 0331   | L    | In Public Hospitals (pt)      |
| Core insurance model 0331   | DE,A | Percentage of HI ()           |

### Variables With Source Information (0 Variables + 0 Control Variables)

| Group | Type | Variable | Sources |
|-------|------|----------|---------|

### Variables With Dimensionless Units (0 Variables + 0 Control Variables)

| Group | Type | Variable |
|-------|------|----------|

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Variables With Source Information (0 Variables + 0 Control Variables)

| Group | Type | Variable | Sources |
|-------|------|----------|---------|

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Variables With Dimensionless Units (0 Variables + 0 Control Variables)

| Group | Type | Variable |
|-------|------|----------|

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**Variables without Predefined Min or Max Values (30 Variables + 4 Control Variables)**

| Group | Type | Variable |
|-------|------|----------|
| Core insurance model 0331 | A | Actual percentage of HI () |
| Core insurance model 0331 | A | Actual Private Hospital Use (pt) |
| Core insurance model 0331 | A | Actual Private Occupancy () |
| Core insurance model 0331 | A | Actual Public Hospital Use (pt) |
| Core insurance model 0331 | A | Actual Public Occupancy () |
| Core insurance model 0331 | A | Average Length of Stay (Day) |
| Core insurance model 0331 | C | Average Premium Ratio () |
| Core insurance model 0331 | C | Baseline HI () |
| Core insurance model 0331 | L | Daily getting ill (pt) |
| Core insurance model 0331 | F,A | Daily number of potentially get ill () |
| Core insurance model 0331 | C | Delay in Perception and Purchase (Day) |
| Core insurance model 0331 | A | Diff in Occupancy () |
| Core insurance model 0331 | F,A | Discharged or dead from Private Hospitals (pt/Day) |
| Core insurance model 0331 | F,A | Discharged or dead from Public Hospitals (pt/Day) |
| Core insurance model 0331 | F,A | Getting sick and use private hospital () |
| Core insurance model 0331 | F,A | Getting sick and use public hospital () |
| Core insurance model 0331 | L | In Private Hospitals (pt) |
| Core insurance model 0331 | L | In Public Hospitals (pt) |
| Core insurance model 0331 | C | Occupancy to Demand () |
| Core insurance model 0331 | DE,A | Percentage of HI () |
| Core insurance model 0331 | A | Pr Occupancy () |
| Core insurance model 0331 | A | Private hospital beds (pt) |
| Core insurance model 0331 | A | Pu Occupancy () |
| Group                     | Type | Variable                  |
|--------------------------|------|---------------------------|
| Core insurance model 0331| A    | Public hospital beds (pt) |
| Core insurance model 0331| C    | Self pay ()               |
| Core insurance model 0331| C    | SeverityFtr ()            |
| Core insurance model 0331| A    | Tax Incentive ()          |
| Core insurance model 0331| C    | Tax Saving to demand ()   |
| Core insurance model 0331| A    | Tax Savings ()            |
| Core insurance model 0331| C    | Use HI ()                 |
| .Control                 | C    | FINAL TIME (Day)          |
| .Control                 | C    | INITIAL TIME (Day)        |
| .Control                 | A    | SAVEPER (Day)             |
| .Control                 | C    | TIME STEP (Day)           |

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**Function Sensitivity Parameters (0 Variables + 0 Control Variables)**

| Group | Type | Variable          |
|-------|------|-------------------|

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**Data Lookup Tables (0 Variables + 0 Control Variables)**

| Group | Type | Variable |
|-------|------|----------|

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**Variables Using Macros (0 Variables + 0 Control Variables)**
Variables Not In Any View (0 Variables + 4 Control Variables)

| Group    | Type  | Variable      |
|----------|-------|---------------|
| .Control | C     | FINAL TIME    |
| .Control | C     | INITIAL TIME  |
| .Control | A     | SAVEPER       |
| .Control | C     | TIME STEP     |

Equations With Unit Errors Or Warnings (26 Variables + 0 Control Variables)

| Group               | Type | Variable                  | Units                                                                 |
|---------------------|------|---------------------------|-----------------------------------------------------------------------|
| Core insurance      | Units| Actual percentage of HI   | Lhs Units: None Specified                                            |
| model 0331          |      | ()                        |                                                                       |
| Core insurance      | Units| Actual Private Hospital   | Lhs Units: (pt)                                                      |
| model 0331          |      | Use (pt)                  | Rhs Units: LOOKUP Used With Dimensioned Argument < (Day) > Complete Rhs Units: LOOKUP ( pt , Day ) |
| Core insurance      | Units| Actual Private Occupancy  |                                                                       |
| model 0331          |      | ()                        | Lhs Units: None Specified                                            |
| Core insurance model 0331 | Units | Actual Public Hospital Use (pt) | Lhs Units: (pt)  
Rhs Units: LOOKUP Used With Dimensioned Argument < (Day) >  
Complete Rhs Units: LOOKUP ( pt , Day ) |
|--------------------------|-------|--------------------------------|------------------------------------------------|
| Core insurance model 0331 | Units | Actual Public Hospital Use (pt) | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Average Length of Stay (Day)    | Lhs Units: None Specified  
Rhs Units: LOOKUP Used With Dimensioned Argument < (Day) >  
Complete Rhs Units: LOOKUP ( Day , Day ) |
| Core insurance model 0331 | Units | Average Premium Ratio ()        | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Baseline HI ()                  | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Daily number of potentially get ill () | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Diff in Occupancy ()            | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Getting sick and use private hospital () | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Getting sick and use public hospital () | Lhs Units: None Specified |
| Core insurance model 0331 | Units | In Private Hospitals (pt)       | Lhs Units: (pt)  
Rhs Units: INTEG (( Error >>> (Dmnl) ) (pt/Day)  
<<< Error ) , (constant) )  
Complete Rhs Units: INTEG (( Dmnl - pt/Day ) , 0.0 ) |
| Core insurance model 0331 | Units | In Public Hospitals (pt)        | Lhs Units: (pt)  
Rhs Units: INTEG (( Error >>> (Dmnl) ) (pt/Day)  
<<< Error ) , (constant) )  
Complete Rhs Units: INTEG (( Dmnl - pt/Day ) , 0.0 ) |
| Core insurance model 0331 | Units | Occupancy to Demand ()          | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Percentage of HI ()             | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Pr Occupancy ()                 | Lhs Units: None Specified |
| Core insurance model 0331 | Units | Private hospital beds (pt)      | Lhs Units: (pt)  
Rhs Units: LOOKUP Used With Dimensioned Argument < (Day) >  
Complete Rhs Units: LOOKUP ( pt , Day ) |
| Core insurance model 0331 | Units | Argument < (Day) > |
|--------------------------|-------|-------------------|
|                          | Pu Occupancy () | Complete Rhs Units: LOOKUP ( pt , Day ) |
| Core insurance model 0331 | Units | Public hospital beds (pt) |
| Core insurance model 0331 | Units | Self pay () |
| Core insurance model 0331 | Units | SeverityFtr () |
| Core insurance model 0331 | Units | Tax Incentive () |
| Core insurance model 0331 | Units | Tax Saving to demand () |
| Core insurance model 0331 | Units | Tax Savings () |
| Core insurance model 0331 | Units | Use HI () |

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**Units (2/1)**

| Units | Type | Alternates |
|-------|------|------------|
| Day   | Basic|            |
| pt    | Basic|            |
| pt/Day| Combined|          |

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Feedback Loops (6|0 Loops ) Maximum Loop Length: 5 [2,5] | [0,0]
| Group | Type | Variable | Loops | +/- Ratio | Loop s (IVV) | +/- Ratio |
|-------|------|----------|-------|-----------|-------------|-----------|
| Core insurance model 033 1 | Feedback .. | Daily getting ill (pt) | 2 (33.3%) | 0 [0, 0] | 0 [0, 0] | 0 [0, 0] |
| Core insurance model 033 1 | Feedback .. | Diff in Occupancy () | 2 (33.3%) | 1 [5, 5] | 1 [5, 5] | 1.0 [0, 0] |
| Core insurance model 033 1 | Feedback .. | Getting sick and use private hospital () | 2 (33.3%) | 1 [5, 5] | 1 [2, 2] | 1.0 [0, 0] |
| Core insurance model 033 1 | Feedback .. | Getting sick and use public hospital () | 2 (33.3%) | 0 [0, 0] | 0 [0, 0] | 0 [0, 0] |
| Core insurance model 033 1 | Feedback .. | In Private Hospitals (pt) | 2 (33.3%) | 1 [5, 5] | 1 [2, 2] | 1.0 [0, 0] |

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| Core insurance model 033 | Feedback | In Public Hospitals (pt) | 2 (33.3%) | 0 [0, 0] | 2 [2, 5] | 0.0 | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Cor e insurance model 033 | Feedback | Percentage of HI () | 2 (33.3%) | 1 [5, 5] | 1 [5, 5] | 1.0 | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Cor e insurance model 033 | Feedback | Discharged or dead from Private Hospitals (pt/Day) | 1 (16.7%) | 0 [0, 0] | 1 [2, 2] | 0.0 | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Cor e insurance model 033 | Feedback | Discharged or dead from Public Hospitals (pt/Day) | 1 (16.7%) | 0 [0, 0] | 1 [2, 2] | 0.0 | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Cor e insurance model 033 | Feedback | Pr Occupancy () | 1 (16.7%) | 1 [5, 5] | 0 [0, 0] | Infinit | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 1 Feedback.. | Pu Occupancy () | 1 (16.7%) | 0 [0, 0] | 1 [5, 5] | 0.0 | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 1 Feedback.. | Actual percentage of HI () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 1 Feedback.. | Actual Private Hospital Use (pt) | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 1 Feedback.. | Actual Private Occupancy () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 1 Feedback.. | Actual Public Hospital Use (pt) | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 | Feedback | Actual Public Occupancy (%) | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
|-------------------------|----------|-----------------------------|--------|----------|----------|-----|-----------|--------|----------|----------|-----|-----------|
| Core insurance model 033 | Feedback | Average Length of Stay (Day) | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 | Feedback | Average Premium Ratio () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 | Feedback | Baseline HI () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 033 | Feedback | Daily number of potentially get ill () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 0331 | Feedback.. | Delay in Perception and Purchase (Day) | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
|------------------------|------------|----------------------------------------|--------|--------|--------|----|--------|--------|--------|--------|----|--------|
| Core insurance model 0331 | Feedback.. | Occupancy to Demand () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 0331 | Feedback.. | Private hospital beds (pt) | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 0331 | Feedback.. | Public hospital beds (pt) | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 0331 | Feedback.. | Self pay () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 0331 | Feedback .. | Severity Ftr () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
|--------------------------|-------------|----------------|--------|----------|----------|----|----------|--------|----------|----------|----|----------|
| Core insurance model 0331 | Feedback .. | Tax Incentiv e () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 0331 | Feedback .. | Tax Saving to demand () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 0331 | Feedback .. | Tax Savings () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
| Core insurance model 0331 | Feedback .. | Use HI () | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] | 0 (0%) | 0 [0, 0] | 0 [0, 0] | NA | 0 [0, 0] |
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**Exogenous Variables Analysis (19 Variables + 4 Control Variables)**

| Group                          | Type                | Variable                                      | Variable Number | Data Source  |
|--------------------------------|---------------------|-----------------------------------------------|-----------------|--------------|
| Core insurance model 0331     | Exogenous           | Actual percentage of HI ()                   | 1               | 1 Exogenous  |
| Core insurance model 0331     | Exogenous           | Actual Private Hospital Use (pt)              | 2               | 1 Exogenous  |
| Core insurance model 0331     | Exogenous           | Actual Private Occupancy ()                  | 3               | 1 Exogenous  |
| Core insurance model 0331     | Exogenous           | Actual Public Hospital Use (pt)               | 4               | 1 Exogenous  |
| Core insurance model 0331     | Exogenous           | Actual Public Occupancy ()                   | 5               | 1 Exogenous  |
| Core insurance model 0331     | Exogenous           | Average Length of Stay (Day)                 | 6               | 1 Exogenous  |
| Core insurance model 0331     | Exogenous           | Average Premium Ratio ()                     | 7               | Hardcoded    |
| Core insurance model 0331     | Exogenous           | Baseline HI ()                               | 8               | Hardcoded    |
| Core insurance model 0331     | Exogenous           | Daily number of potentially get ill ()        | 9               | 1 Exogenous  |
| Core insurance model 0331 | Exogenous | Delay in Perception and Purchase (Day) | 10 | Hardcoded |
|---------------------------|------------|----------------------------------------|----|----------|
| Core insurance model 0331 | Exogenous | Occupancy to Demand () | 11 | Hardcoded |
| Core insurance model 0331 | Exogenous | Private hospital beds (pt) | 12 | 1 Exogenous |
| Core insurance model 0331 | Exogenous | Public hospital beds (pt) | 13 | 1 Exogenous |
| Core insurance model 0331 | Exogenous | Self pay () | 14 | Hardcoded |
| Core insurance model 0331 | Exogenous | SeverityFtr () | 15 | Hardcoded |
| Core insurance model 0331 | Exogenous | Tax Incentive () | 16 | 1 Exogenous |
| Core insurance model 0331 | Exogenous | Tax Saving to demand () | 17 | Hardcoded |
| Core insurance model 0331 | Exogenous | Tax Savings () | 18 | 2 Exogenous |
| Core insurance model 0331 | Exogenous | Use HI () | 19 | Hardcoded |
| .Control | Exogenous | FINAL TIME (Day) | 20 | Hardcoded |
| .Control | Exogenous | INITIAL TIME (Day) | 21 | Hardcoded |
| .Control | Exogenous | SAVEPER (Day) | 22 | 1 Exogenous |
| .Control | Exogenous | TIME STEP (Day) | 23 | Hardcoded |

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Endogenous Variables Analysis (11 Variables + 0 Control Variables) (Maximum Endogenous Path Length: 5)
| Core insurance mode | Endogenous | Percentages of HI (%) |  |  |  |  |  |  |  |  |  |  |
|---------------------|------------|-----------------------|---|---|---|---|---|---|---|---|---|---|
|                     |            |                       | 1 | 6 | 5 | 83.3 | 4 | 2 | 4.25 | 5.00 | 5 | 16 | 9 |
| Core insurance mode | Endogenous | Discharged or dead from Private Hospitals (pt/Day) | 2 | 3 | 2 | 66.7 | 7 | 3 | 3.86 | 4.00 | 5 | 16 | 9 |
| Core insurance mode | Endogenous | Discharged or dead from Public Hospitals (pt/Day) | 3 | 2 | 1 | 50.0 | 7 | 3 | 3.86 | 4.00 | 5 | 17 | 8 |
| Core insurance mode | Endogenous | Getting sick and use private hospital () | 4 | 4 | 2 | 50.0 | 5 | 2 | 2.20 | 2.00 | 3 | 18 | 7 |
| Core insurance mode | Endogenous | Getting sick and use public hospital () | 5 | 4 | 2 | 50.0 | 5 | 2 | 2.20 | 2.00 | 3 | 18 | 7 |
| Core insurance mode | Endogenous | Pr Occupancy () | 6 | 2 | 1 | 50.0 | 8 | 3 | 3.75 | 4.00 | 5 | 16 | 9 |
| Core insurance mode | Endogenous | Pu Occupancy () | 7 | 2 | 1 | 50.0 | 7 | 3 | 3.86 | 4.00 | 5 | 17 | 8 |
| Core insurance mode | Endogenous | Daily getting ill (pt) | 8 | 3 | 1 | 33.3 | 7 | 2 | 2.86 | 3.00 | 4 | 17 | 8 |
| Core insurance mode | Endogenous | Diff in Occupancy | 0 | 9 | 2 | 0 | 0.0 | 7 | 4 | 4.57 | 5.00 | 5 | 18 | 7 |
|---------------------|------------|-------------------|---|---|---|---|---|---|---|-----|-----|---|----|---|
| Core insurance mode | Endogenous | In Private Hospitals (pt) | 10 | 2 | 0 | 0.0 | 8 | 2 | 2.75 | 3.00 | 4 | 17 | 8 |
| Core insurance mode | Endogenous | In Public Hospitals (pt) | 11 | 2 | 0 | 0.0 | 7 | 2 | 2.86 | 3.00 | 4 | 18 | 7 |

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**Macros (0 Variables)**

| Name | Macro Definition | Expanded Macro Definition |
|------|------------------|---------------------------|

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**Quick Links:**

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Positive Polarity Causal Links (26 Variables)**
| Cause                                               | Effect                                         | Polarity |
|-----------------------------------------------------|-----------------------------------------------|----------|
| Actual percentage of HI _SDMlookup                  | Actual percentage of HI                      | +        |
| Average Premium Ratio                               | Tax Savings                                   | +        |
| Baseline HI                                         | Percentage of HI                              | +        |
| Daily getting ill                                   | Getting sick and use private hospital         | +        |
| Daily getting ill                                   | Getting sick and use public hospital          | +        |
| Daily number of potentially get ill                 | Daily getting ill                             | +        |
| Delay in Perception and Purchase                    | Percentage of HI                              | +        |
| Diff in Occupancy                                   | Percentage of HI                              | +        |
| Getting sick and use private hospital               | In Private Hospitals                          | +        |
| Getting sick and use public hospital                | In Public Hospitals                           | +        |
| In Private Hospitals                                | Discharged or dead from Private Hospitals     | +        |
| In Private Hospitals                                | Pr Occupancy                                  | +        |
| In Public Hospitals                                 | Discharged or dead from Public Hospitals      | +        |
| In Public Hospitals                                 | Pu Occupancy                                  | +        |
| Pu Occupancy                                        | Diff in Occupancy                             | +        |
| Public hospital beds _SDMlookup                      | Public hospital beds                          | +        |
| Self pay                                            | Getting sick and use private hospital         | +        |
| Tax Incentive                                       | Tax Savings                                   | +        |
| Tax Incentive _SDMlookup                            | Tax Incentive                                 | +        |
| Tax Saving to demand                                | Percentage of HI                              | +        |
| Tax Savings                                         | Percentage of HI                              | +        |
| Time                                                | Actual percentage of HI                       | +        |
| Time                                                | Public hospital beds                          | +        |
| Time                                                | Tax Incentive                                 | +        |
| TIME STEP                                           | SAVEPER                                       | +        |
| Use HI                                              | Getting sick and use private hospital         | +        |
### Negative Polarity Causal Links (15 Variables)

| Cause                                      | Effect                                      | Polarity |
|---------------------------------------------|---------------------------------------------|----------|
| Average Length of Stay                      | Discharged or dead from Private Hospitals   | -        |
| Average Length of Stay                      | Discharged or dead from Public Hospitals    | -        |
| Discharged or dead from Private Hospitals   | In Private Hospitals                        | -        |
| Discharged or dead from Public Hospitals    | In Public Hospitals                         | -        |
| Getting sick and use private hospital      | Daily getting ill                           | -        |
| Getting sick and use public hospital       | Daily getting ill                           | -        |
| Occupancy to Demand                        | Percentage of HI                           | -        |
| Percentage of HI                           | Getting sick and use private hospital      | -        |
| Percentage of HI                           | Getting sick and use public hospital       | -        |
| Pr Occupancy                               | Diff in Occupancy                          | -        |
| Private hospital beds                       | Pr Occupancy                               | -        |
| Public hospital beds                        | Pu Occupancy                               | -        |
| Self pay                                   | Getting sick and use public hospital       | -        |
| SeverityFtr                                | Discharged or dead from Private Hospitals   | -        |
| Use HI                                     | Getting sick and use public hospital       | -        |
### Function-based Polarity Causal Links (14 Variables)

| Cause                                        | Effect                                        | Polarity            |
|----------------------------------------------|-----------------------------------------------|---------------------|
| Actual Private Hospital Use _SDMlookup       | Actual Private Hospital Use                   | Lookup Inconsistent |
| Actual Private Occupancy _SDMlookup          | Actual Private Occupancy                      | Lookup Inconsistent |
| Actual Public Hospital Use _SDMlookup        | Actual Public Hospital Use                    | Lookup Inconsistent |
| Actual Public Occupancy _SDMlookup           | Actual Public Occupancy                       | Lookup Inconsistent |
| Average Length of Stay _SDMlookup            | Average Length of Stay                        | Lookup Inconsistent |
| Daily number of potentially get ill _SDMlookup | Daily number of potentially get ill          | Lookup Inconsistent |
| Private hospital beds _SDMlookup             | Private hospital beds                         | Lookup Inconsistent |
| Time                                         | Actual Private Hospital Use                   | Lookup Inconsistent |
| Time                                         | Actual Private Occupancy                      | Lookup Inconsistent |
| Time                                         | Actual Public Hospital Use                    | Lookup Inconsistent |
| Time                                         | Actual Public Occupancy                       | Lookup Inconsistent |
| Time                                         | Average Length of Stay                        | Lookup Inconsistent |
| Time                                         | Daily number of potentially get ill           | Lookup Inconsistent |
| Time                                         | Private hospital beds                         | Lookup Inconsistent |

### Rate-to-rate Links (0 Variables)

| Cause | Effect |
|-------|--------|
### View-Variable Profile

| View                  | View-Variable Profile |
|-----------------------|-----------------------|
| Not in View           | 4Variables (8.7%)     |
| View 1                | 30Variables (65.2%)   |

### List Of 2 views and their 34 Variables

|                           | Not in View | View 1 | Total: |
|---------------------------|-------------|--------|--------|
| **Total:**                | 4           | 30     |        |
| **SeverityFtr (In 1 View)** |             |        |        |
| **Discharged or dead from Private Hospitals (In 1 View)** | |        |        |
| **Getting sick and use private hospital (In 1 View)** | |        |        |
| **Getting sick and use public hospital (In 1 View)** | |        |        |
| **Pu Occupancy (In 1 View)** | |        |        |
| **Pr Occupancy (In 1 View)** | |        |        |
| **In Private Hospitals (In 1 View)** | |        |        |
| **In Public Hospitals (In 1 View)** | |        |        |
| **Discharged or dead from Public Hospitals (In 1 View)** | |        |        |
| **Daily number of potentially get ill (In 1 View)** | |        |        |
| **Percentage of HI (In 1 View)** | |        |        |
| **Daily getting ill (In 1 View)** | |        |        |
| **Actual percentage of HI (In 1 View)** | |        |        |
| **Tax Savings (In 1 View)** | |        |        |
| Tax Incentive (In 1 View) | Tax Incentive (In 1 View) |
|--------------------------|--------------------------|
| Use HI (In 1 View)       | Use HI (In 1 View)       |
| Tax Saving to demand (In 1 View) | Tax Saving to demand (In 1 View) |
| Average Premium Ratio (In 1 View) | Average Premium Ratio (In 1 View) |
| Occupancy to Demand (In 1 View) | Occupancy to Demand (In 1 View) |
| Actual Private Hospital Use (In 1 View) | Actual Private Hospital Use (In 1 View) |
| Actual Private Occupancy (In 1 View) | Actual Private Occupancy (In 1 View) |
| Actual Public Hospital Use (In 1 View) | Actual Public Hospital Use (In 1 View) |
| Actual Public Occupancy (In 1 View) | Actual Public Occupancy (In 1 View) |
| Baseline HI (In 1 View) | Baseline HI (In 1 View) |
| Self pay (In 1 View)     | Self pay (In 1 View)     |
| Average Length of Stay (In 1 View) | Average Length of Stay (In 1 View) |
| Delay in Perception and Purchase (In 1 View) | Delay in Perception and Purchase (In 1 View) |
| Diff in Occupancy (In 1 View) | Diff in Occupancy (In 1 View) |
| Private hospital beds (In 1 View) | Private hospital beds (In 1 View) |
| Public hospital beds (In 1 View) | Public hospital beds (In 1 View) |
| FINAL TIME (In 1 View)   | FINAL TIME (In 1 View)   |
| INITIAL TIME (In 1 View) | INITIAL TIME (In 1 View) |
| SAVEPER (In 1 View)      | SAVEPER (In 1 View)      |
| TIME STEP (In 1 View)    | TIME STEP (In 1 View)    |

| Total:       | 430 | Total: |
|--------------|-----|--------|
| Not in View  |     | View 1 |

Source File: C:\Users\chenj297\Downloads\Core insurance model 0331.mdl (Sat Apr 02 16:45:29 CST 2022)
Report Created On Sat Apr 02 16:46:02 CST 2022
SDM-Doc Tool Version 1.4.7
Global Security Sciences Division
Argonne National Laboratory