

Supplement

Table S-1. Annual reported cases of notifiable diseases in the China. (2019)

Number	Infectious Diseases	Case Count	Vaccine Listed in the China
1	Hepatitis	1,286,691	Yes
2	Pulmonary tuberculosis	775,764	Yes
3	Syphilis	535,819	No
4	Blenorrhagia	117,938	No
6	Scarlet fever	81,737	No
5	Dysentery	81,075	No
7	HIV	71,204	No
8	Brucellosis	44,036	Yes
9	Pertussis	30,027	Yes
10	Dengue	22,188	No
11	Hemorrhagic fever	9,596	Yes
12	Typhoid and paratyphoid fever	9,274	Yes
13	Measles	2,974	No
14	Malaria	2,487	Yes
15	Encephalitis B	416	No
16	Rabies	290	Yes
17	Anthrax	297	Yes
18	Leptospira	214	Yes
19	Schistosomiasis	113	No
20	Cerebrospinal meningitis	111	Yes
21	Tetanus	65	Yes
22	Cholera	16	Yes
23	Pestis	5	Yes
24	H7N9	1	Yes
25	SARS	NR	No
26	Poliomyelitis	NR	No
27	Human avian influenza	NR	No
28	Diphtheria	NR	Yes

* indicates whether a vaccine was already available to prevent the infectious disease. NR: not reported.

Table S-2. Annual reported cases of notifiable diseases in the US. (2019)

Number	Infectious Diseases	Case Count	Vaccine listed in the US*
1	Chlamydia trachomatis infection	1,808,703	No
2	Gonorrhea	616,392	No
3	Syphilis	129,813	No
4	Campylobacteriosis	71,509	No
5	Salmonellosis (excluding S. Typhi infection and S. Paratyphi infection)	58,371	No
6	Lyme disease	34,945	No
7	Human immunodeficiency virus	31,723	No
8	Hepatitis	28,105	Yes
9	Invasive pneumococcal disease	19,951	Yes
10	Pertussis	18,617	Yes
11	Shigellosis	18,574	No
12	Coccidioidomycosis	18,407	No
13	Shiga toxin-producing Escherichia coli (STEC)	16,939	No
14	Giardiasis	14,860	No
15	Cryptosporidiosis	13,975	No
16	Tuberculosis	8,916	Yes
17	Legionellosis	8,890	No
18	Varicella morbidity	8,297	Yes
19	Ehrlichiosis and Anaplasmosis	7976	No
20	Haemophilus influenzae, invasive disease	6,143	Yes
21	Spotted fever rickettsiosis	5,207	No
22	Cyclosporiasis	4,703	No
23	Rabies(animal)	4,645	Yes
24	Mumps	3,780	Yes
25	Vibriosis	2,851	No
26	Babesiosis	2,420	No
27	Malaria	1,936	No
28	Dengue virus infections	1489	Yes
29	Carbapenemase-producing carbapenem-resistant Enterobacteriaceae	1,483	No
30	Arboviral diseases	1346	No
31	Measles	1,275	Yes
32	Listeriosis	928	No
33	Streptococcal toxic shock syndrome	416	No
34	Salmonella Typhi infection	409	Yes
35	Meningococcal disease	371	Yes
36	Tularemia	274	No
37	Q fever	212	No
38	Zika virus	205	No

Number	Infectious Diseases	Case Count	Vaccine listed in the US*
39	Botulism	196	No
40	Candida auris, clinical	175	No
41	Brucellosis	165	No
42	Influenza-associated pediatric mortality	160	No
43	Salmonella Paratyphi infection	155	No
44	Leptospirosis	94	No
45	Hansen's disease	77	No
46	Vancomycin-intermediate Staphylococcus aureus	76	No
47	Toxic shock syndrome (other than Streptococcal)	44	No
48	Tetanus	26	Yes
49	Cholera	14	Yes
50	Chancroid	8	No
51	Trichinellosis	7	No
52	Rubella	6	Yes
53	Varicella mortality	6	Yes
54	Psittacosis	4	No
55	Vancomycin-resistant Staphylococcus aureus	3	No
56	Diphtheria	2	Yes
57	Anthrax	1	Yes
58	Novel Influenza A virus infections	1	No
59	Plague	1	No
60	Rubella, congenital syndrome	1	Yes
61	Poliomyelitis, paralytic	NR	Yes
62	Poliovirus infection, nonparalytic	NR	Yes
63	Severe acute respiratory syndrome-associated coronavirus disease	NR	No
64	Smallpox	NR	Yes
65	Viral hemorrhagic fevers	NR	No
66	Yellow fever	NR	Yes

* indicates whether a vaccine was already available to prevent the infectious disease. NR: not reported.

Table S-3. Vaccine listed in the China. (As of April 22, 2022)

Preventable Disease	Name of vaccine	Acronyms	Yr. Licensed#	MAH
Pneumococcal Pneumonia	Pneumococcal conjugate vaccine (7-valent)	PCV7	2011	Imported
	Pneumococcal conjugate vaccine (13-valent)	PCV13	2016	Domestic and Imported
	Pneumococcal polysaccharide vaccine (23-valent)	PPV23	2008	Domestic and Imported
Pneumonia and Meningitis	Haemophilus influenza type b conjugate vaccine	Hib	1997	Domestic and Imported
Rabies	Rabies vaccine	Rabies	1995	Domestic and Imported
Varicella	Varicella vaccine	Var	1996	Domestic and Imported
Zoster	Zoster vaccine	Zoster	2019	Imported
Diarrhea	Oral rotavirus vaccine	RV-1	2020	Domestic
	Rotavirus Vaccine, Live, Oral, Pentavalent	RV-5	2018	Imported
Brucellosis	Brucellosis vaccine	Brucellosis	1982	Domestic
Seasonal influenza	Influenza vaccine, Pediatric	InfV-P	1996	Domestic and Imported
	Influenza vaccine	InfV	1996	Domestic and Imported
Pestis	Plague vaccine	Plague	1946	Domestic
Tick-borne Encephalitis	Tick-borne encephalitis vaccine, inactivated	TBE	2004	Domestic
Typhoid fever	Typhoid Vi polysaccharide vaccine	Typhoid	1982	Domestic and Imported
Cholera	B recombinant subunit /cholera vaccine	Cholera	2000	Domestic
Yellow fever	Yellow fever vaccine	YF	1954	Domestic
Polio	Inactivated poliovirus vaccine	IPV	2009	Domestic and imported
	Oral Poliovirus vaccine, live attenuated	OPV	1961	Domestic
Meningococcal meningitis	Group ACYW 135 meningococcal polysaccharide vaccine	Men-ACYW	2007	Domestic
	Group ACYW135 Meningococcal Conjugate Vaccine	MenACYW	2021	Domestic
	Group A meningococcal polysaccharide vaccine	Men-A	1980	Domestic

Preventable Disease	Name of vaccine	Acronyms	Yr. Licensed [#]	MAH
	Group A,C meningococcal polysaccharide vaccine	MPSV-AC	2001	Domestic and imported
	Group A,C meningococcal polysaccharide conjugant vaccine	MenAC	2006	Domestic
	Group A,C meningococcal polysaccharide conjugant vaccine and Haemophilus influenzae type b conjugate vaccine	MenAC-Hib	2014	Domestic
Hepatitis	Hepatitis A, live attenuated	HepA-L	1996	Domestic and imported
	Hepatitis A, inactivated	HepA-I	2002	Domestic
	Hepatitis B vaccine, recombinant	HepB	1996	Domestic and imported
	Hepatitis A and hepatitis B vaccines	HepAB	2003	Domestic and imported
	Hepatitis E vaccine	HepE	2011	Domestic
Tuberculosis	Bacillus Calmette-Guerin vaccine	BCG	1937	Domestic
Diphtheria, Tetanus, Pertussis	Diphtheria-tetanus-pertussis whole cell vaccine	DTwP	1973	Domestic
	Diphtheria-tetanus-pertussis acellular vaccine	DTaP	1997	Domestic
	Diphtheria-tetanus-pertussis acellular vaccine, adult	Tdap	1997	Imported
	Diphtheria and tetanus combined vaccine	DT	1973	Domestic
	Diphtheria and tetanus combined vaccine, adult	Td	1973	Domestic
	Tetanus toxoid vaccine	TT	1982	Domestic
	Diphtheria-tetanus-acellular pertussis combined vaccine and Haemophilus influenza type b conjugate vaccine	DTaP-Hib	2009	Domestic and imported
	Diphtheria-tetanus-pertussis acellular vaccine, inactivated poliovirus vaccine and Haemophilus influenza type b conjugate vaccine	DTaP-IPV-Hib	2010	Imported
Japanese encephalitis	Japanese encephalitis vaccine, live attenuated	JE-L	1990	Domestic
	Japanese encephalitis vaccine, inactivated	JE-I	1982	Domestic
Leptospirosis	Leptospirosis vaccine	Leptospira	1982	Domestic

Preventable Disease	Name of vaccine	Acronyms	Yr. Licensed [#]	MAH
Measles,Mumps,Rubella	Measles-rubella vaccine, live attenuated	MR	2002	Domestic
	Measles, mumps combined vaccine, live attenuated	MM	2000	Domestic
	Measles-mumps-rubella vaccine, live attenuated	MMR	2002	Domestic and imported
	Measles vaccine, live attenuated	MV-L	1965	Domestic
	Mumps vaccine, live attenuated	Mumps	1984	Domestic
	Rubella, live attenuated	Rubella	1998	Domestic
Anthrax	Anthrax vaccine	Anthrax	1982	Domestic
Hemorrhagic fever with renal syndrome	Hemorrhagic fever with renal syndrome vaccine, inactivated	HFRS	1997	Domestic
Pandemic influenza	Pandemic H1N1 vaccine	H1N1	2009	Domestic
Enterovirus	Enterovirus vaccine, inactivated	EV71	2015	Domestic
Human papillomavirus	Human papillomavirus vaccine (16, 18)	HPV-2	2016	Domestic and imported
	Human Papillomavirus Quadrivalent (Types 6, 11, 16, 18) Vaccine, Recombinant	HPV-4	2017	Imported
	Human Papillomavirus 9-valent Vaccine, Recombinant	HPV-9	2018	Imported
Furunculosis	Furunculosis vaccine	Furunculosis	2004	Domestic
Tracheitis	Tracheitis vaccine	Tracheitis	2004	Domestic
Dysentery	Dysentery vaccine	Dysentery	2002	Domestic
Ebola	Ebola vaccine, adenovirus vector	Ebola	2017	Domestic

[#]If multiple manufacturers produce the same vaccine, we choose the earliest time to market.

MAH: marketing authorization holder.

Table S-4. Vaccine listed in the US. (As of April 22, 2022)

Preventable Disease	Name of vaccine	Acronyms	Yr. Licensed
Encephalitis	Tick-Borne Encephalitis Vaccine	JE	2009
Hepatitis	Hepatitis B Vaccine (Recombinant)	HepB	1986
	Hepatitis A Vaccine, Inactivated	HepA	1995
	Hepatitis A Inactivated and Hepatitis B (Recombinant) Vaccine	HepB-HepA	2001
Diphtheria, Tetanus, Pertussis	Diphtheria & Tetanus Toxoids & Acellular Pertussis Vaccine Adsorbed	DTaP	1997

Preventable Disease	Name of vaccine	Acronyms	Yr. Licensed
	Diphtheria & Tetanus Toxoids & Acellular Pertussis Vaccine Adsorbed, Hepatitis B (recombinant) and Inactivated Poliovirus Vaccine Combined	DTaP-HepB-IPV	2002
	Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed and Inactivated Poliovirus Vaccine	DTaP-IPV	2008
	Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed, Inactivated Poliovirus and Haemophilus b Conjugate (Tetanus Toxoid Conjugate) Vaccine	DTaP-IPV-Hib	2008
	Diphtheria & Tetanus Toxoids Adsorbed	DT	1997
	Diphtheria & Tetanus Toxoids Adsorbed adult	TD	1997
	Smallpox	Smallpox and Monkeypox Vaccine, Live, Non-Replicating	Smallpox
Anthrax	Anthrax Vaccine Adsorbed	Anthrax	1998
Varicella	Varicella Virus Vaccine Live	Varicella	1995
Zoster	Zoster Vaccine Recombinant, Adjuvanted	Zoster	2017
Typhoid fever	Typhoid Vaccine Live Oral Ty21a	Typhoid-L	1989
	Typhoid Vi Polysaccharide Vaccine	Typhoid-P	2000
Measles,Mumps,Rubella	Measles, Mumps, Rubella and Varicella Virus Vaccine Live	MMR-Varicella	2005
	Measles, Mumps, and Rubella Virus Vaccine, Live	MMR	1971
Rabies	Rabies Vaccine	Rabies	2000
Tuberculosis	BCG Live	BCG	1989
Cholera	Cholera Vaccine Live Oral	Cholera	2016
Yellow Fever	Yellow Fever Vaccine	YF	1999
Ebola Zaire	Ebola Zaire Vaccine, Live	Ebola	2019
Pneumonia and Meningitis	Haemophilus b Conjugate Vaccine (Meningococcal Protein Conjugate)	Hib	1989
Pandemic influenza	Influenza Virus Vaccine, H5N1	H5N1	2007
	Influenza A (H1N1) 2009 Monovalent Vaccine	H1N1	2009
Seasonal influenza	Influenza Virus Vaccine (Trivalent, Types A and B)	InfV-triv	1980
	Influenza Vaccine	InfV-quad	2012
Meningococcal meningitis	Meningococcal Group B Vaccine	MenB	2014

Preventable Disease	Name of vaccine	Acronyms	Yr. Licensed
	Meningococcal (Groups A, C, Y, W) Conjugate Vaccine	MenACYW	2020
	Meningococcal Polysaccharide Vaccine, Groups A, C, Y and W-135 Combined	MPSV-ACYW	1981
	Meningococcal (Groups A, C, Y, and W-135) Oligosaccharide Diphtheria CRM197 Conjugate Vaccine	MenACYW-D	2005
Human Papillomavirus	Human Papillomavirus 9-valent Vaccine, Recombinant	HPV-9	2014
	Human Papillomavirus Quadrivalent (Types 6, 11, 16, 18) Vaccine, Recombinant	HPV-4	2006
	Human Papillomavirus Bivalent (Types 16, 18) Vaccine, Recombinant	HPV-2	2009
Diarrhea	Rotavirus Vaccine, Live, Oral, Pentavalent	RV-5	2006
	Rotavirus Vaccine, Live, Oral	RV-1	2008
Dengue	Dengue Tetravalent Vaccine, Live	Dengue	2019
Polio	Poliovirus Vaccine Inactivated (Monkey Kidney Cell)	IPV	2000
Adenovirus	Adenovirus Type 4 and Type 7 Vaccine, Live, Oral	Adenovirus	NA
Pneumococcal Pneumonia	Pneumococcal Vaccine, Polyvalent	PPV-23	1983
	Pneumococcal 20-valent Conjugate Vaccine	PCV-20	2021
	Pneumococcal 15-valent Conjugate Vaccine	PCV-15	2021
	Pneumococcal 13-valent Conjugate Vaccine (Diphtheria CRM197 Protein)	PCV-13	2010

NA: not available.

Table S-5 Prices of vaccines for pediatric in China and the US. (Cost/ Dose, USD; 2021-2022)

Number	Vaccine	Category*	Price	
			China	The US
1	IPV	NIP	4.0	15.1
2	Men-AC	NIP	1.8	NA
3	HepA-L	NIP	4.5	NA
4	HepA-I	NIP	3.3	22.4
5	OPV	NIP	0.4	NA
6	DaTP	NIP	0.9	19.9
7	JE-L	NIP	1.5	NA
8	BCG	NIP	3.8	NA
9	MMR	NIP	3.8	87.3
10	HepB	NIP	1.2	13.6
11	HERS	NIP	2.3	NA
12	DT	NIP	0.4	17.4
13	Men-A	NIP	1.0	NA
14	DTaP-IPV-HI	non-NIP	92.2	65.8
15	Varicella	non-NIP	20.9	94.4
16	RV-1	non-NIP	26.5	102.4
17	RV-5	non-NIP	43.1	77.0
18	HPV-9	non-NIP	199.7	208.1
19	PCV13	non-NIP	107.4	158.2
20	PPV23	non-NIP	28.0	74.5
21	Zoster	non-NIP	245.8	98.9
22	InfV-quad	non-NIP	19.7	14.3
23	Dengue	non-NIP	NA	94.1
24	DTaP-IPV	non-NIP	NA	44.3
25	DTaP-Hep B-IPV	non-NIP	NA	62.5
26	DTaP-IP-Hib	non-NIP	NA	65.77
27	DTaP-IPV-Hib-HepB	non-NIP	NA	95.07
28	Hep A-Hep B	non-NIP	NA	67.68
29	Hib	non-NIP	NA	10.1
30	MenB	non-NIP	NA	125.8
31	MenACWY	non-NIP	NA	102.5
32	MMR-Varicella	non-NIP	NA	153.5

*defines as NIP (government-purchased) and non-NIP (paid for out-of-pocket) vaccines according to the classification of vaccines in China. NIP: National Immunization Program. NA: not available.