

# An Interdisciplinary Approach to GME Population Health and Systems Thinking Education

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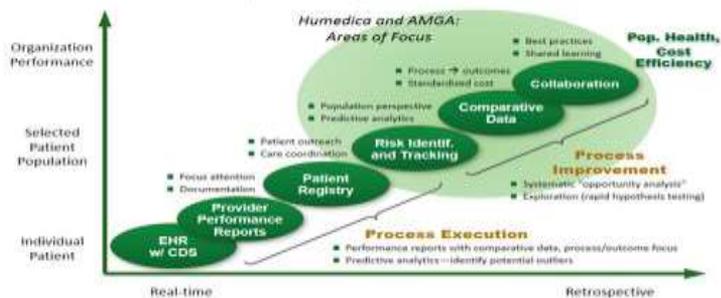
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# Format of Presentation

- Introduction to AAMC/DUKE Initiative
- Curriculum Timeline
- Modules Used
- Filling GME Gap
- Interdisciplinary Integration
- Lessons Learned
- Resident Projects
- Future and Discussion

## Tools for Improving Population Health



## Anceta Participants on How They Are Using Data Analytics to Improve Care



## What is the AAMC / DUKE Initiative

- Support the integration of population health training into graduate medical education curriculum
- Develop meaningful tools and techniques that will support the integration of new population health curriculum
- Evaluate whether or not systems thinking improves the skills of those who complete population health training
- Examine whether or not population health training requires a teaching approach different from our traditional approach to medical training

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## Overview of learning experience

- Goal: Integrate population health into GME using a systems thinking framework to improve long-term understanding
- Population Health Modules: 6 one-hour modules with 13 specific population health milestones
- Population Health Project: ACGME scholarly activity requirement

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# Curriculum Timeline

- March 2014: Call for interested sites released
- April 2014: SIU SOM chosen as a pilot project site
- May 2014: Call to SIU SOM departments for faculty and resident interest
- Sept 2014: Training webinars held by AAMC/Duke
- Oct 2014: On-site training for faculty/residents at SIU SOM
- Nov 2014- Oct 2015:
  - Monthly webinar meetings with grant directors
  - Monthly meetings with faculty/residents
- Nov 2015 – Current:
  - Monthly meetings to work on group projects
  - Currently 2 projects have received IRB approval and subsequently have been accepted for presentations



# Overall Timeline

## Timeline of Events

[SOT-PH] Timeline.docx

Date	Event/Deliverable
August 2014	• Welcome webinar for residents and faculty participating in the program (August 27 <sup>th</sup> ; 3:30-4:30pm ET)
September 2014	• On site DIBT workshop
October 2014	• Faculty Training Webinar on Population Health Module 1: Understanding Community (Oct. 7 <sup>th</sup> ; 2:30-3:30pm ET) • Check-in with project lead
November 2014	• Residents will complete Population Health Module 1: Understanding Community • Faculty Training Webinar on Population Health Module 2: Functioning as Part of a Team (Nov. 3 <sup>rd</sup> ; 4-5 pm ET) • Project Approval by AAMC/Duke
December 2014	• Residents will complete Population Health Module 2: Functioning as Part of a Team • Faculty Training Webinar on Population Health Module 3: Identify Community Resources (Dec. 11 <sup>th</sup> ; 3:30-4:30pm ET) • Check-in with project lead
January 2015	• Residents will complete Population Health Module 3: Identify Community Resources • Faculty Training Webinar on Population Health Module 4: Identify, Assess and Use Data (Jan. 9 <sup>th</sup> ; 3-4pm ET)
February 2015	• Residents will complete Population Health Module 4: Identify, Assess and Use Data • Faculty Training Webinar on Population Health Module 5: Change Management (Feb. 11 <sup>th</sup> ; 3-4pm ET) • Check-in with project lead
March 2015	• Residents will complete Population Health Module 5: Change Management • Faculty Training Webinar on Population Health Module 6: Project Plan Evaluation (March 11 <sup>th</sup> ; 3-4pm ET)
April 2015	• Residents will complete Population Health Module 6: Project Plan Evaluation
May 2015	• Project Presentations (virtual)
June 2015	• Post Evaluation/Feedback
November 2015	• Presentation at 2015 AAMC Annual Meeting

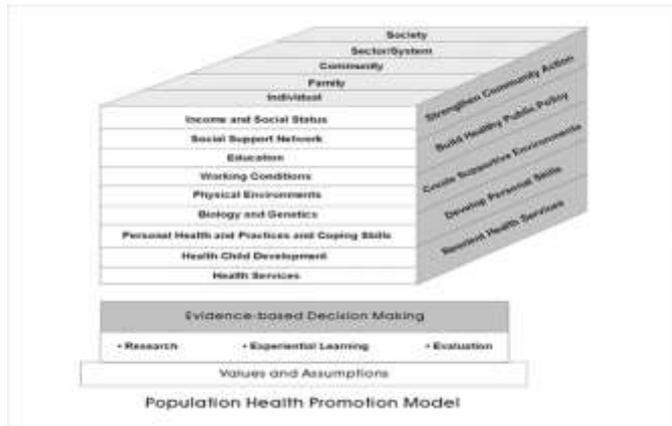
## Modules Used

- Module 1: *Understanding Community*
- Module 2: *Functioning as Part of a Team*
- Module 3: *Identify Community Resources*
- Module 4: *Identify, Assess, and Use Data*
- Module 5: *Change Management*
- Module 6: *Project Plan Evaluation*

## Example of a Module #1



## Example of a Module #2



## How did this project meet a gap in GME?

- CLER visits (project across all residencies and often looking at what sites could offer)
- Population Health is historically not addressed in residency and often not in medical schools previously
- Rapid evolving healthcare practice must address population health needs
- Addressed assessing community needs rather than clinical goals across residency programs
- Addressed assessment in Milestone evaluations (specifically in area of residents assessing population health needs)

## Strengths of Having an Interdisciplinary Approach

- Shared talents/different views
- Able to bring in legal, research, other experts
- Efficiency of resources (not all departments have someone trained to lead education about population health)



## Barriers to Overcome

- Identifying potential participants (interdisciplinary)
- Setting a shared platform
- Deciding on how we would become a group (when, how, and where to meet) – MOST DIFFICULT!

## Lessons Learned

- Moving upstream (i.e. looking at health care from a population standpoint vs individual patient care needs)
- Module topics generated great discussion and could be used for future use (some adaption to our institution)
- Topics for research questions to feasibility to answer was a major task
- Differences in how to develop a population project were addressed
- Working together with interdisciplinary groups helped us realize what great resources we have in people in our institution

## Resident Projects



# Mapping Out How to Approach a Population Health Project



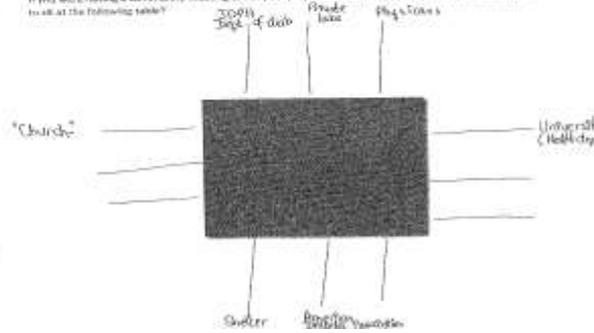
January 2015 AMAC/20001-000001

What issues are there in the community that could benefit your project?  
Hospitals  
Offices  
Health department  
Church  
Schools

Food and security } Local grocery stores  
Food desert  
Gym  
Hiking/Trail  
Violence rate  
Cost of medication

What barriers are there in the community that could make your project difficult?  
Data collection issues

If you were having a community meeting about your project, who are the stakeholders you would want to sit at the following table?



## Mapping Glycemic Control in Sangamon County

- Residents: Tazeen Al-Haq, PGY2, Ashley MacDonald, PGY2, Sheila Thomas, PGY 3
- Faculty: Janice Frueh, Mary Dobbins, Careyana Brenham, Wendi El-Amin, Sabha Ganai, Tracey Smith



## Diabetic Community



# Diabetes Management

Who	What	Goal
Type II Diabetic patients >18 years old in Sangamon County	Approach to nationwide health issue of uncontrolled DM and the complications that arise including cardiovascular disease, neuropathy, renal disease, and complications to eyes and feet	Identify the high risk populations and create a geomap of Sangamon County in Illinois to show areas with need to help develop targeted interventions/ education to decrease complications due to poor glycemic control

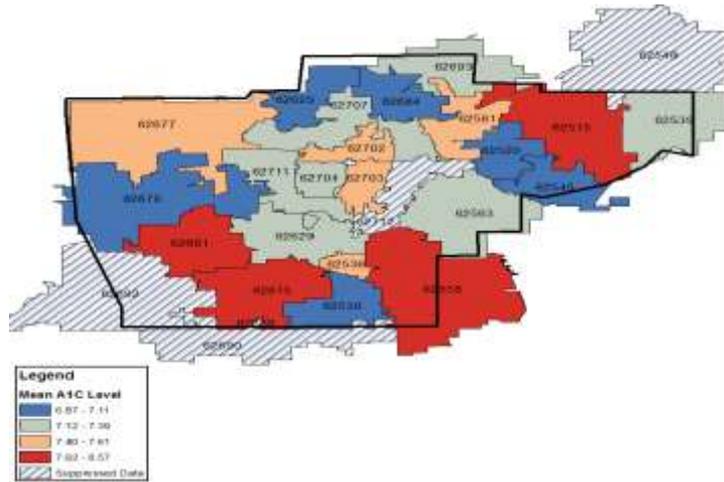
•Methods:

•Retrospective chart review of all diabetic patients seen at SIU clinics in Springfield Illinois from 2012 to 2015 mapped according to zip codes. Chi square testing was used to determine statistical significance.

# Results and Conclusions

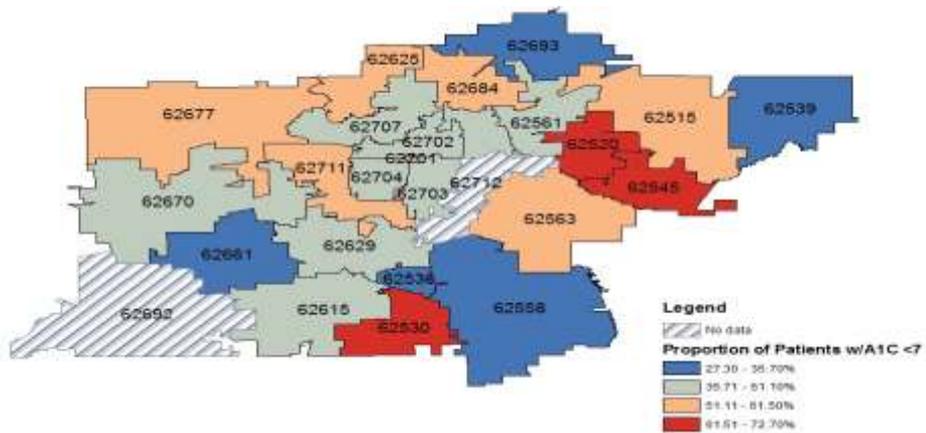
- No statistical difference in A1c based on zip code overall
- Using an A1C value of 7 as a cutoff, there were statistically significant differences in A1C group by demographic factors (gender, insurance status, clinic, zip code, age)
  - ◆ In zip codes 62702 and 62703, statistically significant differences were seen for insurance status and at age and clinic for A1C
  - ◆ In zip codes 62704, statistically significant differences were seen for insurance status and age for both A1C cut points

## Results and conclusions



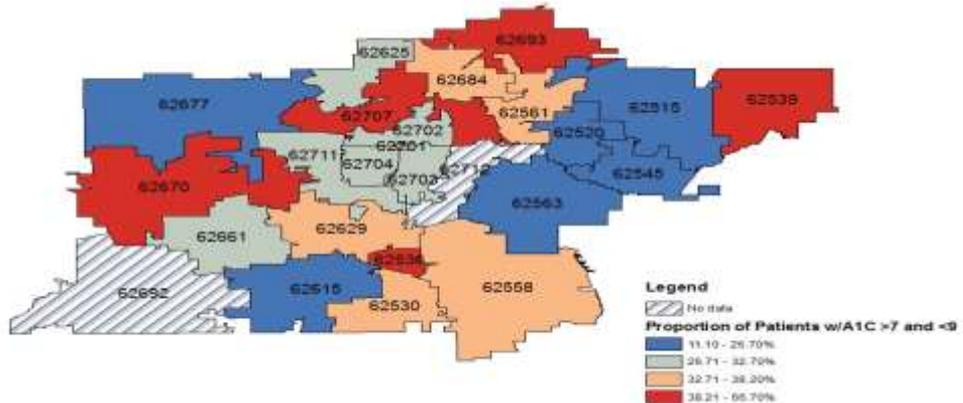
•Figure : Quartiles of Mean A1C Levels in Sangamon County

## Results and Conclusions



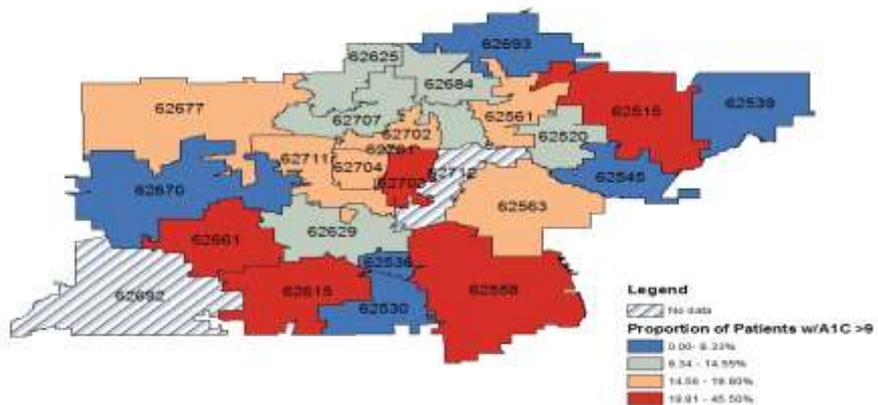
•Figure : Quartiles of Proportion of Patients with A1C Levels below 7

## Results and Conclusions



•Figure : Quartiles of Proportion of Patients with A1C Levels Greater than 7 and Less than 9

## Results and Conclusions



•Figure : Quartiles of Proportion of Patients with A1C Levels Greater than 9

## Next steps

- Passing project on to group of junior residents who will take the data obtained and work to develop targeted interventions and broaden the data search to all of Sangamon County clinics vs preliminary data of SIU only clinics
- Goal to see glycemic control improve in the zip codes with higher A1C levels to reduce secondary outcomes including cardiovascular disease, neuropathy, renal disease, and complications to eyes and feet

## Mapping Obstetrical Complications in Sangamon County

- Resident: Richard Glover
- Faculty: Careyana Brenham, Chris Wohltmann, Tracey Smith



## Pregnancy induced HTN

Who	What	Goal
Obstetrical patients in central Illinois	Approach to nationwide health issue of preeclampsia, eclampsia, gestational hypertension, and chronic hypertension	Identify the high risks populations and create a geomap of the central Illinois region to show areas with need to help develop targeted interventions/education to decrease morbidity and mortality

•Methods:

•Retrospective chart review of all pregnancies complicated with preeclampsia, eclampsia, gestational hypertension, and chronic hypertension in all hospitals in central Illinois from 2010 to 2014 mapped according to zip codes

## Results and Conclusions

- Preliminary results show largest population has resulting cardiovascular complications is young Caucasian females (78%) on government insurance (54%)
- Springfield and Quincy Illinois showed the highest rate of complications in South Central Illinois
- Next steps – develop targeted interventions for this high risk population

## Future



- Completion of Projects
- Presentation at AAMC meeting
- Development of education modules to be used in GME at SIU SOM
- Continuing to work with interdisciplinary group to study population health

## In Memory

- During this project we lost one of our valuable partners, Dr. Christopher Wohltmann and we would like to remember him and all of his wonderful contributions to medical education.



## Thank you & Questions



## Practice with a couple modules:

- Divide into groups of 4-6 people
- We will give handouts to pick a module and discuss the issues
- Think about how you think residents may approach this
- Is an interdisciplinary approach possible at your sites?
- Take 10 minutes to discuss
- Feedback to the big group on how others thought this went for them and how they might incorporate it

## During the break...

- Discuss / think about how you might implement the information you just heard.
- Fill out a session evaluation.



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