



The Value Proposition: Collaborative Research

Improving Immunization Rates in Adolescents through Enhanced Documentation, Surveillance and Accountability

BACKGROUND

Although office-based physicians provide most immunizations in the United States, there is limited published data of office based immunization rates in adolescents. Kids Health First initiated a study in 2001 to assess documented immunization rates among adolescents within 30 private pediatric offices. This study included a pre- and post-chart audit in 2001, and 2004, with an educational intervention presented during the second phase of this study. Results were published in the February 2008 *Journal of Adolescent Health* and delivered in a poster presentation at the Pediatric Academic Society Annual Meeting in 2008.

The Principal Investigator for this project was Edward Gotlieb, M.D., F.A.A.P., F.S.A.H.M., Chair, Kids Health First Research Committee and a member of the Kids Health First Pediatric Alliance, Board of Directors.

PURPOSE

Specific objectives of the study included the following.

- Establish an age-gender registry for the Kids Health First patient population
- Establish a rate of documented adolescent immunization within the KHF practices
- Compare rates of KHF documented adolescent immunization and missed opportunities for immunization to rates previously published by others
- Develop and implement an education intervention for physicians and patients aimed at improving immunization rates and documentation
- Reassess the rate of documented adolescent immunization with KHF practices one year after intervention

Study Design: Chart reviews of patients aged 11-21 years who had been seen in one of 30 practices within the KHF network during 2001 and 2002, were conducted in the first and third phases of the study. During the intervention phase, physician participants received direct feedback, peer interaction and continuing education opportunities. Continuing education options offered, included an interactive digital study entitled *Increasing Immunization Rates among Adolescents** or a lecture titled *Improving Adolescent Immunization Rates* presented by a nationally recognized pediatric infectious disease specialist, Paul M. Darden, M.D., F.A.A.P., Medical University of South Carolina.

**The CD-ROM was developed by the Society for Adolescent Medicine and provided to Kids Health First by GlaxoSmithKline.*

Kids Health First received IRB approval from the AAP Institution Review Board.

Our Role: Within the KHF network, 138 physicians participated in the study. Patients included uninsured, commercially insured and Government-insured adolescents. A total of 9,699 patient records were reviewed.

Data Collection: The researchers used the Clinic Assessment Software Application from the National Centers for Disease Control and Prevention to assess immunization rates by a predetermined selection protocol. In 2001 – 4,837 charts were reviewed and in 2004 – 4,862 charts.

RESULTS

- **Overall increase in immunization rates** for patients from the first to the second data collection more than doubled
- The percentage of **“No Recorded Immunizations”** decreased
- Kids Health First patients demonstrated **adolescent immunization rates at age 13**, which were **higher than the national HEDIS rates**
- **Immunization rates improved for all immunogens**

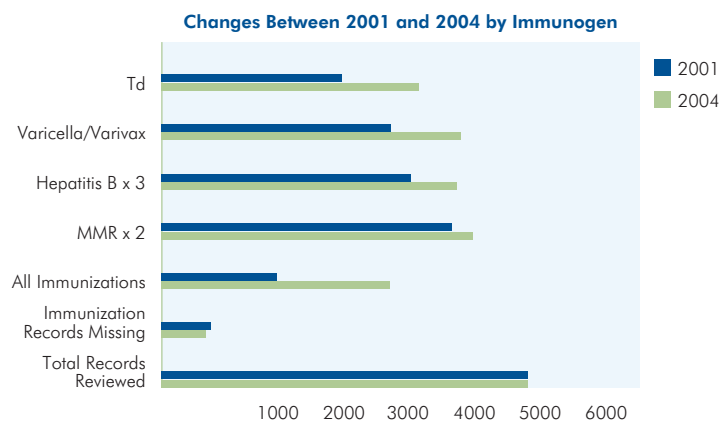
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Table 1: Kids Health First Pediatric Alliance Immunization Rates for 2011 and 2004, All Adolescent Age Ranges

Immunizations	2001 Number (%)	2004 Number (%)	% Change	p-value
Total Records Reviewed	4837	4862	-	-
Immunization Records Missing	499 (10.3)	434 (8.9)	-13.0	0.020
MMR 2, Hepatitis 3, Varicella/Varivax, and Td	1160 (24.0)	2663 (54.8)	129.6	<0.001
MMR x 2	3670 (75.9)	4084 (84.0)	11.3	<0.001
Hepatitis B x 3	3066 (63.4)	3777 (77.7)	23.2	<0.001
Varicella/Varivax	2678 (55.4)	3926 (80.7)	46.6	<0.001
Td	2125 (43.9)	3206 (65.9)	50.9	<0.001

Table 2: Percentage of 13 Year Olds Immunized for 2001 and 2004

Immunizations	2001 KHF Data	2001 National HEDIS	2004 KHF Data	2004 National HEDIS	2004 Statewide Managed Care Plan
No Immunizations Recorded	9.7	n/a	n/a	9.6	n/a
MMR x 2, Hepatitis B x 3, Varicella/Varivax, and Td	21.5	n/a	n/a	51.2	n/a
MMR x 2	77.6	67.6	58.4	83.2	86.0
Hepatitis B x 3	61.6	44.9	31.9	75.0	64.0
Varicella/Varivax	61.1	32.2	37.0	84.8	67.0
Td	36.6	n/a	n/a	58.7	n/a
Combo #1	58.1	39.9	30.2	74.3	62.0
Combo #2	43.4	21.0	18.7	72.6	52.0



CONCLUSIONS

These results clearly demonstrated the salutary affect of how a clinically integrated network of pediatricians working together can change the practice of medicine. In addition, the benefit to the community cannot be underscored; the importance of immunizations in children is critical to managing and eradicating vaccine-preventable diseases.

Kids Health First now requires all member practices to participate in GRITS to ensure a consistent and unified vaccine administration record. This participation further ensures appropriate documentation of all immunizations, regardless of age, gender or payor source.

Having **more than doubled our overall immunization rate** for adolescents between 2001 and 2004, and decreased the number of patient charts with no reported immunizations, this collaborative effort is only one example of how KHF supports and encourages clinical integration.

If you would like more information specifically related to this research study or others, please call 770.333.0033.

ACKNOWLEDGEMENT

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The physicians and other healthcare providers affiliated with Kids Health First are independent providers and are not employed by Kids Health First.

