

**Table 1** Demographic characteristics of 903 subjects in Guangxi, China

Variables	Patients, No. (%) (n=903)
<b>Gender</b>	
Male	578(64.0)
Female	325(36.0)
<b>Age</b>	
18-40	252(27.9)
41-59	430(47.6)
≥60	221(24.5)
<b>Ethnicity</b>	
Han	564(62.5)
Zhuang	328(36.3)
Other Minorities	11(1.2)
<b>Occupations</b>	
Farmer	575(63.7)
Domestic Service	139(15.4)
Others/Uncertain	189(20.9)
<b>Marital status</b>	
Married	570(63.1)
Single, divorced or widowed	326(36.1)
Others/Uncertain	7(0.8)
<b>Highest level of education</b>	
Primary school or below	332(36.8)
Middle school	425(47.1)
High school or above	146(16.2)
<b>Body Mass Index (kg/m<sup>2</sup>)</b>	
18.5-24.0	609(67.4)
<18.5 or >24.0	294(32.6)
<b>The history of serious chronic illness</b>	
Yes	85(9.4)
No	818(90.6)
<b>Transmission route</b>	
Sexual transmission	862(95.5)
Injecting drug abuse	33(3.7)
Others/Uncertain	8(0.9)
<b>CD4<sup>+</sup>T cell counts (cells/µL)</b>	
<200	131(14.5)
200-500	418(46.3)
>500	334(37.0)
Not-detected	20(2.2)
<b>Infection time</b>	
<5	394(43.6)
5-10	357(39.5)

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>10	152(16.8)
<b>ART</b>	
Yes	833(92.2)
No	70(7.8)
<b>Adverse effects of ART</b>	
Yes	96(10.5)
No	737(89.5)

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**Table 2** Effects of CD4 cell count on the willingness of COVID-19 vaccine with HIV infection for 903 subjects in the survey

Variables	Patients, No. (n=903)	$\beta$	S.E.	OR	95%CI	P-Value
<b>CD4<sup>+</sup>T cells count (cells/<math>\mu</math>L)</b>						
<250	186	Ref				
250-349	155	.047	.254	1.048	0.637-1.723	.854
350-500	208	-.210	.229	.810	0.518-1.269	.358
>500	334	-.205	.209	.815	0.541-1.226	.325
Not detect	20	-.266	.517	.767	0.278-2.111	.607

**Table 3** Knowledge of the COVID-19 and its vaccine among HIV/AIDS patients

Variables	Patients, No. (%) (n=903)
<b>What are the main ways to learn about COVID-19?</b>	
Phone	618 (68.4)
TV	536 (59.4)
Radio	66 (7.3)
Newspaper	39 (4.3)
Chat	314 (34.8)
Community	358 (39.6)
Others/Unknown	46 (5.1)
<b>What are the available vaccines in China?</b>	
Inactivated vaccine	404 (44.7)
mRNA vaccine	44 (4.9)
Adenovirus vaccine	19 (2.1)
Recombinant protein vaccine	26 (2.9)
Unknown	410 (45.4)
<b>What do you think is the most appropriate age to receive the COVID-19 vaccine?</b>	
< 18	65 (7.2)
18-40	602 (66.7)
41-59	216 (23.9)
≥60	102 (11.3)
Unknown	167 (18.5)
<b>Which type of occupation is preferential for COVID-19 vaccination?</b>	
medical personnel	671 (74.3)
Border workers	523 (57.9)
Courier / delivery / supermarket staff	360 (39.9)
COVID-19 patients/close contacts	307 (34.0)
Migrant workers	140 (15.5)
Faculty and Students	222 (24.6)
Others/Unknown	76 (8.4)

**Table 4** Attitude towards COVID-19 vaccination for WTV group

Variables	WTV Group, No. (%) (n=658)
<b>Which COVID-19 vaccine would you like to choose?</b>	
Inactivated vaccine	455(69.1)
mRNA vaccine	11(1.7)
Adenovirus vaccine	19(2.9)
Recombinant protein vaccine	7(1.1)
Others	36(5.5)
Unknown	130(19.8)
<b>Why do you want to receive the COVID-19 vaccine</b>	
Fear of contracting COVID-19	500(76.0)
Relatives/friends are willing to accept vaccine	264(40.1)
Fear of infecting family members with COVID-19	227(34.4)
Vaccination can improve immunity	128(19.5)
Others	8(1.2)
<b>Would you still want to receive the COVID-19 vaccine if our country charged for it in the future?</b>	
Yes	457(69.5)
No	198(30.1)
Look at the prices	3(0.5)
<b>Do you still wear a mask after vaccination?</b>	
Yes	587(89.2)
No	29(4.4)
Depends on the situation	42(6.4)

WTV: willingness to vaccination

**Table 5** Attitude towards COVID-19 vaccination for non-WTV group

Variables	Non-WTV Group No. (%) (n=245)
<b>Why don't you want to receive the COVID-19 vaccine?</b>	
Have received pneumonia/influenza (non-COVID-19) vaccine	2(0.8)
Fear of vaccine side effects	134(54.7)
Concern about little effect on HIV infected patients with COVID-19 vaccination	69(28.2)
Worry that COVID-19 vaccines will affect ART efficacy	124(50.6)

I don't think I will get COVID-19	74(30.2)
Too expensive	11(4.5)
Others	45(18.4)

**Would you like to receive the COVID-19 vaccine if it was freely accessible in China?**

Yes	55(22.5)
No	165(67.3)
Unknown	25(10.2)

**Would you accept the COVID-19 vaccination if most people have already been vaccinated in China?**

Yes	68(27.8)
No	152(62.0)
Unknown	25(10.2)

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Non-WTV: unwillingness to vaccination

**Table 6** Univariate and multivariate analysis for the influencing factors on the willingness to vaccination for 903 subjects in the survey

Variables	WTV Group No. (%) (n=658)	Non-WTV Group No. (%) (n=245)	OR(95%CI)	P-Value	Adjusted OR(95%CI)	P-Value
<b>Ethnicity</b>						
Han	390 (59.3)	174 (71.0)	Ref		Ref	
Zhuang	259 (39.4)	69 (28.2)	1.675(1.216-2.306)	0.002	1.653(1.109-2.465)	0.014
Other Minorities	9 (1.4)	2 (0.8)	2.008(0.429-9.389)	0.376	4.196(0.798-22.073)	0.09
<b>Highest level of education</b>						
Primary school or below	207 (31.5)	125 (51.0)	Ref		Ref	
Middle school	328 (49.8)	97 (39.6)	2.042(1.487-2.804)	<0.001	1.747(1.170-2.608)	0.006
High school or above	123 (18.7)	23 (9.4)	3.229(1.964-5.311)	<0.001	2.492(1.326-4.682)	0.005
<b>Do you think COVID-19 vaccination is helpful to control the pandemic</b>						
Yes, large or very large	566 (86.0)	146 (59.6)	Ref		Ref	
May be helpful	19 (2.9)	28 (11.4)	0.175(0.095-0.322)	<0.001	0.437(0.209-0.914)	0.028
No, little or very little	5 (0.8)	4 (1.6)	0.322(0.086-1.216)	0.095	1.851(0.304-11.282)	0.504
Unknown	68 (10.3)	67 (27.3)	0.262(0.178-0.384)	<0.001	0.936(0.532-1.647)	0.818
<b>Do you think COVID-19 vaccination is safety?</b>						
Yes, large or very large	562 (85.4)	129 (52.7)	Ref		Ref	
No, little or very little	5 (0.8)	15 (6.1)	0.077(0.027-0.214)	<0.001	0.082(0.024-0.282)	<0.001
Unknown	91 (13.8)	101 (41.2)	0.207(0.147-0.291)	<0.001	0.381(0.233-0.624)	<0.001
<b>Which type of COVID-19 vaccine is better?</b>						
Domestic vaccine	492 (74.8)	110 (44.9)	Ref		Ref	

Foreign/Imported vaccine	21 (3.2)	11 (4.5)	0.427(0.200-0.911)	0.028	0.644(0.270-1.537)	0.322
No difference	34 (5.2)	17 (6.9)	0.447(0.241-0.829)	0.011	0.669(0.322-1.389)	0.281
Unknown	111 (16.9)	107 (43.7)	0.232(0.166-0.325)	<0.001	0.487(0.305-0.776)	0.002
<b>Is COVID-19 vaccination effective for HIV/AIDS patients?</b>						
Yes	181 (27.5)	40 (16.3)	Ref		Ref	
No	6 (0.9)	16 (6.5)	0.083(0.031-0.225)	<0.001	0.093(0.030-0.287)	<0.001
No difference	78 (11.9)	21 (8.6)	0.821(0.454-1.482)	0.513	0.851(0.427-1.697)	0.647
Unknown	393 (59.7)	168 (68.6)	0.517(0.351-0.761)	0.001	0.785(0.486-1.268)	0.322