

# **Clinical Application of Research and Community Health for Baccalaureate Students: Impacting Houston Pediatric Immunization Rates**



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# Disclosure

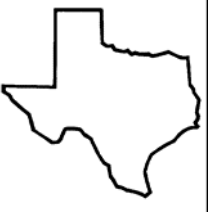


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**The authors declare that there is no conflict of interest.**


# Overview



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# Background



- Texas, USA, allows vaccine exemptions from 2003 to present:  19 fold in exemptions
- Texas is 48<sup>th</sup> in vaccination coverage (Comfort, Espinosa, Hetrick & Bocchini, 2017)
- Gaps in herd immunity
- Risk of life threatening diseases
- The Texas Medical Center (TMC) Health Policy Institute Collaborative funded a year long study with 5 institutions including the CSON Baccalaureate students
- 2019, recent measles outbreak in Texas



(Cohen, 2019)

# Goal/ Purpose



Goal of the Study: To address the complex issue of vaccine delinquency and decrease vaccination disparities among pre-kindergarten and kindergarten students at 8 high risk inner city schools in Houston Texas, U.S.A.

The CSON Baccalaureate students participated during Community Health clinical. The students worked with an interprofessional collaboration of researchers, UTHealth schools, Baylor School of Medicine, the City of Houston Department of Health and Human Services, schools, and nursing faculty.

Purpose: To describe the CSON students participation in the research study.



(Cohen, 2019)

# Methods



## CSON students

- Roles in the study
- Application of Community as Partner Model (McFarland & Anderson, 2019)
- Applied and practiced competencies for community health nursing practice
- Applied competencies for interprofessional collaboration: ethics/values, roles, communication, and teamwork (Sullivan, Kiovsy, Mason, Hill, & Dukes, 2015)
- Reported findings to the interprofessional collaboration and community

# Role of Students in the Study



Aim 1: Reduce vaccine delinquency among prekindergarten and kindergarten children by 50% in the lowest performing schools (at least 8) using an on-site vaccination campaign and common sense, low cost, ready implemented parent outreach programs, and procedures in the schools to maximize immunizations rates.

Aim 2: Further reduce vaccine delinquency rates among preK and kindergarten children in the same schools involved in Aim 1 by 75% below the original delinquency rate in an enhanced vaccination campaign.

# Results: Tasks Completed with Faculty/ Preceptor



## Faculty: Conduct Community Assessment

- Windshield survey
- Interviews of residents
- Identified strengths
- Identified barriers

## Preceptor: Work with School Nurses at 8 Schools

- Immunization tracking
- Immunization reconciliation using *Texas' Immunization Registry*
- Immunization follow up
- Parent outreach (develop bilingual flyers/ handouts, letters, phone calls, mailings)
- Media and advertising events (School marquees & flyers)



# Results 2015-2016 Immunization Report



Schools	Pre-K Students Delinquent	Pre-K Students Enrolled	MMR#1 Delinquency Rates	K students Delinquent	K Students Enrolled	MMR#2 Delinquency Rates	Total Enrolled Students
Elementary School # 1	36	41	87.8%	32	64	50.0%	434
Elementary School # 2	53	87	60.9%	36	119	30.3%	736
Elementary School # 3	8	27	30.0%	36	84	42.9%	516
Elementary School # 4	20	78	25.6%	45	111	40.5%	666
Elementary School # 5	10	44	22.7%	15	62	24.2%	451
Elementary School # 6	15	78	19.2%	20	87	23.0%	518
Elementary School #7	13	74	17.6%	20	95	21.1%	638
Elementary School #8	7	66	10.6%	7	50	14.0%	447

# Results 2016-2017 Immunization Report



Schools	Pre-K Students Delinquent	Pre-K Students Enrolled	MMR#1 Delinquency Rates	K Students Delinquent	K Students Enrolled	MMR#2 Delinquency Rates	Total Enrolled Students
Elementary School # 1	7	22	31.8%	41	65	63.1%	416
Elementary School # 2	1	93	1.1%	9	97	9.3%	705
Elementary School # 3	0	17	0.0%	5	72	6.9%	539
Elementary School # 4	0	59	0.0%	1	80	1.3%	594
Elementary School # 5	6	45	11.1%	15	50	30.0%	390
Elementary School # 6	0	56	0.0%	0	75	0.0%	476
Elementary School #7	5	81	6.2%	26	71	36.6%	579
Elementary School #8	2	59	3.4%	1	71	1.3%	404



# Results: CSON Student Interprofessional Collaboration Domains



Values Ethics	Roles	Communication	Teams	
		√	√	Attended interprofessional planning and organizational meetings
	√			Focused on tasks related to their scope of practice (Aim 1 & 4), time constraints, and professional fit
	√	√	√	Participated in community outreach events that focused on parents and caretakers at the schools, vaccinations clinics, and outreach events with Harris Health (a public health system)
√		√		Produced and sent out flyers in English and Spanish, posted events on school calendars, called families before and after events, sent letters to homes, personal phone calls, and media on school marquee
		√	√	Reported findings of immunization barriers and facilitators to the Schools and the Collaborators for planning of interventions and media outreach
	√		√	Participated in <i>on site</i> immunization clinics

(Sullivan et al., 2015)

# Limitations



- Development of interprofessional collaborations
- Short time of students in clinical – time to engage students
- Changes in school nurse assignments to schools
- Impact of school administration in regards to access and funding
- Generalization to other nursing school settings
- Funding required

# Recommendations



- Develop interprofessional collaborations between nurses, doctors, dental, public health and other professionals along with local community agencies to address a real world problem in your geographical area.
- Many opportunities: Current public health issues such as the rising rates of obesity, increase in suicide rates, the opioid epidemic, food insecurity, isolation of elders, and health disparities impact all communities.
- Community/ public health nursing students to apply competencies of interprofessional collaboration and public health.

# Conclusion



- CSON students applied public health competencies and experienced community outreach, immunization tracking, follow up with families, and interprofessional collaboration.
- CSON students addressed a real world health problem with an interprofessional group.
- This is an innovative approach to develop nursing health professionals prepared to make a significant impact to reduce health disparities, prevent disease and promote health.
- The research project successfully reduced MMR delinquency rates among pre-kindergarten and kindergarten students while providing a rich opportunity for hands on practice for the CSON students.

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# Questions

