Fever

CASE STUDY:

A patient comes in and complains of having a fever for the past day. The patient also complains of a headache and body ache. Temperature of the patient is taken and is reported as being 101.8 F. Used over the counter drugs such as Tylenol but fever was not reduced.

Background Information:

* Body temperature is greater than or equal to 100.5 F
* Sign that something is wrong with body, indicates that the body’s defense mechanism is working.
  + When body temperature is higher than usual, infecting viruses/bacteria cannot survive.
  + Most common cause of fever: infection due to bacteria or virus.
* Normal body temperature: 97 F to 99.6 F.
* Initial treatment: Aspirin, acetaminophen, and lot of fluids.
* High fever (103 to 104) for 12 to 24 hours, seek medical help.
* Moderate Fever (101 to 102) for two to three days, seek medical help.
* Body temperature swings from points of high fever (103) to lows (100, 101), throughout the day, seek medical help.
* Had fever and then after treatment, body temperature returned to normal and then went up again, seek medical help (a secondary infection has probably occurred).
* Over the counter analgesics: Anacin, Tylenol
* Patients with gastric problems: use buffered products.
  + Buffered products contain aspirin and antacids.

NARSESE Translation:

<{John-Doe} --> [fever]>.

<{John-Doe} --> [headache]>.

<{John-Doe} --> [body-ache]>.

<{John-Doe} --> [low-temperature]>.

<<#x --> [low-temperature]> ==> <(\*, #x, 104) --> temperature-below>>.

<<#x --> [high-temperature]> ==> <(\*, #x, 104) --> temperature-above>>.

<<#x --> [normal-temperature]> ==> <(&&, (\*, #x, 100) --> temperature-below), (\*, #x, 97) --> temperature-above)>>.

<<#x --> [fever]> ==> <(\*, #x, 100) --> temperature-above>>.

<<#x --> [fever]> ==> <(\*, OTC-treatment, {#x}) --> Initial-diagnosis>>.

<<#x --> [fever]> ==> <(\*, bed-rest, {#x}) --> Initial-diagnosis>>.

<<#x --> [fever]> ==> <(\*, extra-fluid-intake, {#x}) --> Initial-diagnosis>>.

<<#x --> [fever]> ==> <(\*, aspirin, {#x}) --> OTC>>.

<<#x --> [fever]> ==> <(\*, Tylenol, {#x}) --> OTC>>.

<(\*, [acetaminophen], [Tylenol]) --> primary-ingredient>.

INPUT:

<{John-Doe} --> [fever]>.

<{John-Doe} --> [headache]>.

<{John-Doe} --> [body-ache]>.

<{John-Doe} --> [low-temperature]>.

<<#x --> [low-temperature]> ==> <(\*, #x, 104) --> temperature-below>>.

<<#x --> [fever]> ==> <(\*, #x, 100) --> temperature-above>>.

<<#x --> [fever]> ==> <(\*, OTC-treatment, {#x}) --> Initial-diagnosis>>.

<<#x --> [fever]> ==> <(\*, bed-rest, {#x}) --> Initial-diagnosis>>.

<<#x --> [fever]> ==> <(\*, extra-fluid-intake, {#x}) --> Initial-diagnosis>>.

<<#x --> [fever]> ==> <(\*, aspirin, {#x}) --> OTC>>.

<<#x --> [fever]> ==> <(\*, Tylenol, {#x}) --> OTC>>.

OUPUT:

<<(\*,Tylenol,{John-Doe}) --> OTC> <=> <(\*,aspirin,{John-Doe}) --> OTC>>. %1.00;0.45%

STEP-BY-STEP

(1)

IN: <{John-Doe} --> [headache]>.

IN: <{John-Doe} --> [body-ache]>.

OUT: <{John-Doe} --> [body-ache, headache]>. %1.00;0.81% {3680 : 2;1}

(2)

IN: <{John-Doe} --> [body-ache, headache]>. %1.00;0.81% {3680 : 2;1}

IN: <{John-Doe} --> [low-temperature]>.

IN: <<#x --> [low-temperature]> ==> <(\*, #x, 104) --> temperature-below>>.

OUT: <(\*,{John-Doe},104) --> temperature-below>. %1.00;0.81% {1127 : 2;3}

(3)

IN: <(\*,{John-Doe},104) --> temperature-below>. %1.00;0.81%

IN: <{John-Doe} --> [fever]>.

IN: <<#x --> [fever]> ==> <(\*, #x, 100) --> temperature-above>>.

OUT: <(\*,(&,(/,temperature-below,\_,104),{John-Doe}),100) --> temperature-above>. %1.00;0.73% {13890 : 3;2}

(4)

IN: <(\*,(&,(/,temperature-below,\_,104),{John-Doe}),100) --> temperature-above>. %1.00;0.73% {13890 : 3;2}

IN: <<#x --> [fever]> ==> <(\*, OTC-treatment, {#x}) --> Initial-diagnosis>>.

IN: <<#x --> [fever]> ==> <(\*, bed-rest, {#x}) --> Initial-diagnosis>>.

IN: <<#x --> [fever]> ==> <(\*, extra-fluid-intake, {#x}) --> Initial-diagnosis>>.

OUT: <<(\*,OTC-treatment,{John-Doe}) --> Initial-diagnosis> <=> <(\*,extra-fluid-intake,{John-Doe}) --> Initial-diagnosis>>. %1.00;0.45% {369 : 2;4}

(5)

IN: <<(\*,OTC-treatment,{John-Doe}) --> Initial-diagnosis> <=> <(\*,extra-fluid-intake,{John-Doe}) --> Initial-diagnosis>>. %1.00;0.45% {369 : 2;4}

IN: <<#x --> [fever]> ==> <(\*, aspirin, {#x}) --> OTC>>.

IN: <<#x --> [fever]> ==> <(\*, Tylenol, {#x}) --> OTC>>.

OUT: <<(\*,Tylenol,{John-Doe}) --> OTC> <=> <(\*,aspirin,{John-Doe}) --> OTC>>. %1.00;0.45%