Tikkun Olam through Vaccination: Repairing the Brooklyn Hasidic Jewish Community's Rate of Childhood Immunization

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Abstract

Objective: To increase the immunization rate of children aged 0-17 years with CDC-recommended childhood vaccines, who live in Hasidic Jewish communities of Brooklyn, NY.

Background: Certain areas of Brooklyn, New York are home to very insular neighborhoods consisting of families belonging to the Orthodox Jewish faith. Each family is guided by a strict foundation of rules that are connected directly to this life of faith, and this structured lifestyle is deeply rooted in tradition. Historically, the people of this culture keep the modernization of the rest of the world outside the bounds of their neighborhoods and do not openly embrace change as quickly as their surrounding area.

Main Idea: In a culture where tradition strongly dictates how life is lived, there is an evident gap in both access to and emphasis of preventative healthcare. Because of this, children within this group are under-immunized or completely unimmunized with their CDC-recommended vaccinations. This may be because mothers and fathers of young children are only focusing on information circulated around the community which may be muddled with opinion, misinformation, and deception that has festered over years of keeping those not part of the community outside of the area.

Methods: This study used tertiary data extracted from scientific literature on the topics of vaccine hesitancy, misconception, and how it relates to the high rates of outbreaks of vaccine-preventable diseases in the area. In addition, this study also used a verbally administered questionnaire to ten mothers residing in Boro Park, Brooklyn regarding attitude and acceptance of vaccines for their children.

Conclusions: There is a strong correlation between low immunization rates and high infectious disease rates within the Orthodox Jewish community. Outbreaks that occur are usually discovered to spread rapidly throughout their insular school system and large families. Since this is a very community-oriented group, highly transmissible diseases often jump from family to family and drive up the rate of infections. The common misconceptions that interviewed mothers have about vaccinations parallel those identified by the American Academy of Pediatrics. Introduction of a public health program that specifically addresses the concerns with a culturally sensitive and centered approach may reach more members of the community and educate them about the importance of childhood immunizations, therefore decreasing the disease rate and increasing the immunization rate of the Orthodox Jewish children in Brooklyn.

Keywords: Vaccination, Orthodox Judaism, Childhood Immunizations, Vaccine Hesitancy, Underimmunization, Anti-Vax, Misinformation

Topic Review

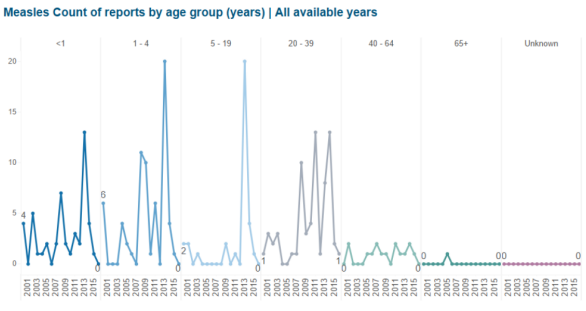
Introduction

A walk through certain neighborhoods in Brooklyn, New York presents a shockingly different way of life for some New Yorkers. Bearded men walk with downcast eyes, wearing long black coats and tall hats. Women with wigs and headscarves shuffle their toddlers and strollers down the sidewalks. School-aged children in dark uniforms cluster at streetcorners to trade candies with one another. Every detail of this way of life is purposeful, symbolic, and deeply rooted in faith-based tradition dating back thousands of years, nearly untouched by the modern world in some areas. Unbeknownst to the Hasidic Jewish population crowding the streets of Brooklyn, deadly diseases that have been long suppressed by nationwide immunization lurk among them easily waiting to settle in on the next passing unvaccinated child and become the next biggest threat to their traditional way of life.

Literature Review

The Hasidic, or "Orthodox" Jewish community has historically kept their communities well separated from the modernization of the world around them, and the same goes for some of their opinions on medical advances since World War II[1]. Many Hasidic mothers maintain the belief that disease prevention interferes with the will of G-d, and that since G-d is the only One who can decide the fate of all humanity, then humanity has no right to intervene[2]. There is a systematic thought process that goes into the decision for or against each and every vaccine available for a child, with popular questions amongst parents being related to vaccine ingredients, if they are kosher, and if they truly provide any benefit that could not be obtained through natural infection and immunity[2]. Some may argue that this may be rooted in a mistrust of governmental suggestion due to historical context of the Holocaust, but another view may show that this is simply a minority group that is not having their needs and questions about vaccines addressed in a culturally appropriate manner.

With collective hesitancy emerged outbreaks of vaccine-preventable diseases in the United States such as measles[3]. As numbers of infections grew and patient zero was identified, a consistent connection was seen in most of the cases; the initial host was a child living in Brooklyn, New York who had recently traveled to Israel for birthright, or who had been around someone who had recent travel to Israel[3]. The CDC recognized these measles outbreaks as "imported cases", due to their origin being in Israel; however, measles began to seat itself endemically within the Orthodox Jewish communities in the United States, primarily in Brooklyn[3]. The enclaves of Jewish communities located in relative proximity within King's County, or Brooklyn, made for a particularly easy means of transmission amongst children belonging to these groups, especially with numbers of children per family reaching above ten in each household[4]. Soon after, cases of mumps began rising as well, perpetuating through crowded classrooms of young children attending *yeshiva*, or Jewish schooling and then returning home daily to their large numbers of siblings in the household, thus furthering the transmission of disease[4]. The speed at which highly transmissible diseases spread yielded a new question from health officials monitoring the spread, which related to the vaccination status



EpiQuery, NYC DOHM data reviewing the age groups and number of measles cases over a >10 year period[5].

of the children who were being affected. A sample study showed that children who were contracting measles were either undervaccinated (ie. not having completed all of the vaccinations required in the two-dose series) or unvaccinated completely[5]. Increasing cases of measles specifically in the years 2013-2015 called upon New York City's Department of Health and Mental Hygiene (NYC DOHMH) to implement stricter immunization rules for students attending public schools within the five boroughs[6]. However, most of the *yeshivas* that were experiencing the highest number of cases were private schools, not under direct control of the New York City Department of Education. Therefore, many of the immunology restrictions did not apply to the areas that needed them the most to contain the spread[6],[7]. Outbreaks within the Orthodox Jewish community of Brooklyn, New York continued on in a spiking pattern over a decade, and immunization outreach measures remained unchanged in response[7].

With large numbers of children in this area still unvaccinated, undervaccinated, or at high risk of previously reduced communicable disease, the modern healthcare system had to take a good look at where the hesitancies resided; not just in the Orthodox Jewish community, but around the nation where anti-vaccination groups were beginning to spread misinformation in a crucial time of beating back disease. Parents and "anti-vax" groups took to sharing false information that vaccines caused neurologic disorders such as autism, contained poisonous ingredients, and overwhelmed the immune system of young babies with the dosing schedule set by the CDC, which perpetuated through communities that were hungry for any kind of information in response to their unattended questions[9]. Resources became available for providers to share with parents which addressed the most common topics of mistrust or uncertainty pertaining to immunizations[9]. However, despite the attempt at outreach towards hesitancy, measles cases spiked yet again and New York City saw another outbreak of measles in the years 2018-2019, likely within this same minority group due to the issues not being addressed the first time[10]. As more media attention was gained when schools and daycares began requiring proof of vaccination for children to attend in an attempt to control the spread, pressure increased on the demand for further addressment of parental hesitations regarding immunizations.

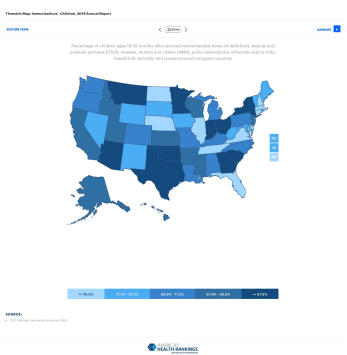
The Tikkun Olam through Vaccination Project

Studies and analyses were reviewed of the most current concerns that parents across the United States had regarding vaccines. The American Academy of Pediatrics (AAP) indicated in 2016 that dismissing all patients who did not want to vaccinate from primary care practices was not addressing the problem and ineffective at controlling climbing infection rates[11]. Many healthcare providers indicated that it was frustrating to have their professional advice essentially ignored, but the AAP maintained that addressing the individual's specific concerns was to be the standard[11]. With the scope of the project being focused on the Brooklyn area, resources from the Jewish community were critically reviewed to determine the most common reasons for hesitancy, both scientific- and faith-based[12]. A detailed study into Jewish law, *Halakha*, revealed connections and disparities regarding immunizations in children. Many Hasidic Jewish people maintain that taking preventative measures against a small disease is interfering with the will of G-d, however rabbis and councils have outwardly promoted vaccination of all children, including the Lubavitcher Rebbe Mendel Schneerson of the Chabad[13]. Attempting to merge a rather "modernized" practice into a strictly tradition-based culture proved to be a challenge, and did not attract attention at the city government level in enough time to solve the public health crisis that was ongoing[13]. While the urge to vaccinate by religious leaders was noted within the Jewish community, many parents still retained concerns that were not based in religion, and were instead focused around

three major questions: what ingredients did vaccines contain, was it too many vaccines to give a child at once, and what would a long-term effect be on the child[14]. The CDC's initial approach in the early 2000s was to address these questions with parents at the time of their child's visit, and use evidence-based informational handouts and posters to promote open knowledge about all available immunizations[14].

But research expanded, as did the number of routine childhood vaccines recommended by the CDC, and parent suspicion increased as the list of immunizations required by schools grew[14]. The AAP modified the approach to disseminating tailored information regarding the most common concerns parents were raising in regards to having their child achieve full immunization status. They methodically reached out to the healthcare providers and pediatricians of the United States with a document of their recommendations for opening the discussion with vaccine-hesitant parents and how to address the misinformation being shared[15]. The AAP published their guidance for professionals to navigate the situation, rather than for parents and patients. This allowed for the healthcare providers to have a resource to rely on and a comprehensive "source" to cite when parents came to them with questions about vaccines. The AAP made it easy for information to be consolidated and therefore easily accessed by providers to then share with their patients based on the most common questions that providers were hearing from their communities in regards to vaccines.[15] Calling upon pediatricians and family practice providers to address these concerns set the expectation that parents might feel more comfortable making their hesitancies known at the time of the visit and therefore more easily discussed to reach a compromise. More focused topics presented the opportunity to have in-depth discussions that opened up lengthy discussions about vaccine additives, ingredients, and residuals and quell the theories that the adjuvants caused harmful effects such as autism[16]. A detailed explanation to parents of how the immune system works in young children and served to address the hesitation that parents had about overwhelming their child with too many shots and who wanted to take a 'low and slow' approach[17]. This reduced the general number of children who were on a "delayed" vaccine schedule, though that rate in the United States still remains elevated today, and helped to get children immunized more completely and at a faster rate[17]. Overall, the parental opinion of having their questions regarded as valid rather than pushed aside or being dismissed from the practice seemed to improve. Studies showed that parents did prefer to get their information from healthcare professionals that they knew and trusted, most often their own primary care provider[18].

The goal of the Tikkun Olam through Vaccination project is to expand upon all that the AAP is doing to combat vaccine misinformation, but to focus it to a particular group of patients that often does not have medical literature explained to them through their specific lens of life[19]. It can be very easy to take a 'one-size-fits-all' approach to a problem of this magnitude, however smaller groups such as the Orthodox Jewish community who are struggling in the data may not be receiving the information that they need in the precise way that they need it. Delivering tailored, evidence-based information to the community that specifically addresses their personal concerns is the only way to combat medical misinformation. Backing this distribution of information with support by providers within their community–their pediatricians, family providers, urgent care offices, pharmacies–maintains the bond of trust and helps to bridge the connection towards receipt of true factual information[19]. The purpose of this project is to take the pressure of finding relative answers to this specific group's questions off of healthcare providers and give them handouts, flyers, cards, online resources, and tangible evidence to disseminate



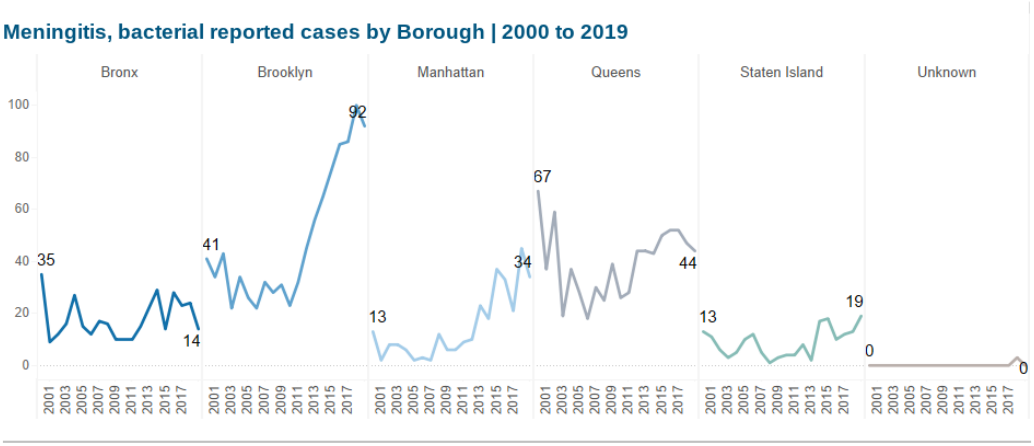
to their patients without having to do the work themselves. Making this transmission of evidence-based information easy is expected to cause an increase in the number of fully vaccinated children in the Orthodox Jewish community of Brooklyn, NY and a decrease in the incidence of vaccine-preventable disease outbreaks such as measles and mumps, as will be demonstrated by reportable data within 5-10 years.

America's Health Rankings. 2020. Explore Childhood Immunizations in the United States | 2020 Annual Report. [online] Available at: https://www.americashealthrankings.org/explore/annual/measure/Immunize_h/state/ALL. Accessed 7 July 2021.[19]

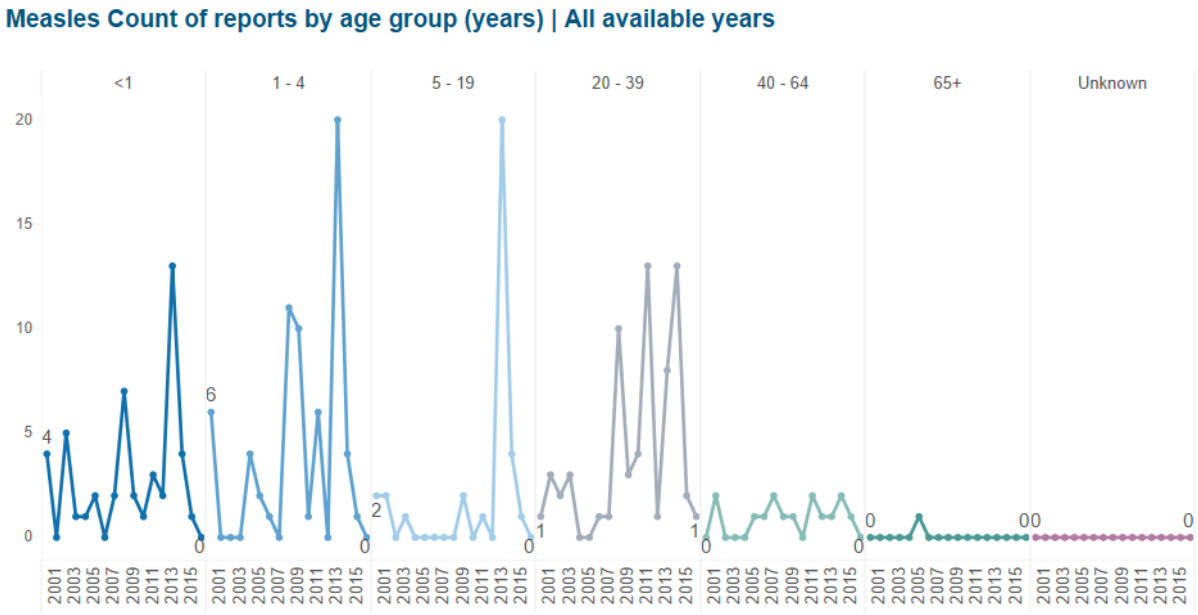
Conclusion

The misinformation surrounding vaccines for children has only grown in the decades of which their use and significance has expanded. As seen most recently with the CoVID-19 pandemic, unfactual information disseminated to the public causes not only delays in prevention of major outbreaks and mutations of disease, but breakdown of trust in the scientific process. It can be detrimental to public health in general if humans begin to lose faith in scientists who have dedicated their lives to the study of immunology and disease and instead elect to follow trends of suspicion-based content that is not derived from studies or data. Should this trend continue, diseases that were once thought to be controlled or managed may have the chance to mutate and become virulent again, sliding past the effectiveness of the vaccines already in place. The importance of managing dissemination of truthful, evidence-based information plays a key role in maintaining public health of all communities large and small. There can be no group of people regardless of their belief system or status of life left behind in the effort to provide factual information to all to bolster education about a topic so important to our nation and the entire world. Tikkun Olam through Vaccination starts within the Orthodox Jewish Community but speaks equally to communities of all backgrounds with the same message to spread clear, concise information to families in promotion of immunizations for children.

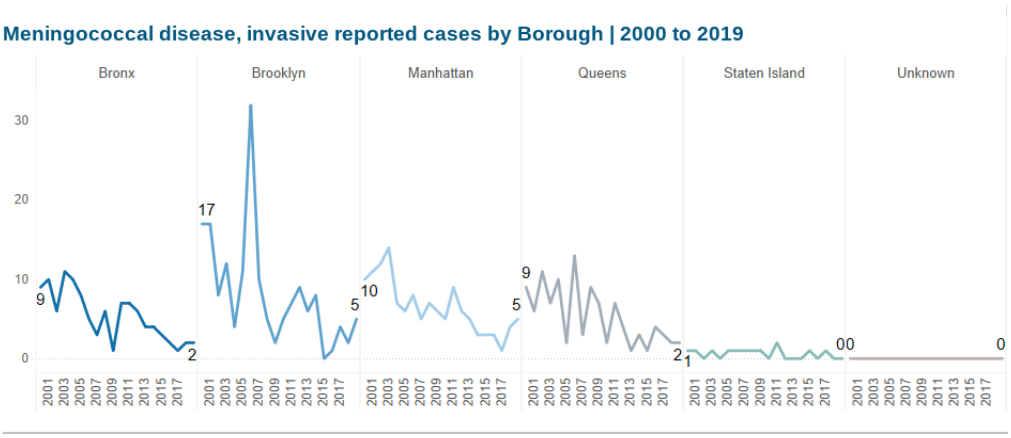
Figures



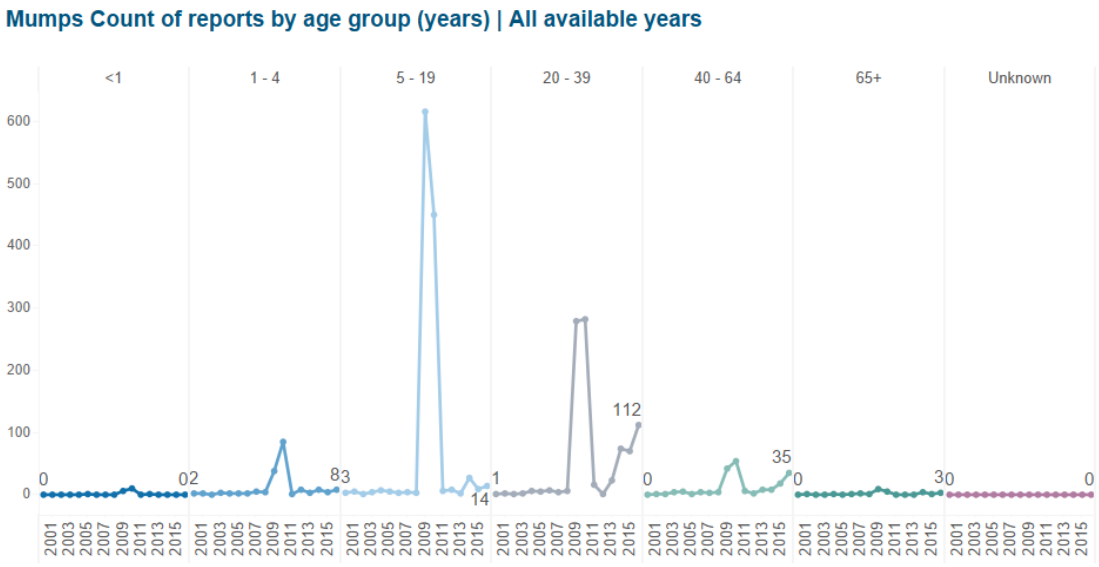
A graphical representation of the rate of disease occurrence of bacterial meningitis by borough. Special note should be made that Brooklyn not only has the highest number of cases, but the largest spike from baseline[21].



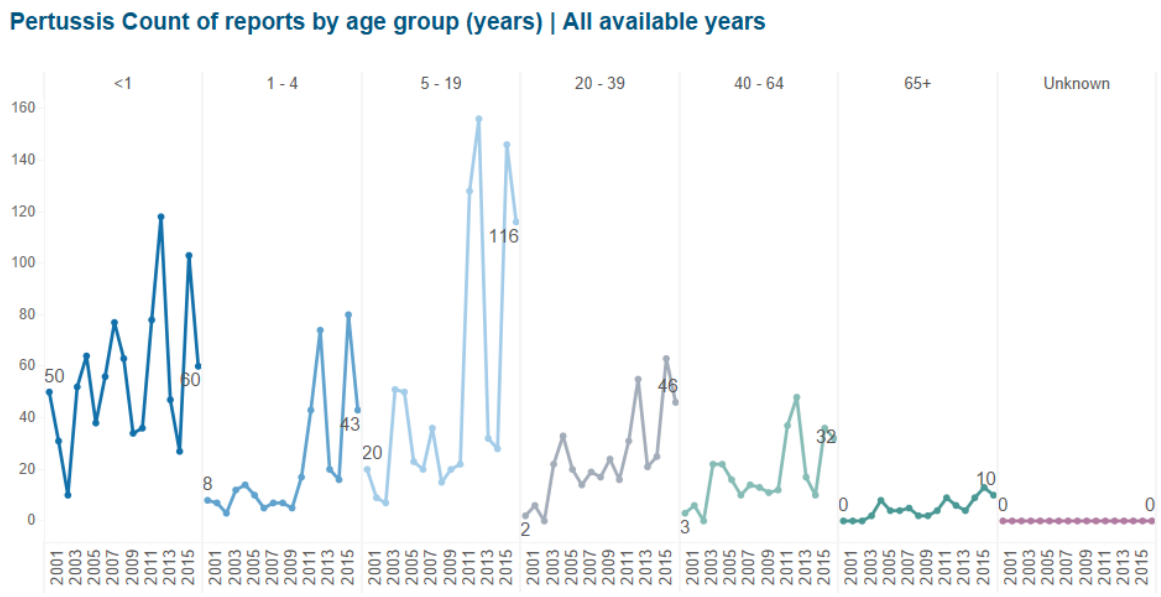
A graphical representation of the rate of disease occurrence of measles sorted by age group within Kings County, Brooklyn. The largest variations in the graph occur in school-ages when children are in attendance of yeshiva[22].



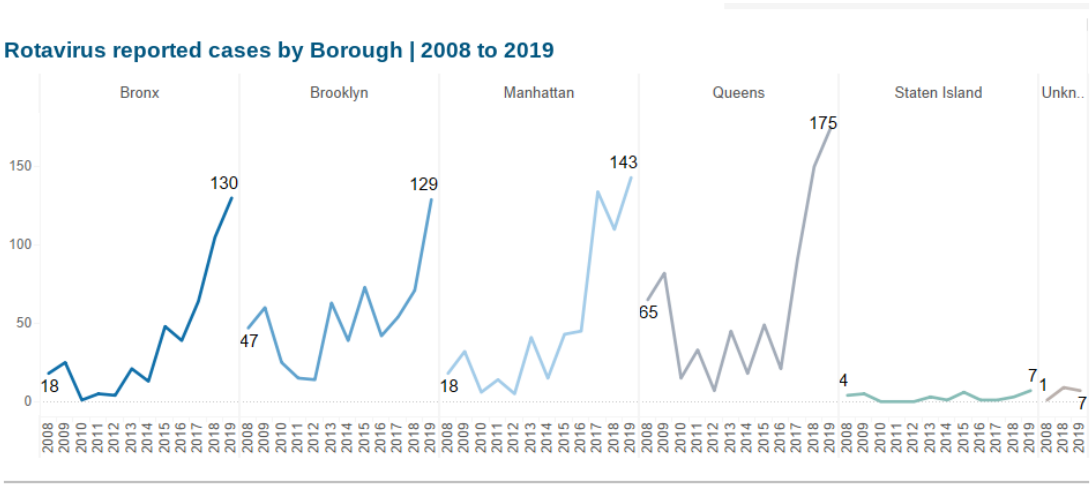
A graphical representation of the rate of disease occurrence of invasive meningococcal disease by borough. Special note should be made that Brooklyn not only has the highest number of cases, but the largest spike and one of the highest baselines[23].



A graphical representation of the rate of disease occurrence of mumps by age group in Kings County, Brooklyn. School-aged children and young adults entering seminary studies made the highest totals for the outbreaks in 2009-2011[24].



A graphical representation of the rate of disease occurrence of pertussis by age in Kings County Brooklyn. Special note should be made that infants, young adults, and middle adults who make up most of the family ages are elevated in numbers of infection, indicating that transmission was high within the same homes[25].



A graphical representation of the rate of disease occurrence of rotavirus by borough. As rotavirus is highly contagious, the numbers are fairly consistent throughout the city. Rotavirus can be deadly to infants and children causing severe diarrhea[26].

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