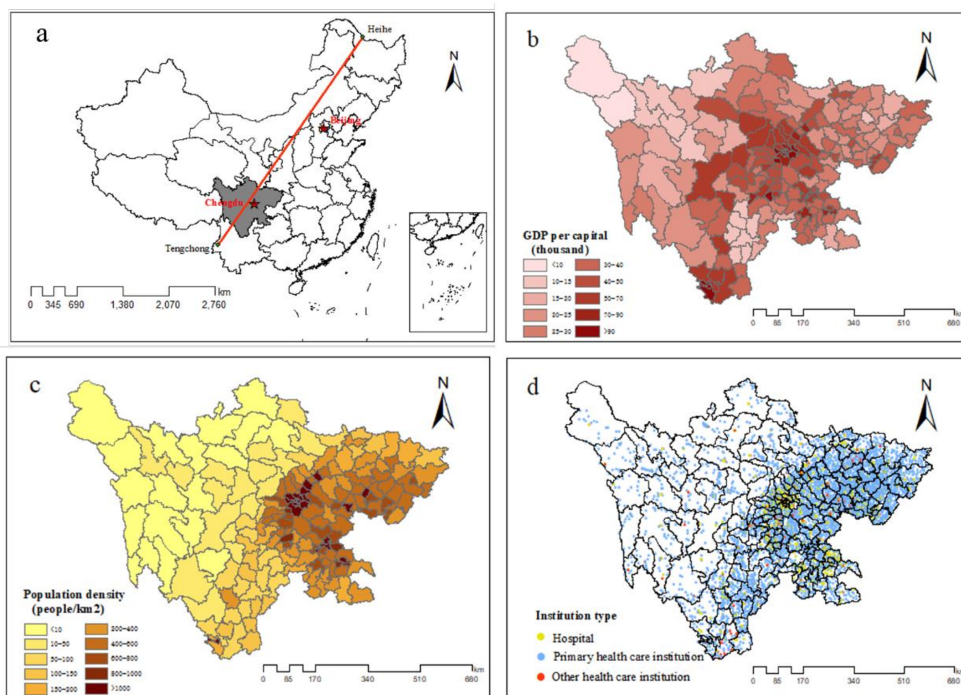


## APPENDIX



**Figure A1.** Characters of Sichuan province.

(a) Geographic position of Sichuan; (b) Per capital GDP among counties in 2017; (c) Population density among counties in 2017; (d) Distribution of health care institutions in 2018.

**Table A1.** Ghost table for discharge data**Home page of inpatient record**

Year \_\_\_\_\_

Name of Hospital \_\_\_\_\_ (Organization code: □□□□□□□□ - □)

Number of Health Card:

Hospitalization count:

Patient's identification number:

Name _____ Gender <input type="checkbox"/> 1.M <input type="checkbox"/> 2.F Birthday _____ Age _____			
Nationality _____		Neonatal birth weight _____ g Neonatal admission weight _____ g	
Birthplace _____		Native place _____ Ethnic group _____	
ID number _____		Occupation _____ Marital status _____	
Present address _____		Tel _____ Post code _____	
Registered address _____		Post code _____	
Work address _____		Office Tel _____ Post code _____	
Contact person _____		Relationship _____ Address _____ Tel _____	
Admission type <input type="checkbox"/> 1. emergency <input type="checkbox"/> 2. outpatient clinic			
3. Referred from other institutions and its name is _____ 9. others			
Admission time _____ year _____ month _____ day _____ hour _____ minute			
Hospital department _____		Inpatient ward number _____ The department the patient transferred to is _____	
Discharge time _____ year _____ month _____ day _____ hour _____ minute			
Diagnosis in outpatient (emergency) department _____		ICD-10 _____	
Health status at admission <input type="checkbox"/> 1. critically ill <input type="checkbox"/> 2. acute <input type="checkbox"/> 3. ordinary			
Diagnosis at admission _____		ICD-10 _____ Date of making the principal diagnosis _____	
Whether the patient was critically ill during hospitalization <input type="checkbox"/> 1.yes <input type="checkbox"/> 2.no			
Diagnosis on Discharge	ICD-10	Disease status at admission (DSA)	Disease status on discharge (DSD)
Principal diagnosis :			
Other diagnosis :			
DSA: 1.yes 2.clinically undetermined 3.unclear 4.no		DSD: 1.cured 2.improved 3.not cured 4.deceased 5.others	
Cause of injury/poisoning _____		ICD-10 _____	
pathological diagnosis: _____		ICD-10 _____ Pathological examination number _____	
TNM stage: <input type="checkbox"/> 1.I <input type="checkbox"/> 2.II <input type="checkbox"/> 3.III <input type="checkbox"/> 4.IV			
drug allergy <input type="checkbox"/> 1.no 2.yes, and the allergic drug is: _____ Autopsy of deceased patient <input type="checkbox"/> 1.yes <input type="checkbox"/> 2.no			
Blood type <input type="checkbox"/> 1.A <input type="checkbox"/> 2.B <input type="checkbox"/> 3.O <input type="checkbox"/> 4.AB <input type="checkbox"/> 5.unclear <input type="checkbox"/> 6. unchecked			
Rh <input type="checkbox"/> 1. negative <input type="checkbox"/> 2. positive <input type="checkbox"/> 3. unclear <input type="checkbox"/> 4. unchecked			
Follow up clinic <input type="checkbox"/> 1.yes <input type="checkbox"/> 2.no		Follow-up period _____	

Section director's name _____ Chief doctor _____ Attending doctor _____ Visiting staff _____ Resident doctor _____ Primary nurse _____ Refresher doctor _____ Intern _____ coder _____									
The quality of medical record <input type="checkbox"/> 1. high 2. medium 3. low      Quality control doctors _____ Quality control nurses _____      Date of making quality control _____									
Prophylactic use of antimicrobial drugs for primary surgical incision <input type="checkbox"/> 1. yes 2. no Duration(hours): _____ Drug combination <input type="checkbox"/> 1. yes 2. no									
Surgery code	time	level	Name of the operation	Operating Doctor			Wound healing grade	anesthesia	Anesthesiologists
				Operator	Assistant I	Assistant II			
							/		
							/		
							/		
							/		
							/		
							/		
							/		
							/		
Clinical pathway management <input type="checkbox"/> 1. yes 2. no    Complete clinical pathway <input type="checkbox"/> 1. yes 2. no, and the reason is _____ Variation <input type="checkbox"/> 1. yes    2. no; the reason is: _____									
Discharge type <input type="checkbox"/> 1. Discharge on doctor's orders 2. Be referred to a superior hospital, and its name is _____ 3. Be referred to primary health institution(THC/CHC), and its name is _____ 4. Leave hospital without medical advice    5. dead    9. others									
Does she/he has the plan to be readmitted within 31 days <input type="checkbox"/> 1. no    2. yes, and the reason is _____									
How long did the craniocerebral injury patient remain in a coma: Before admission, she/he was in coma for _____ minutes After admission, she/he was in coma for _____ minutes									
Whether the patient was readmitted for the same disease <input type="checkbox"/> 1. yes    2. no How long has it been since the last discharge? _____ days									
<b>Inpatient expense (yuan):</b> Total expense _____ (out-of-pocket payment: _____ others: _____) <b>1. Comprehensive medical services:</b> (1) General medical service expense: _____ (2) General treatment expense: _____ (3) Nursing expense: _____ (4) Other expense: _____ <b>2. Diagnosis:</b> (5) Pathological diagnosis: _____ (6) laboratory diagnosis: _____ (7) Imaging diagnosis: _____ (8) Clinical diagnosis: _____ <b>3. Treatment:</b> (9) Non-surgical treatment: _____ (Clinical physiotherapy: _____) (10) Surgical treatment expense: _____ (Anesthetic expense: _____ Operation: _____) <b>4. Recovery:</b> (11) Recovery expense: _____ <b>5. Traditional Chinese treatment:</b> (12) Traditional Chinese treatment expense: _____ <b>6. Western medicine:</b> (13) Western medicine expense: _____ (Antimicrobial expense: _____) <b>7. Traditional Chinese medicine (TCM):</b> (14) Proprietary Chinese medicine expense _____ (15) Chinese herbal medicine expense: _____ <b>8. Blood and blood products:</b> (16) Blood expense: _____ (17) Albumin products: _____ (18) Globulin products: _____ (19) Hemagglutinin sub products: _____ (20) Subclass of cytokines: _____ <b>9. Consumable materials:</b> (21) Disposable medical materials for inspection: _____ (22) Disposable medical materials for treatment: _____ (23) Disposable medical materials for surgery: _____ <b>10. Others:</b> (24) Other expense: _____									

**Table A2.** Full results of two-level hierarchical models

<i>Explaining variables</i>	<i>Dependent variable</i>			
	log(LOS)	log(expense)	log(LOS)	log(expense)
	(1)	(2)	(3)	(4)
Wounds	0.390*** (0.006)	0.472*** (0.006)		
<i>Wounds type (vs patients without complex wounds)</i>				
Pressure ulcers			0.233*** (0.009)	0.484*** (0.009)
Diabetic ulcers			0.183*** (0.014)	0.194*** (0.013)
Venous leg ulcers			0.268*** (0.044)	0.137** (0.042)
Non-healing surgical wounds			0.939*** (0.013)	0.807*** (0.013)
Other ulcers			0.380*** (0.020)	0.333*** (0.019)
Age (year)	0.003*** (0.00002)	0.008*** (0.00002)	0.003*** (0.00002)	0.008*** (0.00002)
<i>Gender (vs male)</i>				
Female	-0.061*** (0.001)	-0.056*** (0.001)	-0.061*** (0.001)	-0.056*** (0.001)
Missing	-0.055*** (0.015)	-0.061*** (0.014)	-0.055*** (0.015)	-0.061*** (0.014)
Charlson Index	0.075*** (0.0003)	0.116*** (0.0003)	0.075*** (0.0003)	0.116*** (0.0003)
<i>Social insurance program (vs UEBMI) <sup>a</sup></i>				
URBMI	-0.059*** (0.001)	-0.036*** (0.001)	-0.059*** (0.001)	-0.036*** (0.001)
NRCMS	-0.078*** (0.002)	-0.036*** (0.002)	-0.078*** (0.002)	-0.036*** (0.002)
Others	-0.127*** (0.001)	-0.078*** (0.001)	-0.127*** (0.001)	-0.078*** (0.001)
<i>Occupation (vs Civil Servants &amp; active army) <sup>b</sup></i>				
Professionals & technical	-0.055*** (0.006)	-0.031*** (0.006)	-0.055*** (0.006)	-0.031*** (0.006)

Office clerk & manager	-0.057*** (0.005)	-0.024*** (0.005)	-0.057*** (0.005)	-0.024*** (0.005)
Worker	0.013* (0.005)	0.050*** (0.005)	0.013* (0.005)	0.050*** (0.005)
Agricultural labor	-0.006 (0.005)	0.050*** (0.005)	-0.006 (0.005)	0.050*** (0.005)
Student	-0.051*** (0.005)	-0.100*** (0.005)	-0.050*** (0.005)	-0.100*** (0.005)
Freelancer	-0.057*** (0.005)	-0.001 (0.005)	-0.057*** (0.005)	-0.001 (0.005)
Self-employed	-0.051*** (0.007)	-0.017* (0.007)	-0.051*** (0.007)	-0.017* (0.007)
Unemployed	-0.048*** (0.005)	-0.014** (0.005)	-0.048*** (0.005)	-0.014** (0.005)
Retired	0.062*** (0.005)	0.030*** (0.005)	0.062*** (0.005)	0.030*** (0.005)
Others	0.004 (0.005)	0.021*** (0.005)	0.005 (0.005)	0.021*** (0.005)
<i>Whether or not surgery was required (vs No)</i>				
Surgery (Yes)	0.127*** (0.001)	0.714*** (0.001)	0.126*** (0.001)	0.714*** (0.001)
<i>Health care institution levels (vs primary hospital)</i>				
Secondary hospital	0.067 (0.035)	0.443*** (0.043)	0.067 (0.035)	0.443*** (0.043)
Tertiary hospital	-0.190*** (0.049)	0.681*** (0.061)	-0.190*** (0.049)	0.681*** (0.061)
Unassigned hospital	0.055 (0.028)	0.168*** (0.035)	0.055 (0.028)	0.168*** (0.035)
Primary healthcare sector	-0.456*** (0.036)	-0.825*** (0.045)	-0.456*** (0.036)	-0.825*** (0.045)
Other providers	-0.548*** (0.048)	0.014 (0.059)	-0.547*** (0.048)	0.014 (0.059)
<i>Ownership type (vs private)</i>				
Public	0.222*** (0.027)	-0.041 (0.034)	0.222*** (0.027)	-0.041 (0.034)

Missing	0.171*	-0.325***	0.172*	-0.325***
	(0.067)	(0.083)	(0.067)	(0.083)
Constant	1.848***	7.337***	1.848***	7.337***
	(0.025)	(0.031)	(0.025)	(0.031)
Observations	4,021,677	4,021,677	4,021,677	4,021,677

Note: Cells contain coefficient (and standard error). \*p <0.05, \*\*p<0.01, \*\*\*p<0.001.

<sup>a</sup>. UEBMI (Urban Employee Basic Medical Insurance); URBMI (Urban Resident Basic Medical Insurance); NRCMS (New Rural Cooperative System).

<sup>b</sup>. Occupations with too small a sample were merged with similar occupations.

**Table A3.** Inpatient wounds point prevalence estimates by wound types and demographic characteristics

Variable	Pressure ulcers		Diabetic ulcers		Venous leg ulcers		Non-healing surgical wounds		Other ulcers	
	frequency	point prevalence (95% CI)	frequency	point prevalence (95% CI)	frequency	point prevalence (95% CI)	frequency	point prevalence (95% CI)	frequency	point prevalence (95% CI)
<i>Age group</i>										
0-9	4	0.009 (0.004, 0.024)	0	0.000 (0.000, 0.009)	0	0.000 (0.000, 0.009)	73	0.172 (0.137, 0.217)	18	0.042 (0.027, 0.067)
10-19	17	0.173 (0.108, 0.277)	0	0.000 (0.000, 0.039)	0	0.000 (0.000, 0.039)	125	1.272 (1.068, 1.515)	29	0.295 (0.205, 0.424)
20-29	48	0.164 (0.123, 0.217)	7	0.024 (0.012, 0.049)	2	0.007 (0.002, 0.025)	344	1.172 (1.055, 1.303)	61	0.208 (0.162, 0.267)
30-39	104	0.369 (0.305, 0.447)	43	0.153 (0.113, 0.206)	17	0.060 (0.038, 0.097)	331	1.175 (1.055, 1.308)	89	0.316 (0.257, 0.389)
40-49	347	0.722 (0.650, 0.802)	221	0.460 (0.403, 0.525)	81	0.169 (0.136, 0.209)	695	1.446 (1.342, 1.557)	225	0.468 (0.411, 0.533)
50-59	498	0.871 (0.798, 0.951)	611	1.068 (0.987, 1.157)	223	0.390 (0.342, 0.445)	831	1.453 (1.358, 1.555)	326	0.570 (0.511, 0.635)
60-69	983	1.176 (1.105, 1.252)	891	1.066 (0.998, 1.138)	415	0.497 (0.451, 0.547)	997	1.193 (1.121, 1.269)	477	0.571 (0.522, 0.624)
70-79	1,643	2.296 (2.188, 2.409)	939	1.312 (1.231, 1.399)	287	0.401 (0.357, 0.45)	542	0.757 (0.696, 0.824)	474	0.662 (0.605, 0.725)
80-89	1,822	6.085 (5.813, 6.370)	501	1.673 (1.533, 1.826)	104	0.347 (0.287, 0.421)	136	0.454 (0.384, 0.537)	262	0.875 (0.775, 0.987)

90+	449	13.480 (12.296, 14.776)	56	1.681 (1.295, 2.182)	10	0.300 (0.163, 0.553)	16	0.480 (0.296, 0.780)	52	1.561 (1.191, 2.046)
<i>Gender</i>										
Male	3,466	1.809 (1.749, 1.870)	1,848	0.964 (0.921, 1.009)	810	0.423 (0.395, 0.453)	2,263	1.181 (1.133, 1.230)	1,289	0.673 (0.637, 0.710)
Female	2,449	1.158 (1.113, 1.205)	1,421	0.672 (0.638, 0.708)	326	0.154 (0.138, 0.172)	1,826	0.864 (0.825, 0.904)	724	0.342 (0.318, 0.368)
Missing	0	0.000 (0.000, 1.265)	0	0.000 (0.000, 1.265)	3	0.989 (0.336, 2.904)	1	0.330 (0.017, 1.865)	0	0.000 (0.000, 1.265)
<i>Ethnic group</i>										
Minority	106	0.512 (0.424, 0.619)	42	0.203 (0.150, 0.274)	17	0.082 (0.051, 0.132)	244	1.179 (1.040, 1.337)	62	0.300 (0.234, 0.384)
Han	5,809	1.518 (1.479, 1.557)	3,227	0.843 (0.815, 0.873)	1,112	0.293 (0.277, 0.311)	3,846	1.005 (0.974, 1.037)	1,951	0.510 (0.488, 0.533)
<i>Occupation</i>										
Civil Servants & active army	31	1.524 (1.074, 2.162)	11	0.541 (0.302, 0.968)	5	0.246 (0.105, 0.575)	29	1.426 (0.993, 2.047)	12	0.590 (0.338, 1.031)
Professionals & technical	30	0.904 (0.633, 1.290)	15	0.452 (0.274, 0.745)	4	0.121 (0.047, 0.310)	39	1.175 (0.86, 1.606)	8	0.241 (0.122, 0.476)
Office clerk & manager	78	0.755 (0.605, 0.942)	55	0.533 (0.409, 0.693)	18	0.174 (0.11, 0.275)	152	1.472 (1.256, 1.725)	44	0.426 (0.317, 0.572)
Worker	103	1.253 (1.033, 1.519)	60	0.730 (0.567, 0.939)	19	0.231 (0.148, 0.361)	115	1.399 (1.166, 1.679)	59	0.718 (0.557, 0.926)
Agricultural labor	1,999	1.100 (1.053, 1.150)	1,226	0.675 (0.638, 0.714)	608	0.335 (0.309, 0.362)	1,549	0.853 (0.811, 0.896)	902	0.497 (0.465, 0.53)



Student	19	0.183 (0.117, 0.286)	4	0.039 (0.015, 0.099)	2	0.019 (0.005, 0.07)	87	0.839 (0.681, 1.035)	21	0.203 (0.133, 0.31)
Freelancer	124	1.259 (1.056, 1.501)	72	0.731 (0.581, 0.921)	18	0.183 (0.116, 0.289)	136	1.381 (1.168, 1.633)	77	0.782 (0.626, 0.977)
Self-employed	13	0.683 (0.399, 1.169)	15	0.789 (0.478, 1.301)	6	0.315 (0.145, 0.688)	18	0.946 (0.599, 1.495)	11	0.578 (0.323, 1.035)
Unemployed	205	1.640 (1.431, 1.881)	85	0.680 (0.550, 0.841)	30	0.240 (0.168, 0.343)	113	0.904 (0.752, 1.087)	58	0.464 (0.359, 0.600)
Retired	1,113	5.894 (5.559, 6.250)	484	2.563 (2.345, 2.802)	36	0.191 (0.138, 0.264)	186	0.985 (0.853, 1.137)	115	0.609 (0.507, 0.731)
Others	2,200	1.524 (1.462, 1.589)	1,242	0.861 (0.814, 0.910)	393	0.272 (0.247, 0.301)	1,666	1.154 (1.100, 1.211)	706	0.489 (0.454, 0.527)