



Data Quality Committee Monthly Meeting

Friday, December 13, 2019

12 – 1 pm ET

Chair(s): MisChele Vickers,
Eunice Santos

Ambassador: Krystal Collier

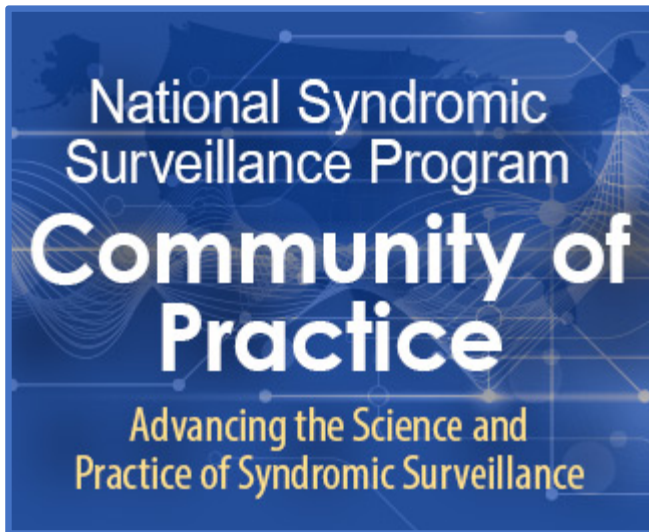
CSTE contact: Hayleigh McCall

Agenda

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- Next meeting: Friday, January 9, 2020 12 – 1 pm ET
- CSTE Announcements
- NSSP CoP Announcements
- Athenahealth Survey for Syndromic Surveillance to State Registries
- Guest Speaker: Visualizing Data Quality Across Georgia Regions
- What is Data Quality?
 - What does it mean in Public Health
 - What does it mean in Syndromic Surveillance
 - What does it mean to the community at large



Even though CSTE is a member-based organization, involvement in the NSSP CoP and its related groups will remain **free of charge** and **independent of CSTE membership**

Email syndromic@cste.org to be added to the NSSP CoP or any of its related groups

- Collaborative spaces
 - CSTE building out an online collaborative space for the NSSP CoP and all CoP-related groups
 - In the interim, each group will have a Basecamp space
 - Links to join included in all call-related email communications
- Knowledge Repository
 - Have a resource you want considered for addition to the KR?
Email syndromic@cste.org

2020 CSTE Annual Conference



Call for Abstracts is open and closes on **Friday, January 10, 2020 at 11:59pm EST!**

2020 CSTE Annual Conference will highlight SyS-related sessions

Limited funding is available to support NSSP CoP member travel to the 2020 CSTE Annual Conference and the Surveillance/Informatics Workshop

NSSP CoP Announcements

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- Steering Committee is working with CSTE, CDC, and the NSSP CoP Committee Co-chairs on the future direction of the NSSP CoP
 - ❖ DQC members, please feel free to share your thoughts/suggestions/needs that you feel should be taken into account while we are planning for 2020 with your DCQ co-chairs and ambassador.

Yiu Wing Wu <ywu@athenahealth.com>

📧 Thu, Dec 5, 8:37 AM (8 days ago) ☆ ↶ ⋮

to Kali.Turner@doh.wa.gov, IS-Build-Public ▾

Hello,

My name is Yiu Wing Wu and I am reaching out on behalf of our mutual clients who are either already in testing/production with your state Syndromic Surveillance registry or intend to connect with your Syndromic Surveillance registry in the future. We are working with registries to ensure our connections meet both the CDC standard, as well as any additional requirements a state or jurisdiction identifies within their respective specifications. Currently, we are collecting information from our stakeholders. We will reach out to you again regarding the implementation of any necessary changes and what that will look like for our current or future clients looking to connect.

What we need from you:

Please fill out the attached scoping questionnaire to the best of your ability. We understand there may be overlap between the information you have previously provided to **athena**, and appreciate your support in this effort for our mutual clients. We kindly request completed questionnaires be returned by **Friday, December 13th, 2019**.

What to expect:

As mentioned, we are just in the initial stages of conducting outreach and collecting information from our stakeholders at this point. Your input in this process is extremely valuable and we will take all responses into account as we plan to roll out any necessary changes in the future. Once we approach the implementation of these changes, we will reach out to you again to work together to perform testing and create a rollout plan. No changes will be implemented without working with and informing our stakeholders first.

Thank you in advance for your partnership. If you have any questions, please do not hesitate to reach out.

Best,

Yiu Wing Wu

Senior Systems Integration Associate, Integration Services



311 Arsenal Street • Watertown, MA 02472

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Guest Speaker

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Welcome

Michael M. Thomas, MS

Biostatistician

Georgia Department of Public Health

Visualizing Data Quality Across Georgia Regions

NSSP Community of Practice, Data Quality Committee Meeting
Dec 13, 2019

Michael M Thomas, MS,
Biostatistician
Epidemiology Program



Outline

Background

- Syndromic in Georgia

Methods

- Descriptive Spatial Analysis of Visits

Results

- Median Chief Complaint Maps

Conclusion/Future Work



Background

Syndromic Surveillance in GA

Purpose: Rapid recognition & reporting of natural or unnatural disease outbreaks

- ~140 emergency departments send data to local system housed within SendSS.
- Participation in OD2A grant which does use syndromic surveillance data to observe overdose frequency over time.
- Active and retrospective syndromic activities, involve spatial components.

Syndromic Surveillance in GA

Syndromic Surveillance Examples

- Notifiable Diseases
- Carbon Monoxide Poisoning
- Gastrointestinal Clusters
- Drug Overdose
- Boil Water Advisories
- Air Quality Advisories
- Influenza Outbreaks
- Chemical Exposures
- Mass Displacements

		Year Over Year					Charts	School Surveillance			
		Event Count	Event Graph	Flag Summary	Raw CC Data	GIS Data	Comment List				
Strata:	Event:	FEBRUARY									
		13	14	15	16	17	18	19	20	21	
All Strata	Bt-Eid	0	1	0	0	0	0	0	0	0	
All Strata	Fevgi	260	243	246	284	300	265	257	269	233	
All Strata	Ili	847	756	743	859	1010	876	827	780	692	
All Strata	Feverflu	1356	1261	1318	1524	1654	1379	1284	1244	1173	
All Strata	Fevresp	255	255	244	300	346	293	273	244	244	
All Strata	Respiratory	965	860	858	967	1038	1011	905	950	850	
All Strata	Rsv	3	7	5	8	7	1	10	7	2	
All Strata	Fevflurespdmitt	15	19	20	18	22	17	20	13	18	
All Strata	Fevflurespdeath	0	0	0	1	0	1	0	0	0	
All Strata	Sepsis	10	28	23	13	17	16	25	6	18	
All Strata	Veryill	107	104	118	114	107	134	115	108	112	
All Strata	Fevchest	59	44	44	36	42	55	56	50	45	
All Strata	Bloodyresp	22	8	17	17	16	21	15	21	13	
All Strata	Bloodyvomit	48	36	34	44	29	42	31	46	39	
All Strata	Botulism	38	44	53	49	51	45	45	51	58	
All Strata	Rashfever	19	9	25	21	39	28	21	24	17	
All Strata	Hemorrhagic	7	3	2	3	2	4	7	3	1	
All Strata	Poxrashfev	1	0	1	2	6	0	2	1	0	
All Strata	Bloodydiarrhea	12	5	6	7	5	10	4	12	4	
All Strata	Gi	1503	1339	1423	1504	1489	1524	1460	1511	1408	
All Strata	Diarrhea	465	363	379	465	441	410	438	470	407	
All Strata	Nauseavomit	1350	1229	1322	1380	1363	1408	1332	1386	1297	
All Strata	Asthma	1036	957	1017	895	992	1127	977	961	1014	
All Strata	Drugalc	134	136	151	151	127	129	136	131	128	
All Strata	Heat	556	517	569	524	477	556	513	578	629	
All Strata	Injury	2374	2227	2279	2388	2193	2353	2179	2159	2252	
All Strata	Poison	118	138	114	113	108	131	128	94	100	

Syndromic Surveillance in GA

- Syndromes are generally developed empirically based on data from our state. Some were developed when the system had less coverage.
- Differing EHRs across the state can cause the efficacy of these vary in different areas, **especially when the syndrome relies heavily on chief complaint.**
- There are a few ways of measuring chief complaint quality, **median length of chief complaint is common.**

Snippet from Overdose Syndrome

```
...  
cc like '% od %' or cc like 'od %' or cc like '% od'  
or cc like '% od.%'  
or cc like '%od/si%'  
or cc like '%operdose%'  
or cc like '% opioid%'  
or cc like '%opium%'  
or cc like '% opoid%'  
or cc like '%over dose%'  
or cc like '%overdo%'  
or cc like '%overose%'  
or cc like '% narcan%'  
...
```

Methods

Methods

Analysis

- Pull syndromic data from Nov 3, 2019 – Nov 9, 2019
 - 69,489 ED Visits
- Create a dataset containing median chief complaint for each public health district using syndromic data
- Plot the median chief complaints on a statewide level and on a district level to describe spatial distribution of chief complaint quality
- *'sf'* and *'tmap'* R packages used for plotting

Results

Results

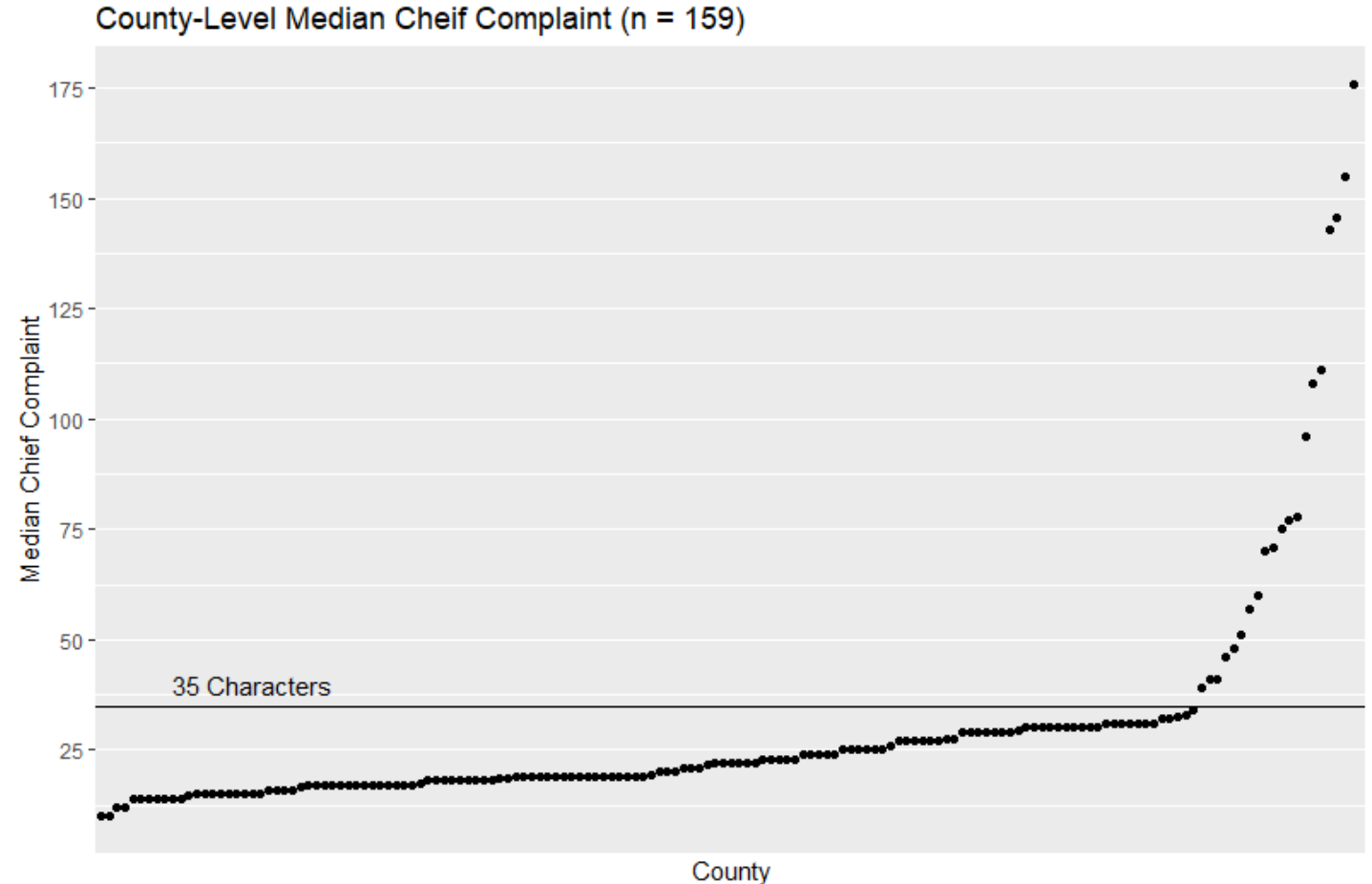
Median Chief Complaint vs County

Georgia is among the top 5 states with large numbers of counties.

This plot displays the variability in the median chief complaint by county.

Some counties have EHRs that allow for detailed, hand-written chief complaints

This can be a challenge for our epidemiologists, because syndromes heavily based on slang or common names will be disproportionately represented in these counties



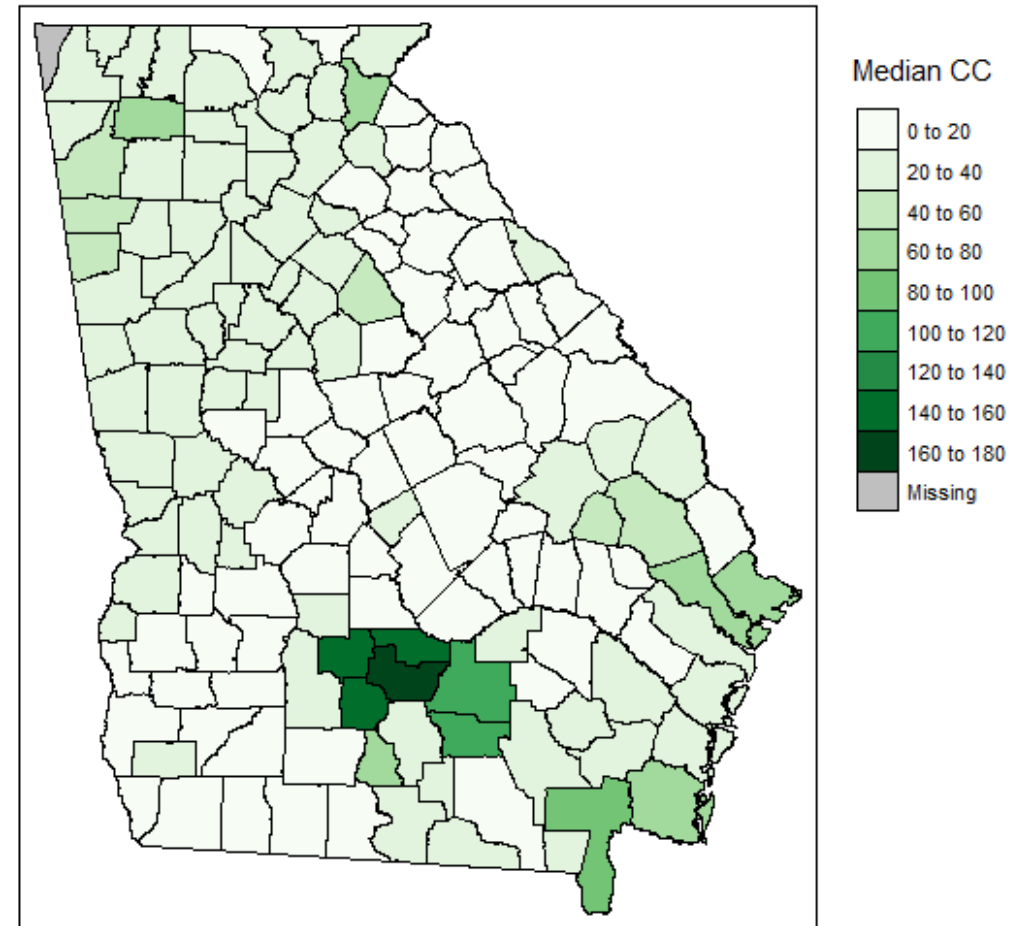
Results

Spatial Distribution of Chief Complaints

It's clear from this plot that the verbose median chief complaints are clustered in specific areas.

The areas where the verbose median chief complaints are clustered will respond differently to more text-based syndromes.

Map of GA Data Quality, CC Characters



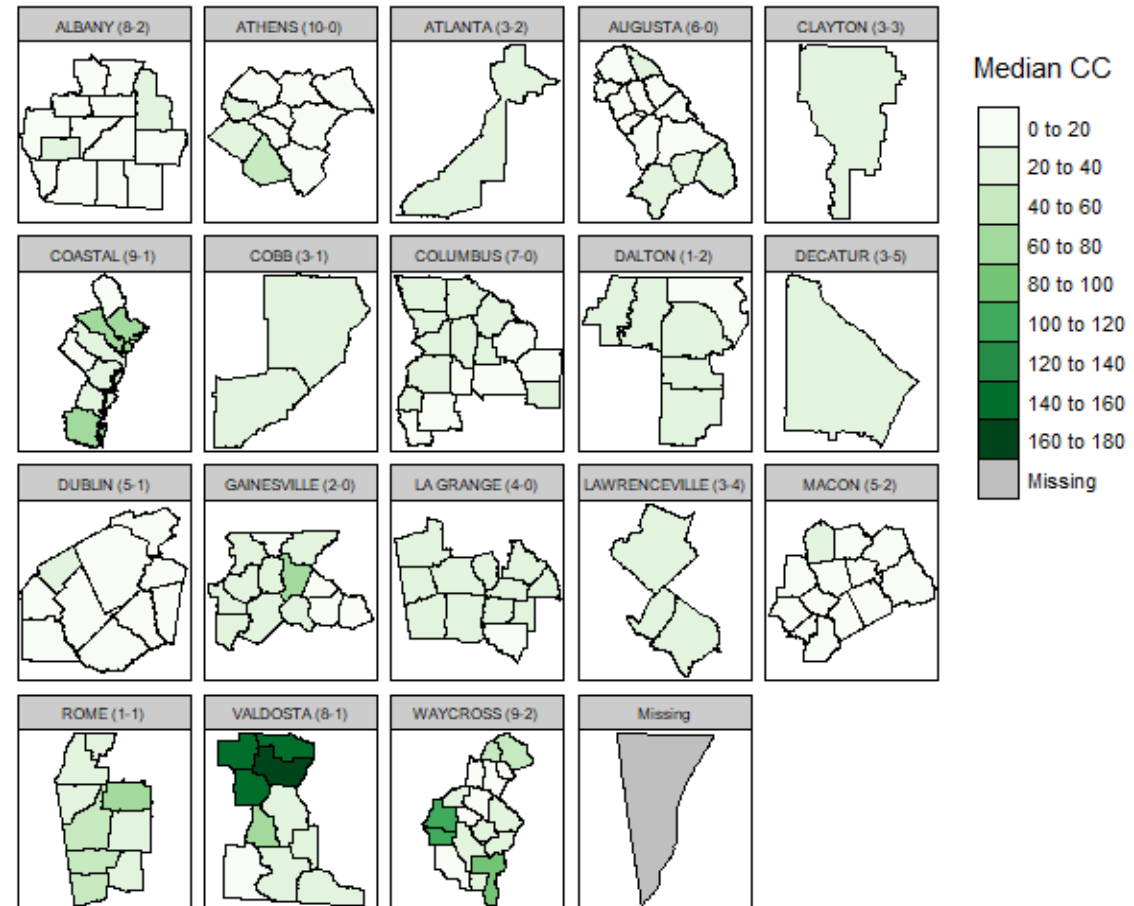
Results

By District

This plot displays each of Georgia's public health districts.

It's clear that southeast Georgia (Valdosta, Waycross, and Coastal) have better chief complaint length than the rest of the state excluding the Rome district.

Map of GA Data Quality by District, CC Characters



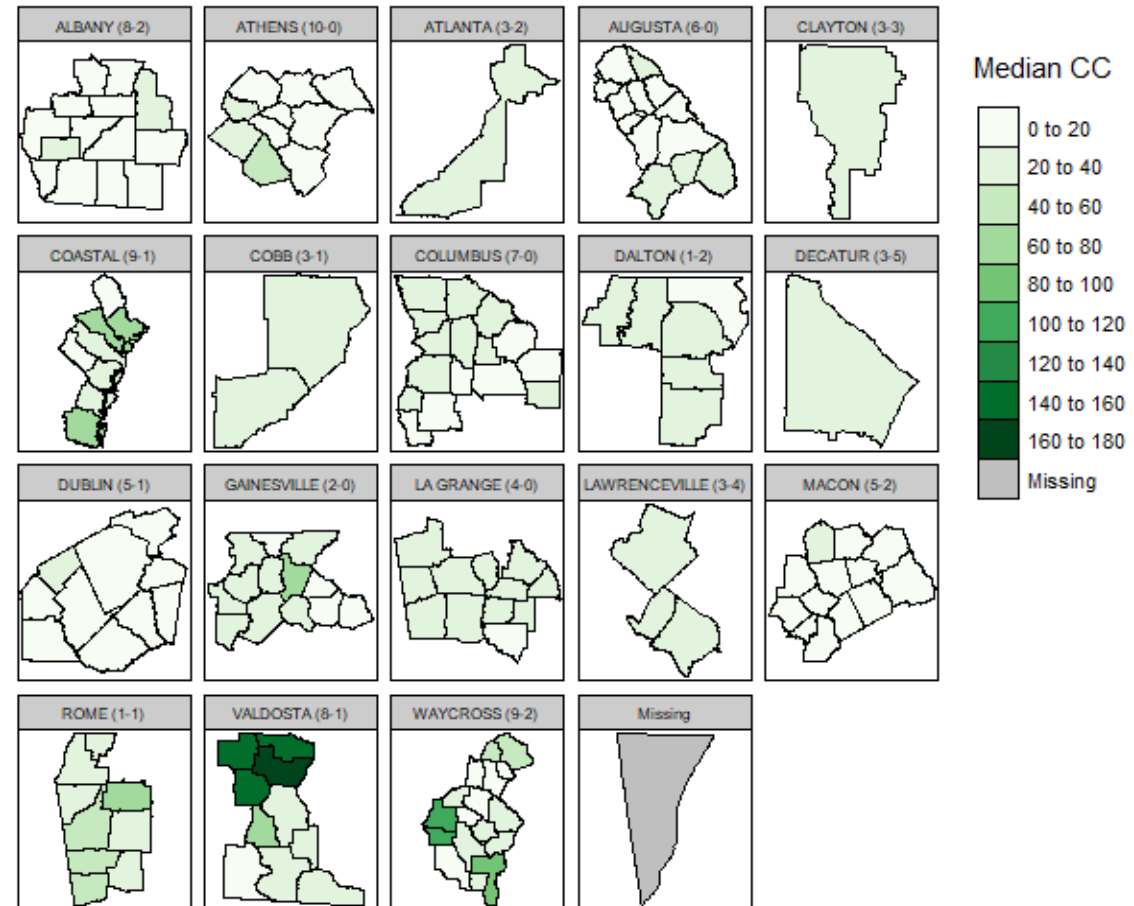
Conclusion

If syndromic surveillance epidemiologists use space as a feature to determine clusters, it might be best if they have an understanding of boundaries where chief complaint data vary.

Questions? Comments?

Michael M. Thomas, MS
michael.thomas@dph.ga.gov

Map of GA Data Quality by District, CC Characters



Open Mic

DQC

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- New issues! Tell us about your data quality issues
- Questions for the group

