

**Domestically-oriented vaccine economics research ideas,  
Research Agenda in Vaccine Economics Project, United States, 2002**

Idea Topic	VACCINE ECONOMIC RESEARCH IDEA	Priority Rank		
		All voters	Non-industry voters	Industry voters
Supply and shortages	What are the costs of vaccine shortages, and conversely, what would be the value of having a better vaccine stockpiling system?	1	1	6
Human papillomavirus vaccine	What will be the cost-effectiveness of HPV vaccine? Take possible reduction of Pap screening into account. Different strategies for choosing the population to be vaccinated should be evaluated.	2	4	1
Adult vaccination	What would be the costs of a "Vaccines for Adults" program that would include influenza, pneumococcal, and hepatitis B vaccines? What would be its cost-effectiveness?	3	3	10
Pertussis	What is the cost-effectiveness of vaccinating adults and/or adolescents against pertussis? Various strategies including universal immunization, maternal immunization, postpartum immunization, immunization of adult household contacts of a newborn, immunization of women or all adults of "childbearing" age should be included in the analysis.	4	8	4
Universal purchase	What is the cost-effectiveness of universal purchase of vaccines? This study would begin with a comparison of universal purchase states with non-universal purchase states to see which have better coverage. Also would look at the costs of universal purchase and adoption decisions by universal purchase states.	5	2	58
Meningococcal vaccine	What is the cost-effectiveness of meningococcal group C conjugate vaccine for infants (already in use in Canada and England)? What is the incremental cost-effectiveness of this vaccine compared with the existing quadrivalent polysaccharide formulation?	6	10	13
Delivery	What are the costs of introducing a new vaccine to the national infrastructure?	7	9	18
Influenza	What is the cost-effectiveness of universal vaccination against influenza?	8	6	25
Registries	What are the costs of and benefits of vaccine registries and recall mechanisms? What is the cost of extra immunization? What other savings are achieved due to vaccine registries, eg nurses not having to call schools, etc.?	9	20	2
Adult vaccination	What would be the cost-effectiveness of using standing orders for influenza and/or pneumococcal vaccination for the elderly in hospitals to increase coverage rates in this age group?	10	17	7
Influenza	If influenza vaccination is recommended for young children, what will be the costs of adding another vaccine to the already-crowded immunization schedule? What will be the most cost-effective ways to deliver it? Compare different strategies for delivering 2 doses to children receiving the vaccine for the first time. Should it be given during routine visits or in mass immunization program?	11	12	20
Combination vaccines	What would be the cost-effectiveness of a combination MMR-V vaccine?	12	14	14
Influenza	How does the cost-effectiveness and cost-benefit of influenza vaccination vary based on risk group, especially for children?	13	16	16
Delivery	What is the cost-effectiveness of alternative strategies for increasing immunization coverage rates, eg using reminder/recall, assessment/feedback, linkage with WIC?	14	33	3
Smallpox	How much would it cost to have a smallpox vaccination campaign?	15	5	68
Hep A / Hep B combination	What would be the marginal cost-effectiveness of adding hepatitis A to the existing hepatitis B vaccine?	16	27	11
Safety	To what extent do (incorrect) beliefs that vaccines cause adverse effects lead to underutilization?	17	13	31
Influenza	What is the cost-effectiveness of vaccinating pregnant women against influenza?	18	7	69

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Delivery systems	What are the costs and cost-effectiveness of administering influenza vaccination via pharmacists or in supermarkets, vs. in large group settings or small private offices?	19	19	27
Optimization models --U.S.	If resources to purchase vaccines are limited, what choices should be made to maximize benefit in a defined population, eg in a state or in a county? For example, what is the value of increasing coverage of an existing vaccine, eg MMR, compared with starting a new program, eg Hepatitis A vaccination? Or investment in increasing coverage for adolescents or the elderly.	20	23	19
Updating analyses	Update the analysis by the Harvard Center for Risk Analysis (by Tengs) that compares the cost-benefit / cost-effectiveness of immunization programs with other medical interventions.	21	26	17
Pneumococcal vaccine	What would be the cost-effectiveness of administering a pneumococcal conjugate vaccine, or a combined pneumococcal conjugate-polysaccharide vaccine, to adults?	22	40	9
Chlamydia	What would be the cost-effectiveness of a vaccine against chlamydia?	23	18	45
Influenza	What is the cost-effectiveness of the live attenuated virus vaccine against influenza?	24	11	87
Varicella	What is the cost-effectiveness of vaccination against herpes zoster in the elderly?	25	31	22
Delivery costs	How do vaccine delivery costs change with changes in compliance, setting, and target population? For example, what are the costs of vaccine administration in various settings, eg private offices, large health centers, public health clinics, pharmacies? What are the average vs. marginal costs of vaccine delivery?	26	44	5
Vaccines for Children	Working poor families can't get pneumococcal conjugate vaccine because the public health department can't cover it and these families don't qualify for VFC. What would be the costs and benefits (cost-effectiveness) of expanding VFC to eliminate such inequities?	27	25	32
Supply and development	What incentives are needed to encourage manufacturers to enter the market, stay in the market, and maintain current good manufacturing processes? What causes manufacturers to withdraw from a vaccine market?	28	22	49
Pertussis	What are the protection vs. safety tradeoffs of various strategies for giving the 5th dose of pertussis vaccine -- either give it at 5 yrs and give a 6th dose during adolescence, or hold it and give the 5th dose during adolescence?	29	37	24
Values for vaccines	Are vaccines undervalued in today's market, and if so, why? What are people willing to pay for prevention of a disease, vs. treatment of a disease, eg influenza?	30	36	26
Meningococcal vaccine	What is the cost-effectiveness of the existing meningococcal vaccine?	31	32	36
Delivery systems	What would be the costs and benefits of the federal government establishing a federal vaccine distribution center? A federal vaccine order entry center? This would mean that states would not have to run these processes.	32	16	87
Supply and shortages	How does existing pricing and profitability affect investment in new vaccine development and the availability of existing vaccines?	33	24	58
Hepatitis A	What would be the cost-effectiveness of vaccinating children < 2 years old against hepatitis A? The incremental cost of vaccinating other low-risk subgroups?	34	34	38
Human immunodeficiency virus	What is the cost-effectiveness of HIV vaccine in the U.S., especially in high-risk groups? What will be the cost-effectiveness if the vaccine is only partially effective?	35	52	8
Coverage rates	What is the incremental cost-effectiveness of additional % increases in the immunization coverage rate? Could use measles, varicella, Hib, or polio as examples.	36	35	58

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Updating analyses	Create an ongoing cost-effectiveness model or evaluation tool that can be used to continually assess vaccines and allowing rapid assessment of the new economic effects as circumstances change.	37	21	87
Hepatitis B	How cost-effective are various strategies for hepatitis B vaccination, vs. screening, in prison populations and other high-risk groups such as STD clinics and HIV clinics?	38	46	28
Influenza	When influenza vaccine supply is limited, which risk groups (eg high-risk children, elderly) should receive vaccine first in order to maximize benefit?	39	38	58
Respiratory syncytial virus	What would be the cost-effectiveness of vaccinating children < 2 yrs old against RSV? Should such a vaccine be used in low-risk children?	40	45	30
Reimbursement policies	What are the problems with current Medicare reimbursement policy, eg for influenza vaccine? Are providers having to delay purchase or reducing use of influenza vaccine due to reimbursement problems?	41	41	58
Pneumococcal vaccine	What is the cost-effectiveness of the new 9-valent pneumococcal conjugate vaccine (in development by Merck) for children?	42	28	87
Hepatitis B	What is the cost-effectiveness of various strategies for delivering catch-up hepatitis B vaccine to adolescents, eg school-based vaccinations vs. clinic-based, vs. STD centers for the high-risk?	43	39	65
Supply and shortages	What is the cost-effectiveness of reduced-dose schedules for pneumococcal conjugate vaccine, eg 3 doses instead of 4; 2 doses instead of 4; 2 PCV7 doses and 1 dose of polysaccharide vaccine	44	43	45
Administration modes	What are the costs and cost-effectiveness of alternative modes of vaccine administration, eg oral, nasal, injectable? This idea is especially pertinent for resource-constrained places where HIV, Hep C and Hep B can be spread by multi-use injections.	45	61	15
Safety	What are the costs of post-marketing surveillance for adverse events?	46	47	47
Elderly	What would be the cost-effectiveness of improving routine vaccination of the elderly?	47	50	36
Herd immunity	How much more cost-effective would a specific vaccine appear -- eg influenza vaccine -- if herd immunity were incorporated in an analysis?	48	66	23
Smallpox	At what risk of disease will people be willing to accept smallpox vaccination and its risk of adverse events?	49	29	110
Adolescents	What are the costs of catch-up vaccines for adolescents, eg hepatitis B, vs. the cost of doing nothing and letting them experience disease?	50	42	87
Vaccines for Children	What would be the savings from being able to use VFC for the S-CHIP programs? Right now, private providers purchase vaccine and CHIP reimburses.	51	30	110
Group A strep	What is the cost-effectiveness of vaccination against Group A streptococcus?	52	54	41
Parainfluenza	What would be the cost-effectiveness of vaccination against parainfluenza?	53	53	58
Tuberculosis	If a new, really effective TB vaccination became available, what would it save?	54	58	46
Adult vaccination	What is the cost-effectiveness of combining adult immunization interventions with other preventive health practice, eg mammograms and colon cancer screening, or smoking cessation	55	69	33
Polio	What is the cost-effectiveness of alternative policies for polio prevention in the post-eradication era?	56	60	58
Regulation	What is the cost of regulation? Have these costs increased over the years?	57	68	49
Influenza	What would be the cost-effectiveness of a hospital policy to offer influenza vaccine to every hospitalized child aged > 6 months who does not have a contraindication at the time of discharge between Sept 30 and Jan 30 each year?	58	51	87

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School entry requirements	What is the cost-effectiveness of school entry requirements for vaccines? The health benefits would be achieved via improved coverage rates.	59	85	12
Administration modes	What is the cost-effectiveness of OSHA recommendations for safe needle practices?	60	70	58
Generic vaccination models	Can one build a generic vaccination model that could be used for cost-effectiveness and cost-benefit analyses of new vaccines?	61	65	68
Varicella	What is the cost-effectiveness of a second varicella vaccination?	62	55	87
Combination vaccines	What is the cost-effectiveness of selected combination vaccines? Also, what are the hidden costs of new combination vaccines, in terms of confusion caused and under or overvaccinating?	63	56	87
Staph aureus	What is the cost-effectiveness of Staph aureus vaccine for hemodialysis patients?	64	87	21
Updating analyses	What is the current cost-effectiveness and cost-benefit of existing vaccines using most recent guidelines for economic analyses?	65	71	58
Supply and production	What are the costs and benefits of using a "contract manufacturing" approach to make vaccines? This would mean a cost-plus-reasonable profit model that would remove the risks of R&D costs, production costs, and marketing costs from the manufacturer.	66	59	87
Vaccines for Children	What are the costs to states and providers of participating in the VFC program?	67	48	110
Pricing	What are the projected future costs of vaccines? Are the costs of vaccines rising more quickly than inflation? Are they increasing more or less quickly than other drugs? What is happening in this market?	68	62	87
Pricing	How are vaccine prices negotiated in the public sector? In the private sector? How should vaccine prices be set?	69	50	110
Supply and production	What would be the costs of and savings from a system of government-owned, contract-operated vaccine production?	70	65	87
Combination vaccines	What is the optimal (most cost-effective) formulary of combination vaccines?	71	73	58
Hepatitis A/B	What is the cost-effectiveness of vaccinating people with hepatitis C against hep A and B?	72	81	37
Development	How do we understand the economics of vaccine development in the face of near-monopsonies?	73	81	50
Reduced-dose schedules	What is the cost-effectiveness of a 2-dose or 1-dose hepatitis B schedule? One expert commented that a single-dose strategy should be analyzed given work that is being done with novel adjuvants.	74	57	110
Combination vaccines	What are the health and economic costs of delaying the introduction of a combination vaccine that could improve coverage rates?	75	83	58
Rotavirus	What is the cost-effectiveness of the rotavirus vaccines currently in development?	76	75	74
Herpes simplex	What is the projected cost-effectiveness of herpes simplex vaccination compared with alternative STD prevention strategies such as abstinence education?	77	78	73
Smallpox	What is the cost-effectiveness of routine immunization vs. outbreak control?	78	93	34
Financing	What are the differences between the U.S. and English vaccine reimbursement systems? Are there policies that could be adapted to the U.S., given the difference in health insurance systems?	79	63	110
Reduced-dose schedules	What would be the cost-effectiveness of possibly dropping a dose of DTaP, IPV, or Hib?	80	67	110
Reimbursement policies	How much will provider reimbursement decrease if new combination vaccines become available? There are potentially perverse incentives here. A study could compare the HMO vs. private provider perspectives.	81	74	87

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Updating analyses	What is the actual cost-effectiveness of a new vaccine compared with its predicted cost-effectiveness from an economic model? What happens to subgroups near the cost-effectiveness threshold at the assumed price when the actual price is used in the analysis?	82	81	70
Respiratory syncytial virus	What would be the cost-effectiveness of a vaccine against RSV in the elderly and high-risk patients?	83	93	39
Validation of previous model-based analyses	What was the cost-effectiveness of implementing pneumococcal conjugate vaccine in practice?	84	76	87
Development (and supply issues)	What are the costs, and opportunity costs, of bringing a new vaccine to market, including research and development, response to regulatory needs, and marketing? What is the return on investment for the vaccine industry? Lyme disease vaccine would be a good case study for this.	85	93	43
Vaccine Injury Compensation	What would be the costs of a federal compensation program for adverse events caused by experimental vaccines?	86	77	87
Migrant populations	What are the most efficient strategies for vaccinating migrant populations when records are not available?	87	97	43
Meningococcal vaccine	What would be the cost-effectiveness of vaccinating additional risk groups against meningococcal disease?	88	81	87
Hepatitis A	What is the cost-effectiveness of vaccinating the following high-risk subgroups: --Geographically defined areas --Food service workers --People infected with hepatitis C	90	98	40
Mandatory vs. non-mandatory vaccines	What are the costs and benefits of mandatory vaccination programs, as compared with making vaccine available and letting individuals decide whether to have it?	90	104	29
Influenza	The current influenza vaccine distribution system is flawed. What would be the costs and benefits of letting state health departments distribute influenza vaccine?	91	72	110
Administration modes	What is the economic benefit of self-administered vaccines, eg intranasal influenza?	93	84	87
Pricing	What is the economic impact of vaccine monopolies? Would having more producers raise or lower the price; would it improve distribution?	93	93	66
Costs of vaccine-preventable diseases	Update cost studies for illnesses such as HBV or pertussis, where the cost of illness data are old and don't represent current costs.	94	86	87
Anthrax	What is the most cost-effective strategy for allocating anthrax vaccine to the various possible risk groups, eg postal workers, military, etc.?	96	93	87
Delivery systems	What are the costs of vaccine storage? How much should we be willing to pay for each additional month of shelf life? What is the cost of the cold chain, and who's paying for it? ie, how much should we be willing to pay for vaccine that doesn't need to be frozen or refrigerated?	96	93	87
Optimization models -- U.S.	What are the real and potential effects of recent strong emphases on HIV vaccine development and counter-bioterrorism vaccine development?	97	88	110
Experimental vaccines	How much would it cost to have a defined compensation program for experimental vaccines?	98	100	87
Traveler's diarrhea	What would be the cost-effectiveness of a vaccine against traveler's diarrhea, which would probably include E. coli and cholera?	102	104	87
Combination vaccines	What are the economic consequences of combination vaccines on stimulating or repressing the vaccine development process?	102	111	58
Immigrants	What would be the cost-effectiveness of mandating vaccines for immigrants?	102	111	58

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Rotavirus	What is the cost-effectiveness of rotavirus vaccine, with intussusception added to the model?	102	93	110
Vaccines for Children	How much is VFC saving compared with the private sector price?	102	93	110
Rubella	What is the cost-effectiveness of alternative strategies for preventing rubella importation and/or outbreaks?	102	104	87
Safety	What was the cost-effectiveness of implementing DTaP vaccine, which increased safety?	102	104	87
Values for vaccines	How do utilities for the QALYs of children differ if they are assigned by parents vs. by others in the community? Could use pneumococcal conjugate vaccination or influenza vaccination as the example.	106	111	71
Utilities and QALYs	Conduct studies to derive utilities for various vaccine preventable illnesses. For example, HAV vs. HBV, which have different morbidity and mortality profiles.	107	111	72
Influenza	What are the costs of pandemic influenza?	108	99	110
Special populations	What are the economic benefits of vaccination to the Indian Health Service and tribal health agencies? The IHS is a payer, but this system has a different perspective from a VA or an HMO.	111	104	110
Defense department vaccines	What is the cost-effectiveness of vaccines that can be used by the military? These include dengue, malaria, tick-borne encephalitis, and adenovirus.	111	111	87
Safety	What is the cost-effectiveness of improvements in vaccine safety?	111	104	110
Parainfluenza	What would be the cost-effectiveness of parainfluenza subunit influenza vaccine for high-risk patients?	111	104	110
Athletes	What is the cost-effectiveness of vaccination for student and professional athletes?	114	118	58
Hepatitis B	What is the willingness-to-pay for hepatitis B vaccine among young men and/or young gay men, who may be uninsured or underinsured?	114	111	110
Rabies	What is the cost-effectiveness of completing a course of rabies vaccine once the series is already started compared with discontinuing if the animal tests negative?	114	111	110
Yellow fever	What would be the cost-effectiveness of a yellow fever vaccine?	117	115	110
Travelers	What is the cost-effectiveness of integrating a foreign travel clinic program in a public health immunization program?	117	118	87
Coccidiomycosis vaccine	What would be the cost-effectiveness of coccidiomycosis vaccine?	119	118	110
Dengue vaccine	What would be the cost-effectiveness of Dengue fever vaccine?	119	118	110
Travelers	What would be the cost-effectiveness of mandating vaccines for travelers? Examples are yellow fever, dengue virus infection, TB. What are the costs of imported, vaccine-preventable diseases?	119	118	110