

References:

Barker, Lawrence E., Susan Y. Chu, Qian Li, Kate M. Shaw, and Jeanna M. Santoli. "Disparities between White and African American Children in Immunization Coverage." *Journal of the National Medical Association*. 98.2 (2006): 130-35. Print.

The national difference between white and African-American children between 19-35 months in the United States has increased about one percentage point annually. Barker and the Center for Disease Control and Prevention examined how this gap differed with geographical region and income. By using the National Immunization Survey, a national telephone survey, they were able to examine difference in white and African American children in immunization coverage within income groups at or above the poverty level for each census region (northeast, south, midwest, and west). The results conclude that among households at or above the federal poverty level in the northeast census region, disparity is widening between white and African American coverage, yet in the Midwest region disparities are narrowing. Barker resolves that addressing the widening disparity in coverage requires new strategies that consider current social and economic contexts.

An examination of the narrowing in the midwest region attributes it an increase in coverage among African Americans while that among whites is remaining constant or growing very slowly. In the northeast the widening gap is due to an

upward trend of white coverage and downward trend among African Americans. It is widely known that higher-income groups tend to have greater immunization coverage. In the northeast the proportion of white children from household incomes of greater than \$75,000 increased about 20% between 1998 and 2003, whereas for African American households of the same criteria an increase was only about 8%. The article further details factors unrelated to income that may contribute to the disparity in immunization coverage. In relation to our vaccine research, a lot of what I've been researching is about people who have the opportunity for vaccination but refuse it, this article highlights the issues that arise for those who want vaccinations but due to certain social constructs are not successful. It pairs well with the article done by Streyer and the Medical University of South Carolina.

Chen, Cecilia. "Rebellion against the polio vaccine in Nigeria; implications for humanitarian policy." *African Health Sciences*. 4.3 (2004): 205-07. Print.

Cecilia Chen at Tufts University examines the reasons for the rebellion that occurred in Nigeria during the World Health Organization's global polio eradication initiative in 1998, as well possible solution for future initiatives. The WHO began eradication of polio with Nigeria because it was one of the two countries that had contributed to increased polio cases worldwide between 2001 and 2002. The Global Polio Eradication Initiative (GPEI) led by the WHO with support of some other organizations had four strategies: immunization of infants for life during their first year, immunization of children under 5,

surveillance for outbreaks, and targeted “mop-up” campaigns when an outbreak occurred. Nonetheless, the movement came to a halt in some Islamic countries due to rumors of contamination with HIV/AIDS, anti-fertility drugs, and cancer causing viruses. Chen explains that the strategy used by the WHO should have exhibited a bottom-up approach, in which local leaders, who have great political power and respect among the community, were the spearhead of the movement.

The history between Africa and western countries has never been sound. African countries have long been dominated by Europeans and exploited for their resources and people, so there is a underlying lack of trust of the humanitarian agencies. Humanitarian agencies may be seen as the vehicles through which western countries seek to impose their policies on non-Western countries resulting in an increased level of distrust of the organizations. With that said the dilemma can be overcome. This article was written in 2004, Amy Kaler’s article written in 2009 shows how the inclusion of local authorities can make an impact on the success of vaccine eradication initiatives.

Downs, David. "Australian experience in general medical practice immunization-achievements and problems." *Vaccine*. 19. (2001): 2413-17. Print.

The author explains the rationale behind strategies used in the Immunize Australia Campaign that began in 1997. In 1994 vaccine preventable diseases pertussis and measles were reaching endemic proportions amongst Australia children. The article discusses options used to overcome obstacles from the perspective of a

general medical practitioner. There are three essential components in the vaccination equation model: the vaccine giver, the vaccine receiver and the process facilitator, all of which are needed for a successful program. The person facilitating the process is represented by the Federal Government, the person giving the vaccine is represented by the general practitioner, and the person receiving the vaccine is represented by the parent, not the child.

The Goals of the Immunize Australia Campaign were to 1) have greater than 90% immunization coverage of children at 2 years of age, 2) have near universal immunization coverage at school entry age, and 3) have near universal coverage of children under 17 for measles, mumps and rubella. To assist in facilitation the Australian Childhood Immunization Register (ACIR), was established to record all aspects of childhood vaccinations. For support from the practitioners, the General Practice Incentive Initiative (GPII) was introduced. This scheme gave monetary incentives to general practitioners who gave vaccinations. Finally to get the parents involved, the government gave them childcare bonuses, including rebates and childcare assistance. The campaign has been very effective. In relation to the USA, this is an example of what can be done to fight the spread of anti-vaccine attitudes. Having monetary support systems in place may influence many who do not vaccinate, especially those of lower income households who generally make up majority of the population that don't vaccinate. Also, providing doctors with financial incentives could push more doctors to educate their patients on the benefits of immunizations.

Gray, Robert M., Joseph P. Kesler, and Phillip M. Moody. "The Effects of Social Class and Friends' Expectations of oral polio." *American Journal Of Public Health*. 56.12 (1966): 2028-32. Print.

In 1966, the University of Utah, Department of Preventative Medicine and Sociology wrote this paper with the purpose of developing information on why persons in the lower socioeconomic class utilize available medical services less frequently than do persons from higher social class levels. Their main focus was an interest in why a sizable proportion of lower social class persons fail to become immunized even when these services are easily available to them. The findings of the study suggest that there are proportionately more people in the upper and middle classes, compared to the lower class, who believe their friends expect them to be immunized. It is also suggested that a consideration of this friendship factor could be used to an advantage in planning future public health activities, especially those relating to immunization programs.

Peer pressure was a large factor in childhood vaccinations. Why was the pressure to vaccinated considerable among the higher and middle class? I think it could be that those amongst the higher class consist of the people that enforce vaccinations- physicians and health policy makers. Also, considering the time and place in which this study was done, I assume the results would be drastically different compared today. It would be interesting to research similar articles on socioeconomic class in Utah today to see if the findings are still true.

Moran, Nicola, Darren Shickle, and Erica Richardson. "European citizen's opinions on immunisation." *Vaccine*. 26. (2008): 411-18. Print.

This research done at the Social Policy Research Unit, University of York, Heslington was based on a study that explored which public health interventions a cross-section of people across Europe would be willing to accept; their reasons for accepting or rejecting specific public health policies and their enforcement; and how people balanced public and private interest. The groups were segregated according to the gender; age; marital status; parental status; educational status; and smoking status. The central theme emerging from the focus groups was the concept of risk discussed in terms of both private interest – ‘could immunizations harm my child?’ – and public interest – ‘could non-immunization harm other people?’ There was a broad agreement among participants that immunization programs were beneficial to public health.

Overall, focus group participants were supportive of immunization and recognized the potential health benefits to individual children and to the wider society with high rates of immunization coverage. It is possible that the timing of the study may have influenced the findings. Focus groups were held during September and October of 2003 when the global panic surrounding Severe Acute Respiratory Syndrome (SARS) was at a peak. This may have heightened public awareness over the dangers of communicable diseases and thus possibly increased support for immunizations. Nonetheless, if focus group studies were to be employed here in the United States it would better evaluate the opinions of the

public, just as this study has done across Europe. There is a disconnect between actual public knowledge and what public health authorities think the public knows. Having possibly state wide or even county wide focus groups would detail the extent of public knowledge, and could in turn change the programming of public health policies and marketing strategies.

Steyer, Terrence E., Arch G. Mainous III, and Mark E. Geesey. "The effect of race and residence on the receipt of childhood immunizations: 1993-2001."

***Vaccine*. 23. (2005): 1464-1470. Print.**

Steyer with the Medical University of South Carolina, Department of Family Medicine's purpose of this study was to examine the impact of race and residence on the receipt of childhood immunizations during the years 1993-2001. They hypothesized that white children, both in rural and metropolitan areas, would have less delayed immunizations than their minority counterparts, and that rural African-American and Hispanic children would have more delayed immunizations than similar metropolitan minorities. The primary variables of the study included area of residence, race/ethnicity, and childhood immunization status. The independent variables were health insurance status, poverty level, having a medical home, and access to care based on monetary availability. The results found no consistent trend. In 1993, rural whites were more likely to have delayed immunization than metropolitan whites, in 1997 family income below the poverty level was the only significant factor in immunizations, and in 2001 both

rural African Americans and those lacking health insurance had delays in immunization status. While there was no difference found in overall immunization status, rural children are less likely to receive new vaccines when they are first recommended. Therefore efforts should be made to increase the distribution of immunizations and resources to rural health care providers.

After reading this article, I began to reflect on the vaccine status here in Blacksburg, Virginia. The majority of residence here are white and the area is a rural mix. What efforts do the New River Valley, and specifically the Town of Blacksburg take to ensure that the children here get immunized? There is also a substantial amount of residence here close to the poverty line, if not below it, so again the question comes to mind of the accessibility of immunizations. These are questions that could be further examined in future research pertaining to our local environment.

Tatley, Michael V., Desiree L. Kunac, Anne McNicholas, Lifeng Zhou, and Suzie Ballantyne. "The Intensive Vaccines Monitoring Programme (IVMP): An electronic system to monitor vaccine safety in New Zealand." *Vaccine*. 26. (2008): 2746-52. Print.

The New Zealand Pharmacovigilance Centre at the University of Otago did research on the effectiveness of a new vaccine surveillance program. In response to an epidemic of meningococcal B disease that started mid-1991, New Zealand

introduced a tailor-made strain-specific outer membrane vesicle vaccine (MeNZB) in 2004. Because of the quality of safety data available from overseas studies using group B outer membrane vesicle vaccines New Zealand did not undertake Phase III clinical trials. Instead, a new system was developed for the surveillance strategy, which utilized an automated electronic data capture and assessment process, the Intensive Vaccines Monitoring Programme (IVMP). The purpose of the article is to describe the IVMP system, including the benefits and challenges encountered through its use during the national immunization campaign, as well as its future potential as a safety-monitoring tool for vaccines and medicines.

The main aims of the IVMP were to provide an early alert mechanism of unexpected adverse events occurring with the meningococcal vaccine and to measure the incidence of clinical conditions requiring a health care consultation in the 6-week period following vaccination with the meningococcal vaccine and/or other routine childhood immunization scheduled vaccines. First, data was captured at the family practice level. The information was then sent to the practice's management software. Second, the information from the practice was sent to the New Zealand Pharmacovigilance Centre, and assessed. Then a report was sent to three different analysis groups. The use electronic means as collection consultation data eliminated the need for the classic survey and their associated heavy workload on practice staff enabling a potential 100% compliance rate. I think an electronic system like New Zealand's IVMP would substantially change

the quality of the healthcare system in the United States. With so many family's seeking claim to vaccines as the reason for their child's disorder or even death, having a system that closely monitors changes electronically through consultations would make the relationship between vaccine and disorder more concrete, if the relation existed.

Wilson, Kumanan, Ed Mills, Heather Boon, George Tomlinson, and Paul Rtivo. "A survey of attitudes towards paediatric vaccinations amongst Canadian naturopathic students." *Vaccine*. 22. (2004): 329-34. Print.

Wilson with the University of Toronto, Department of Medicine had two objectives in this study. First, they aimed to determine the willingness of students at the Canadian College of Naturopathic Medicine (CCNM) to recommend childhood vaccinations and second, they sought to identify factors associated with students' willingness to recommend vaccinations, as well as to assess their perceptions of the risks of vaccination. This study was done because despite documented successes of vaccinations, a growing anti-vaccination movement appears to be emerging, and a main contributor to the movement may be the beliefs of some complementary and alternative medicine (CAM) providers. In order to accomplish these objectives a questionnaire was distributed amongst classes to all 4 years of students in the program. The results were that under half of the students believe vaccines to be moderately beneficial, over two-thirds believed vaccines to be highly or moderately risky and almost half of the students

knew someone who had an adverse reaction to a vaccination. Of the most concern is that only a minority of students would advise parents to have their children receive all recommended pediatric vaccinations.

The CCNM does not actively teach of the benefits of vaccinations, but students are told not to make recommendations against vaccinations. The decisions not to recommend vaccination is due to a combination of concerns about lack of benefit and their potential risks. The apparent uncertainty towards vaccination identified by the study suggests that the right strategy may help to alleviate vaccination concerns. Again, the overwhelming idea of misinformation is present.

Unfortunately, these alternative medicines are legal and therefore cannot be changed but public health officials should find effective ways to communication the benefits of vaccination to naturopathic providers during their training. It could be the first step toward preventing the spread of anti-vaccination ideas. Also naturopathic providers who do promote vaccinations should be aware of these anti-vaccinations sentiments and seek to inform students.