

BioSense

Public Health Surveillance Through Collaboration

<https://biosen.se>

2.0

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BioSense 2.0 Webinar: Features Update January 16, 2014, 1:00 PM – 2:00 PM EST

Hosted by ISDS & the BioSense Redesign Team



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Epidemiologist

BioSense Redesign Team



Learning Objectives

By the end of the Webinar, the audience will be able to:

1. Describe the BioSense 2.0 binning system for emergency department visit data.
2. Discuss analytic tools that are in development.
3. Discuss how BioSense 2.0 can support or augment their agency's population health surveillance work.
4. Describe BioSense 2.0 key functionalities.
5. Identify new BioSense application functions and services.

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If you are seeking Certified in Public Health (CPH) recertification credit for this Webinar, please be sure to complete the evaluation form at the end of the Webinar.

One credit is available for attending this Webinar and completing the evaluation. The cost for non-members is \$10. For ISDS members, the CPH credit is free.

If you have any questions, please contact us at syndromic@syndromic.org.



Upcoming ISDS Events

- ❑ *BioSense User Group Meeting*
Tuesday, January 21, 2014, 3:00 PM – 4:00 PM EST
- ❑ *Meaningful Use Community Call*
Friday, February 7, 2014, 1:00 PM – 2:00 PM EST

Visit www.syndromic.org for more information on upcoming events

For more information about BioSense 2.0, please visit the BioSense Redesign Collaboration Web Site www.biosense2.org

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Upcoming Partner Event

2014 CSTE Annual Conference Strike a Chord: Epi with Impact

June 22-26—Nashville, TN

Registration opens 2/3/14

More information at <http://www.csteconference.org/>

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Tabular Data Display in BioSense 2.0

BioSense 2.0

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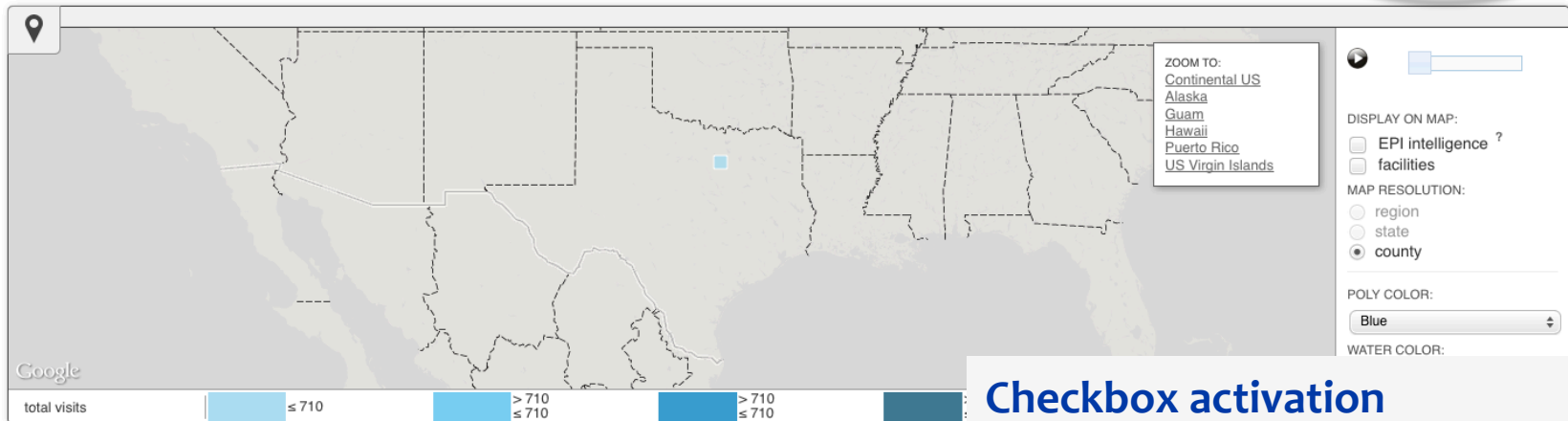
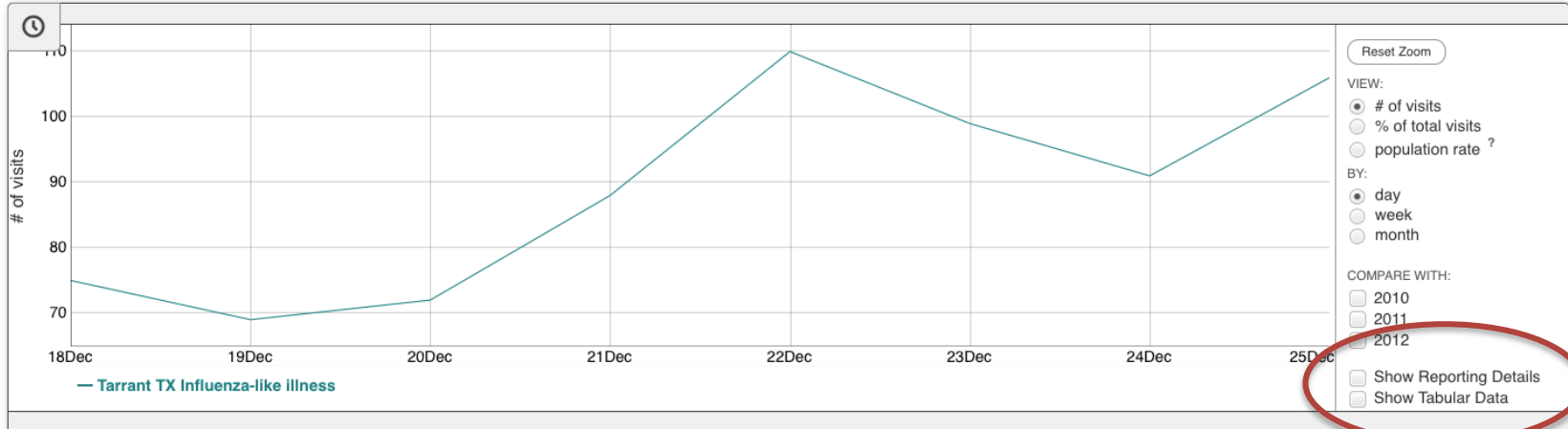
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BioSense 2.0 BETA

Welcome, Robin



Viewing 710 visits for 1 syndrome in 1 location from 12/18/2013 - 12/25/2013 from 46 sources for Male, Female, and Unknown, ages all ages.



Checkbox activation
HTML/CSS styling not finalized
Tarrant County, ILI, past month

Univariate Tabular Display

BioSense 2.0 BETA
Welcome, Robin

Viewing 710 visits for 1 syndrome in 1 location from 12/18/2013 - 12/25/2013 from 46 sources for Male, Female, and Unknown, ages all ages.

save
 modify
 analytics
 notes
 share
 export
 alerts

VIEW: # of visits % of total visits population rate ?

BY: day week month

COMPARE WITH: 2010 2011 2012

Show Reporting Details Show Tabular Data

Age			
0-<2		49	
2-4		45	
5-17		104	
18-49		370	
50-64		102	
65+		40	
Total		710	

TYPE:

CHOOSE 1: Sex Age Group Geographic Unit Data Sources

ZOOM TO:

Bivariate Tabular Display

Welcome, Robin
BioSense 2.0 BETA

Viewing 710 visits for 1 syndrome in 1 location from 12/18/2013 - 12/25/2013 from 46 sources for Male, Female, and Unknown, ages all ages.

Date	# of visits
18Dec	75
19Dec	70
20Dec	72
21Dec	88
22Dec	110
23Dec	98
24Dec	91
25Dec	105

Reset Zoom

VIEW:

- # of visits
- % of total visits
- population rate ?

BY:

- day
- week
- month

COMPARE WITH:

- 2010
- 2011
- 2012

Show Reporting Details

Show Tabular Data

		Sex			Total
		Male	Female	Unknown	
Age	0-2	29	20	0	49
	2-4	21	24	0	45
	5-17	44	60	0	104
	18-49	152	218	0	370
	50-64	43	59	0	102
	65+	16	24	0	40
	Total		305	405	0

TYPE: Bivariate

ROW - CHOOSE 1

- Sex
- Age Group
- Geographic Unit
- Data Sources

COLUMN - CHOOSE 1

- Sex
- Age Group
- Geographic Unit
- Data Sources

[get tabular data](#)

Data Source Tabular Display

(same conceptually as bivariate, but with additional uses for metadata)



Source	✓	✓	✓	✓
Nevada	0	0	0	0
Wisconsin	0	0	0	0
Ohio	0	0	0	0
Georgia	0	0	0	0
Indiana	0	0	0	0
Maryland	0	0	0	0
Colorado	0	0	0	0
Arizona	0	0	0	0
Missouri	0	0	0	0
Texas	0	0	0	0
Oregon	0	0	0	0
Tennessee	0	0	0	0
Kansas	0	0	0	0
North Carolina	0	0	0	0
Illinois	0	0	0	0
Michigan DCH	0	0	0	0
Alaska	0	0	0	0
California	0	0	0	0
Wyoming	0	0	0	0
Virginia	0	0	0	0
Louisiana	0	0	0	0
District Of Columbia	0	0	0	0
Tarrant County APC - Texas Region 2/3	303	403	0	706
West Virginia DHHR	0	0	0	0
Alabama DPH	0	0	0	0
Arkansas DPH	0	0	0	0
Florida DOH	0	0	0	0
Minnesota DOH	0	0	0	0
New Jersey DHSS	0	0	0	0


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Welcome, Nabarun  

You may enter multiple syndromes. If you enter more than one, you will have the option to compare or combine the data. 

what 

disease syndrome

where 


region, state, county









when 


time period






GO

Clear Search  Advanced Options 

my views 

-  Flu- Matching "Where" with "Source"  
-  BAH demo 
-  Flu- Matching "Where" with "Source"  
-  anemia example 
-  CA Demo Dec 13 

BioSense most popular 

-  Abdominal pain, Gastrointestinal hemorrhage - 709, PA - 9/15/2013 - 10/23/2013
-  Abdominal pain, Gastrointestinal hemorrhage - 709, PA - 1 year
-  Abdominal pain, Gastrointestinal hemorrhage - 709, PA - 9/15/2013 - 10/23/2013
-  Abdominal pain, Gastrointestinal hemorrhage - 709, PA - 1 year
-  All Visits - USA - 1 year

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BETA
BioSense 2.0

[Jump to Syndrome List](#)

To search for specific codes or definitions, use the search function of your Internet browser.

BioSense 2.0 Binning Algorithm

Introduction

This document is paired with a separate spreadsheet named [BioSense Binning Instructions.xlsx](#). The flow of the BioSense 2.0 algorithm is described in this document. Details and specific instructions relating to parsing referred to in this document are found in the binning instructions spreadsheet.

Raw, HL7 encoded ADT records received by BioSense are Extracted, Translated and then Loaded (ETL) in the Jurisdictional Locker (or Meaningful Use Base [MUB] table). Periodically the binning algorithm looks at records that have not previously been binned and performs the binning of records into syndromes and sub-syndromes.

Binning

Binning is performed in distinct passes through the raw data that is housed in jurisdictional lockers.

First Pass

In the first pass data from the Diagnosis Code, Diagnosis text, Procedure Code, or Chief Complaint fields of the ADT record are viewed (see the "SEARCH TYPE" column in the binning instructions spreadsheet). The record is tested using, regular expressions, against all of the rules found in the binning instructions spreadsheet. All possible matches are recorded and temporarily stored.

If the text in from the SEARCH VALUE column is found in the record and the sign in the "Include/Exclude" column is "+" then the record is identified with the syndrome; if the sign in the "Include/Exclude" column is "-" then the record is not identified with the syndrome.

Note: The first pass will create a large number of false positives. These false positives are removed in later passes.

Second Pass

After all possible matches are found (see pass 1), pruning begins. Each

Abdominal pain

Diagnosis Search Terms

Include: 789.0, 789.6, 7890, 7896

Diagnosis Text Search Terms

Include: abd + cramp, abd + grip, abd + pain, abdominal + pain, abdominalgia, adb + pressure, ap, epigast + pain, epigastric tenderness, gut + pain, stomach ache, stomach cramp

Chief Complaint Search Terms

Include: ab pain, abd + cramp, abd + pain, abd + pressure, abd pain, abd pn, abdominal pain, abdo pain, abdom pain, abdomen pain, abdomianl pain, abdomin pain, abdomina pain, abdominal pain, abdomnal pain, abdonminal pain, abominal pain, acides estomacal, adb pain, adb pn, abdominal pain, adominal pain, apendicitis, appendicitis, bariga, belly ache, belly pain, blq pain, calambre abdominal, calambre de estomago, calambre en el estomago, diverticulitis, dolor abd, dolor abdomen, dolor abdominal, dolor de abdomen, dolor de bariga, dolor de estomago, dolor en el abdomen, dolor en el vientre, dolor en la bariga, dolor estomago, epaigastric pain, epigas pain, epigastric pain, epigastrial pain, epigastric burn, epigastric discomfort, epigastric distress, epigastric pain, epigastric pressure, epigatric pain, eppigastric pain, estomag, indigestion, l q pain, lq, lq pain, lrq pain, luq, malestar estomacal, pansa, panza, peritoniti, quadrant pain, r q pain, rlq, rq pain, ruq, stomach ache, stomach cramp, stomach pain, stomach problem, stomachache, stomache, upset stomach, urq pain, vientre

	A	B	C	D	E	F	G	H
1	SEARCHVALUE	SEARCH VALUE (CHANGED)	Syndrome Name	SEARCHTYPE	BINTYPE	Include/Exclude	DWNEGATION	
261	asma	asma	Asthma	Chief Complaint	Sub-Syndrome	+	1	
262	asthama	asthama	Asthma	Chief Complaint	Sub-Syndrome	+	1	
263	asthamtic	asthamtic	Asthma	Chief Complaint	Sub-Syndrome	+	1	
264	asthma	asthma	Asthma	Diagnosis Text	Sub-Syndrome	+	1	
265	asthma	asthma	Asthma	Chief Complaint	Sub-Syndrome	+	1	
266	asthmia	asthmia	Asthma	Chief Complaint	Sub-Syndrome	+	1	
267	bronchospasm	bronchospasm	Asthma	Diagnosis Text	Sub-Syndrome	+	1	
268	bronchospasm	bronchospasm	Asthma	Chief Complaint	Sub-Syndrome	+	1	
269	chest tight	chest tight	Asthma	Chief Complaint	Sub-Syndrome	+	1	
270	heezing	heezing	Asthma	Chief Complaint	Sub-Syndrome	+	1	
271	r a d	r a d	Asthma	Chief Complaint	Sub-Syndrome	+	1	
272	rad	rad	Asthma	Chief Complaint	Sub-Syndrome	+	1	
273	reactive airway	reactive airway	Asthma	Diagnosis Text	Sub-Syndrome	+	1	
274	reactive airway disease	reactive airway disease	Asthma	Chief Complaint	Sub-Syndrome	+	1	
275	status asthmaticus	status asthmaticus	Asthma	Diagnosis Text	Sub-Syndrome	+	1	
276	status asthmaticus	status asthmaticus	Asthma	Chief Complaint	Sub-Syndrome	+	1	
277	weezing	weezing	Asthma	Chief Complaint	Sub-Syndrome	+	1	
278	wheezing	wheezing	Asthma	Chief Complaint	Sub-Syndrome	+	1	
279	wheeze	wheeze	Asthma	Chief Complaint	Sub-Syndrome	+	1	
280	wheezing	wheezing	Asthma	Chief Complaint	Sub-Syndrome	+	1	
281	wheezy	wheezy	Asthma	Chief Complaint	Sub-Syndrome	+	1	
282	whezging	whezging	Asthma	Chief Complaint	Sub-Syndrome	+	1	
283	- insect	- insect	Bites, animal	Chief Complaint	Sub-Syndrome	-	2	
284	aldilla	aldilla	Bites, animal	Chief Complaint	Sub-Syndrome	+	1	
285	animal	animal	Bites, animal	Chief Complaint	Sub-Syndrome	+	1	
286	ara?a	ara?a	Bites, animal	Chief Complaint	Sub-Syndrome	+	1	
287	arana	arana	Bites, animal	Chief Complaint	Sub-Syndrome	+	1	
288	ardilla	ardilla	Bites, animal	Chief Complaint	Sub-Syndrome	+	1	
289	bite - frost	bite - frost	Bites, animal	Chief Complaint	Sub-Syndrome	+	1	
290	bite + animal	bite + animal	Bites, animal	Diagnosis Text	Sub-Syndrome	+	1	
291	bite + snake	bite + snake	Bites, animal	Diagnosis Text	Sub-Syndrome	+	1	
292	cat	cat	Bites, animal	Diagnosis Text	Sub-Syndrome	+	1	