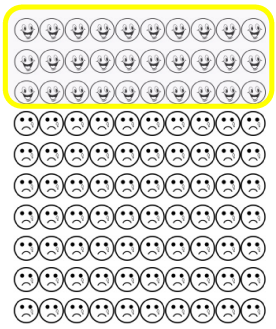
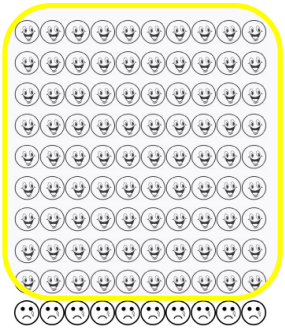
Appendix 1: Explanations to attributes and levels

Investigators were required to convey the following definitions to patients:

- 'Expected gains in health outcomes from the treatment' suggests that the ideal treatment goals set out in the evidence-based guidelines for individual patients can be achieved; 'Not as expected' implies that there can be certain treatment effects, however, the ideal treatment targets cannot be fully achieved. This attribute is the qualitative aspect of effectiveness.
- Likelihood of effective treatment: 'effective treatment' equals the attribute 'gains in health outcomes from the treatment' in choice sets: a new medical technology that can reach its expected gains in health outcomes is effective. The attribute 'likelihood of effective treatment' is the quantitative aspect of effectiveness.
- For the severity of target disease, 'not severe' means that the target disease of the new technology is non-fatal and has no impact on patients' quality of life; 'severe' suggests that the target disease of the new technology is non-fatal, however, patients' quality of life has been significantly reduced; 'fatal' means that the target disease of the new technology is fatal and patients are likely to die from the disease.
- For incidence of serious adverse events, 'often' is equivalent to or slightly higher than 10%; 'occasionally' equals 3%.
- 'Serious adverse events' means life-threatening adverse events caused by the new technology, such as severe hypoglycemia, severe hypersensitivity reaction, kidney or liver damage, etc.
- Alternative technologies already reimbursed have similar effectiveness and safety to the new technology (Level: Yes); no alternatives already reimbursed have similar effectiveness and safety to the new technology (Level: No).
- The cost of the technology is the out-of-pocket costs if not reimbursed. The hypothesis is that technology has never been reimbursed unless you make a choice.

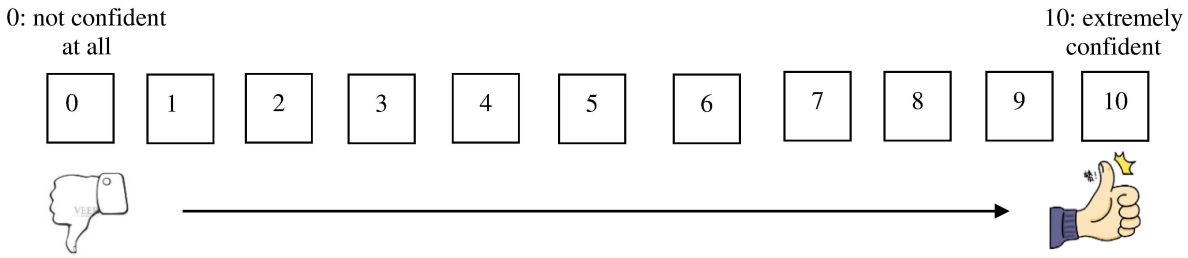
Appendix 2: Examples of DCE choice sets

Medical technologies A and B are used to treat chronic diseases and currently not been covered by the social insurance reimbursement scheme. If you are forced to make a choice, which technology should be reimbursed by social insurance? There are no right or wrong answers; please make a choice based on your own experience.

Attributes	New technology A	New technology B
Expected gains in health outcomes from the treatment	**As expected**	**Not as expected**
Likelihood of effective treatment	 **30%**	 **90%**
Severity of target disease	**Severe, non-fatal**	**Not severe**
Incidence of serious adverse events (life-threatening)	**Never or rarely**	**Often**
Alternative technologies currently covered by insurance	**Yes**	**No**
Out-of-pocket cost for new technology (if not reimbursed)	**1500 CNY per month**	**3500 CNY per month**
Which one should be covered by health insurance? Your choice	☐	☐

Appendix 3: Evaluation of confidence

The following statements reflect how confident you feel when completing the choice sets. Please select your confident level from 0 to 10 and give a tick ' √ ' in the score to represent your selection:



Appendix 4: Number of participants in the sampled hospitals

Supplemental Table 1. Number of participants in the sampled hospitals

Name of hospital	City	Number of patients
Taizhou People's Hospital	Taizhou	60
Jiangyin People's Hospital	Wuxi	40
First People's Hospital of Wujiang District	Suzhou	60
Nantong First People's Hospital	Nantong	23
Nantong Third People's Hospital	Nantong	100
Affiliated Hospital of Nantong University	Nantong	125

Appendix 5: Distribution of patients by type of disease and type of insurance

Supplemental Table 2. Types of insurance for patients with hypertension and diabetes

Disease	URRBMI	UEBMI
Hypertension	130	131
Diabetes	49	40
Total	179	171

Urban and Rural Residents Basic Medical Insurance (URRBMI); Urban Employees Basic Medical Insurance (UEBMI)

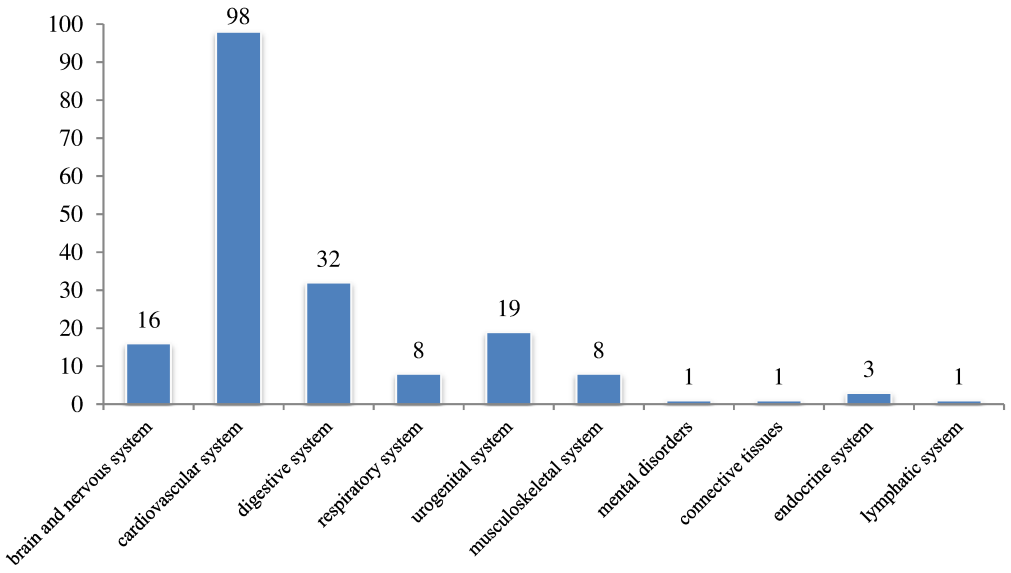
χ^2 =0.732 P= 0.392

Supplemental Table 3. Types of benefits for UEBMI patients with hypertension and diabetes

Disease	UEBMI with extra benefits	UEBMI without extra benefits
Hypertension	27	104
Diabetes	11	29
Total	38	133

χ^2 =0.842 P= 0.359

Appendix 6: Types of chronic commodities for the included patients



Supplemental Figure 1. Number of patients with chronic commodities

Appendix 7: Subgroup analysis by type of disease

Supplemental Table 4. Subgroup analysis by type of disease

Attributes	Hypertension		Diabetes	
	Mean (SE)	SD (SE)	Mean (SE)	SD (SE)
Expected gains in health outcomes from the treatment				
Not as expected (reference)				
As expected	0.716**(0.158)	0.443(0.496)	0.965**(0.259)	0.125(0.497)
Likelihood of effective treatment (per 10% increase)	0.519**(0.064)	0.375**(0.086)	0.420**(0.093)	0.401**(0.119)
Severity of target disease				
Not severe (reference)				
Severe	0.328*(0.162)	0.056(0.495)	0.100(0.273)	0.441(0.834)
Fatal	0.215(0.196)	1.189**(0.276)	0.304(0.311)	1.146**(0.395)
Incidence of serious adverse events				
Often (reference)				
Occasionally	0.767**(0.164)	0.014*(0.381)	0.553*(0.266)	0.337(0.548)
Never or rarely	0.995**(0.195)	1.126(0.271)	0.938**(0.349)	0.989*(0.459)
Alternative technologies currently covered by insurance				
Yes (reference)				
No	0.152(0.158)	0.978**(0.315)	0.089(0.248)	0.019(0.383)
Out-of-pocket costs (thousand CNY per month increase)	-0.178*(0.084)	1.024**(0.128)	-0.395**(0.126)	0.774**(0.190)
Log likelihood	-929.220		-311.029	
Participants	261		89	
Observations	2484		2412	

*P<0.05; **P<0.01; SD: Standard Deviation estimates reflect preference heterogeneity in the participants; SE: Standard Error

Patients who had both hypertension and diabetes were excluded to ensure the homogeneity.

Appendix 8: Subgroup analysis by type of insurance

Supplemental Table 5. Subgroup analysis by type of insurance

Attributes	(1) URRBMI patients		(2) UEBMI patients		(3) UEBMI patients without extra insurance benefits[#]	
	Mean (SE)	SD (SE)	Mean (SE)	SD (SE)	Mean (SE)	SD (SE)
Expected gains in health outcomes from the treatment						
Not as expected (reference)						
As expected	0.977**(0.204)	0.811*(0.325)	0.732**(0.166)	0.320(0.641)	0.652**(0.193)	0.609(0.420)
Likelihood of effective treatment (per 10% increase)	0.512**(0.069)	0.384**(0.075)	0.444**(0.066)	0.383**(0.082)	0.450**(0.074)	0.271**(0.085)
Severity of target disease						
Not severe (reference)						
Severe	0.519**(0.189)	0.247(0.887)	0.062(0.171)	0.138(0.609)	-0.09(0.194)	0.193(0.615)
Fatal	0.761**(0.230)	1.112**(0.316)	-0.217(0.211)	1.321**(0.289)	-0.385(0.242)	1.387**(0.333)
Incidence of serious adverse events						
Often (reference)						
Occasionally	0.704**(0.181)	0.088(0.389)	0.462**(0.165)	0.501(0.401)	0.526**(0.196)	0.707(0.381)
Never or rarely	0.928**(0.214)	1.013**(0.301)	0.876**(0.206)	0.881**(0.317)	0.792**(0.232)	0.858*(0.361)
Alternative technologies currently covered by insurance						
Yes (reference)						
No	0.142(0.161)	0.242(0.516)	-0.003(0.148)	0.556(0.380)	-0.143(0.158)	0.106(0.679)
Out-of-pocket costs (thousand CNY per month increase)	-0.511**(0.112)	1.041**(0.152)	-0.071(0.078)	0.818**(0.125)	-0.211*(0.090)	0.790**(0.146)
Log likelihood	-706.268		-707.710		-562.183	
Participants	207		201		158	
Observations	2484		2412		1896	

*P<0.05; **P<0.01; SD: Standard Deviation estimates reflect preference heterogeneity in the participants; SE: Standard Error;

[#]This subgroup did not include those UEBMI patients who enjoyed extra health insurance benefits.

Appendix 9: Subgroup analysis by health-related quality of life

Supplemental Table 6. Subgroup analysis by health-related quality of life

Attributes	EQ-5D-5L index value ≤0.8		EQ-5D-5L index value >0.8	
	Mean (SE)	SD (SE)	Mean (SE)	SD (SE)
Expected gains in health outcomes from the treatment				
Not as expected (reference)				
As expected	0.554*(0.228)	0.971*(0.423)	0.953**(0.165)	0.466(0.493)
Likelihood of effective treatment (per 10% increase)	0.606**(0.093)	0.450**(0.098)	0.405**(0.054)	0.320**(0.074)
Severity of target disease				
Not severe (reference)				
Severe	0.874**(0.240)	0.043(0.408)	0.106(0.156)	0.349(0.533)
Fatal	0.724**(0.254)	0.773*(0.347)	-0.064(0.195)	1.499**(0.281)
Incidence of serious adverse events				
Often (reference)				
Occasionally	0.131(0.202)	0.007*(0.461)	0.815**(0.166)	0.431(0.357)
Never or rarely	0.516*(0.236)	0.453(0.519)	1.120**(0.200)	1.103**(0.275)
Alternative technologies currently covered by insurance				
Yes (reference)				
No	0.007(0.179)	0.142(0.466)	0.093(0.140)	0.560(0.458)
Out-of-pocket costs (thousand CNY per month increase)	-0.233*(0.109)	0.909**(0.157)	-0.283**(0.083)	0.979**(0.135)
Log likelihood	-438.402		-954.540	
Participants	127		281	
Observations	1524		3372	

*P<0.05; **P<0.01; SD: Standard Deviation estimates reflect preference heterogeneity in the participants; SE: Standard Error

Appendix 10: Patients' health-related quality of life by type of insurance

Supplemental Table 7. Patients' health-related quality of life by type of insurance

Type of insurance	EQ-5D-5L index value ≤0.8	EQ-5D-5L index value >0.8
URRBMI	90	117
UEBMI	37	164
Total	127	281

χ^2 =29.898 P=0.000

Appendix 11: Subgroup analysis by gender

Supplemental Table 8. Subgroup analysis by gender

Attributes	Male		Female	
	Mean (SE)	SD (SE)	Mean (SE)	SD (SE)
Expected gains in health outcomes from the treatment				
Not as expected (reference)				
As expected	0.805**(0.174)	0.754*(0.357)	0.921**(0.200)	0.193(0.512)
Likelihood of effective treatment (per 10% increase)	0.476**(0.065)	0.409**(0.077)	0.456**(0.069)	0.362**(0.089)
Severity of target disease				
Not severe (reference)				
Severe	0.303(0.177)	0.541(0.425)	0.346(0.191)	0.333(0.435)
Fatal	0.249(0.199)	1.077**(0.282)	0.182(0.241)	1.582**(0.319)
Incidence of serious adverse events				
Often (reference)				
Occasionally	0.680**(0.167)	0.471(0.371)	0.528**(0.187)	0.007(0.417)
Never or rarely	0.953**(0.204)	0.768*(0.338)	0.897**(0.232)	1.146**(0.306)
Alternative technologies currently covered by insurance				
Yes (reference)				
No	0.127(0.144)	0.288(0.650)	0.093(0.168)	0.202(0.643)
Out-of-pocket costs (thousand CNY per month increase)	-0.246**(0.084)	0.893**(0.131)	-0.281**(0.098)	0.979**(0.153)
Log likelihood	-780.85		-667.657	
Participants	220		188	
Observations	2640		2256	

*P<0.05; **P<0.01; SD: Standard Deviation estimates reflect preference heterogeneity in the participants; SE: Standard Error