

Supplementary Table 1:

Antigen of Immunization	Measles	Mumps	Tetanus Toxoid	Pertussis	Anthrax	Hepatitis B
AKA	Attenuvax, MMR II	MMR II	Td, DT, TT, Infanrix (DTaP), Adacel/Boostrix (dTaP), DTP	Infanrix/Daptacel/Tripedia (DTaP), Adacel/Boostrix (dTaP), DTP	Anthrax Vaccine Adsorbed (AVA)	Engenerix-B, Recombivax HB, Comvax
Antigen	Each dose contains $\geq 1,000$ TCID <sub>50</sub> * of live, attenuated measles virus.	Each dose contains 12,500 TCID <sub>50</sub> * of live, attenuated mumps virus.	Each 0.5 mL dose contains 2-10 Lf <sup>%</sup> of tetanus toxoid, purified from culture and detoxified.	Each 0.5 mL dose contains 2.5-25 $\mu$ g detoxified PT, 5-25 $\mu$ g FHA. Some also contain 3 $\mu$ g PRN and 5 $\mu$ g FIM. DTP: 4-12 Protective Units of whole pertussis	Sterile, cell-free filtrate of non-encapsulated B. anthracis culture, containing secreted proteins, including protective antigen (PA). PA is not quantified	Sterile suspension (20 ug/ml, Comvax: 10 ug/ml) of noninfectious, purified, recombinant HBsAg from cultured <i>S. cerevisiae</i> cells. Contains no more than 5% yeast protein.
Adjuvant (per dose)	None	None	<625 $\mu$ g aluminum as KAl(SO <sub>4</sub> ) <sub>2</sub> , Al(OH) <sub>3</sub> , or AlPO <sub>4</sub>	$\leq 1.5$ mg AlPO <sub>4</sub> or Al(OH) <sub>3</sub>	<600 $\mu$ g Al(OH) <sub>3</sub>	$\leq 1$ mg of Al(OH) <sub>3</sub> or KAl(SO <sub>4</sub> ) <sub>2</sub>
Preservative	None	None	$\leq 50$ $\mu$ g Hg/mL Residual formaldehyde ( $\leq 200$ ug/ml)	$\leq 100$ $\mu$ g residual formaldehyde, <50 ng residual glutaraldehyde, trace thimerosal	25 $\mu$ g/mL benzethonium chloride 100 $\mu$ g/mL formaldehyde	None
Childhood Vaccination Schedule	2 SQ doses (0.5 mL each). Ages: 12-15 months of age, 4-6 years of age	2 SQ doses (0.5 mL each) at 12-15 months of age, then 4-6 years of age	3 IM doses (0.5 mL) given 4-8 weeks apart, then a dose 6-12 months after dose 3. Booster at school entrance.	4 IM doses (0.5mL) given at 2, 4, 6, and 15-20 months of age (intervals of 6-8 weeks). Booster at school entrance.	5 IM doses (0.5 mL each) at 0, 1, 6, 12, and 18 months. Note: Most individuals in this study also received a dose at 2 weeks.	Comvax: 3 IM doses (0.5 ml each) at 2, 4, and 12-15 months of age. Others: 3 IM doses at 0, 1, and 6 months. 0.5 mL per dose is given to those of <20 years of age; 1 mL is given to persons $\geq 20$ years of age.

Adult booster Schedule	Every 10 years.	One dose at least 5 years after last childhood vaccination.	Yearly
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Abbreviations: TCID<sub>50</sub>, tissue culture infectious dose 50; DTP, diphtheria and tetanus toxoids and whole-cell pertussis vaccine adsorbed; Lf, limit of flocculation units; PT, pertussis toxin; FHA, filamentous hemagglutinin; PRN, pertactin; FIM, fimbriae types 2 and 3; HBsAg, hepatitis B surface antigen.

Supplementary Table 2: multiple regression of anti-PA IgG

	R <sup>2</sup>	β (SE)	p
Years Since Last Vaccination	0.126	-0.212 (0.013)	<0.001
Military-recorded Vaccinations	0.152	0.180 (0.010)	<0.001
Race	0.006	AA: -0.049 (0.146)	0.003

Abbreviations: SE, Standard Error

Supplementary Fig. 1: Distribution of specific antibody levels against measles, mumps, tetanus, hepatitis B, and PA. 1350 individuals were tested for antibodies to measles virus (A), mumps virus (B), tetanus toxoid (C), and whole pertussis (D); 1465 individuals were tested for PA antibody levels (E); and 931 individuals were tested for antibody directed toward hepatitis B surface antigen (F). Shown are the log<sub>10</sub> transformed antibody

levels as calculated against standard curves, along with means and standard deviations. Each symbol indicates a single individual; dashed lines indicate the cutoff value for seropositivity or protection for each test. For PA (E), the range of equivocal values is indicated by two dashed lines.

