

Appendix 1. Search terms for systematic review

(1) Migrant: migrant* OR migration OR (floating population) OR (peasant worker)

(2) NCD risk factors and outcomes:

(risk factor*) OR smok* OR tobacco OR cigarette OR alcohol OR drink* OR diet OR nutrition OR energy intake OR vegetable OR fruit OR protein OR fat OR fish OR meat OR sodium OR salt OR activitiv* OR inactiv* OR exercise OR sedentary OR overweight OR obesity OR BMI OR (waist circumference) OR (blood pressure) OR hypertensi*OR (blood glucose) OR (blood sugar) OR diabetes OR (blood lipids) OR (air pollution) OR (air quality) OR (disease management) OR diagnose OR diagnosis OR treatment OR control

(3) China: China OR Chinese OR (Hong Kong) OR Taiwan OR Macau

Appendix 2. Search strategy for systematic review

Database	Search term	Date	Total Number
Medline	limit ((migrant* OR migration OR floating population OR peasant worker) AND (risk factor* OR smok* OR tobacco* OR cigarette* OR alcohol* OR drink* OR diet OR nutrition OR energy intake OR vegetable OR fruit OR protein OR fat OR fish OR meat OR sodium OR salt OR activitiv* OR inactiv* OR exercise OR sedentary OR overweight OR obesity OR BMI OR (waist circumference) OR (blood pressure) OR hypertensi* OR (blood glucose) OR (blood sugar) OR diabetes OR (blood lipids) OR (air pollution) OR (air quality) OR (disease management) OR diagnose OR diagnosis OR treatment OR control) AND (China* OR Chinese* OR Hong Kong* OR Macau* OR Taiwan*)) to (english language and yr="2000 -Current")	03/04/20 0	3267
Scopus	TITLE-ABS-KEY (migrant* OR migration* OR "floating population*" OR "peasant worker*") AND TITLE-ABS-KEY ("risk factor*" OR smok* OR tobacco OR cigarette OR	04/04/20 0	6865

	<p>alcohol OR drink* OR diet OR nutrition OR "energy intake" OR vegetable OR fruit OR protein OR fat OR fish OR meat OR sodium OR salt OR activitiv* OR inactiv* OR exercise OR sedentary OR overweight OR obesity OR bmi OR "waist circumference" OR "blood pressure" OR hypertensi* OR "blood glucose" OR "blood sugar" OR diabetes OR "blood lipids" OR "air pollution" OR "air quality" OR "disease management" OR diagnose OR diagnosis OR treatment OR control) AND TITLE-ABS-KEY (china* OR chinese* OR "Hong Kong*" OR taiwan* OR macau*) AND PUBYEAR > 1999 AND (LIMIT-TO (SRCTYPE , "j")) AND (LIMIT-TO (LANGUAGE , "English"))</p>		
<p>JSTOR (The length of search term is limited)</p>	<p>((migrant OR migration OR "floating population") AND (smoke OR alcohol OR nutrition OR inactive OR hypertension OR diabetes OR overweight OR disease management)) AND (China OR Chinese OR "Hong Kong" OR Macau OR Taiwan)) AND la:(eng OR en) Content Type: Journal Articles Publication Date: From 2000 To 31/03/2019</p>	<p>15/04/2 0</p>	<p>18,972</p>
<p>WHO Library Database</p>	<p>'kw,wrld: migrant* OR migration* OR "floating population*" OR "peasant worker*" and kw,wrld: "risk factor*" OR smok* OR tobacco* OR cigarette* OR alcohol* OR drink* OR diet* OR nutrition* OR "energy intake*" OR protein* OR fat* OR fruit* OR vegetable* OR fish* OR meat* OR sodium* OR salt* OR inactive* OR sedentary* OR exercise* OR activit* OR hypertensi* OR "blood pressure*" OR "blood sugar*" OR diabet* OR "blood lipid*" * OR overweight* OR "air pollution*" OR "air quality*" OR "disease management*" OR</p>	<p>05/04/2 0</p>	<p>514</p>

	<p>diagnose* OR diagnosis* OR treatment* OR control* and kw,wrld: china* OR chinese* OR "Hong Kong*" OR taiwan* OR Macau*' with limit(s): 'ln,rtrn:eng yr,st-numeric=2000- itype:PERIODICAL' Date Range: 2000 - 2020</p>		
World Bank E- Library	<p>(migrant* OR migration* OR "floating population*" OR "peasant worker*") AND ("risk factor*" OR smok* OR tobacco* OR cigarette* OR alcohol * OR drink* OR diet* OR nutrition* OR "energy intake*" OR protein* OR fat* OR fruit* OR vegetable* OR fish* OR meat* OR sodium* OR salt* OR inactive* OR sedentary* OR exercise* OR activit* OR hypertension* OR hypertensiv e* OR "blood pressure*" OR "blood sugar*" OR diabet* OR "blood lipids" OR overweight* OR "air pollution*" OR "air quality*" OR "disease management*" OR diagnose* OR diagnosis* OR treatment * OR control*) AND (china* OR chinese* OR "Hong Kong*" OR taiwan* OR Macau*) Content Type: Journal Articles Publication Date: 01/01/2000 - 31/03/2020</p>	05/04/20	106

Database(s): **Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily** 1946 to April 03, 2020

Search Strategy:

#	Searches	Results
1	(migrant* or migration or "floating population" or "peasant worker").mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	281570
2	risk factors/	811821
3	(smok* or tobacco or cigarette).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	377905
4	(alcohol or drink*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	401223
5	(diet or nutrition or energy intake or vegetable or fruit or protein or fat or fish or meat or sodium or salt).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	5124098
6	(activitiv* or inactiv* or exercise or sedentary).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	670261
7	(overweight or obesity or BMI or waist circumstance).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	412447
8	(blood pressure or hypertensi*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	785791

9	(blood glucose or blood sugar or diabetes).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	708312
10	exp Hyperlipidemias/ or blood lipids.mp.	72059
11	(air pollution or air quality).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	61461
12	(disease management or diagnose or diagnosis or treatment or control).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	10137932
13	2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12	14961877
14	(China or Chinese or Hong Kong or Taiwan or Macau).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	478370
15	1 and 13 and 14	4182
16	limit 15 to (english language and yr="2000 -Current")	3267

Appendix 3. Methodologies and study characteristics of included studies

	Author, year	Study designs	Settings	Data sources	Sampling methods	Participants	Definitions of migrant	Comparison /reference groups	Statistical methods on outcome variables we examined in paper
1	Hou, 2018 ³¹	Cross-sectional	Nationally	China Health and Retirement Longitudinal Study (CHARLS)	Not specified	N= 17,000 Age: 45 and over	By hukou status	Rural& urban residents	Multivariate regression analysis
2	Chen, 2009 ³²	Cross-sectional	National level (Beijing, Hebei, Henan, Sichuan, Jiangsu, Anhui, Shandong, Hubei, and Hunan Province)	NIH-funded exploratory project in 2004 and 2005	Quota sampling	N = 3,026, Age: 18-40	By hukou status	Rural& urban residents	Multivariate regression analysis
3	Gong,2016 ³³	Cross-sectional	National level (excluding Tibet and Hainan)	2014 Chinese Labor Dynamic Survey (CLDS)	Multi-stage stratified sampling	N= 23,594 Age: 15-49 (women)	By hukou status	Non-migrants	Descriptive statistics only
4	Hou, 2019 ³⁴	Cross-sectional	Nationally	China Health and Retirement Longitudinal Study (CHARLS)	Not specified	N= 17,000 Age: 45 & over	By hukou status	Rural& urban residents	Descriptive statistics only
5	Yi, 2019 ³⁵	Pooled cross-sectional	National level (except for Hong Kong, Macao, Taiwan, Hainan, and Tibet)	China Labor-force Dynamics Survey (CLDS)	Multi-stage stratified sampling	N = 51,530 Age: 15 to 64	By hukou status	Rural& urban residents	Descriptive statistics only
6	Oyebode, 2015 ³⁶	Cross-sectional	Nationally	WHO Study on global AGEing and adult health (SAGE)	Multi-stage stratified sampling method	N = 39,436 Age: 18 & over	By residential status	Rural& urban residents	Multivariate regression analysis

				surveyed between 2007 and 2010 (Wave 1)					
7	Qi, 2013 ³⁷	Cross-sectional	Nationally	Internal Migration and Health in China (IMHC)	Multi-stage stratified sampling	N = 3000 Age: 18-64	By hukou status	Rural& urban residents	Multivariate regression analysis
8	Tong,2017 ³⁸	Cross-sectional	Nationally	China Labor-force Dynamics Survey (CLDS) in 2014	Multi-stage stratified sampling	N= 18,263 Age: 16-60	By hukou status	Rural& urban residents	Multivariate regression analysis
9	Wang, 2018 ³⁹	Multiple cross-sectional	Municipal level: Liangshan Yi Autonomous Prefecture, Sichuan province	self-collected by questionnaires and anthropometric measurements	Multi-stage stratified sampling	N=3,395 Age: 20-80	By residential status	Rural residents only	Descriptive statistics only
10	Yang,2015 ⁴⁰	Cross-sectional	District level: Longhua district, Shenzhen City	Self-collected by face to face interview	Multi-stage stratified sampling	N=6,934 Age:15-69	Not specified	Urban residents only	Multivariate regression analysis
11	Yu, 2010 ⁴¹	Cross-sectional	Township level: Caihu region of Hubei Province, China	Self-collected by face to face interview	Random cluster sampling	N = 3,155 Age: 18 and over	By residential status	Rural residents only	Descriptive statistics only
12	Shan, 2011 ⁴²	Cross-sectional	Municipal level: Liangshan Yi Autonomous Prefecture, Sichuan province	Self-collected by questionnaires and anthropometric measurements	Multi-stage stratified sampling	N = 3,132 Age: 20 and over	By residential status	Rural residents only	Multivariate regression analysis

13	Bi,2016 ⁴³	Cross-sectional	National level	2012 China Noncommunicable Disease and Risk Factor Surveillance in Migrant Workers study	Multi-stage stratified sampling	N=48,704 Age: 18-59	Not specified	General population	Multivariate regression analysis
14	Zhang, 2018 ⁴⁴	Pooled cross-sectional	Municipal level: Liangshan Yi Autonomous Prefecture, Sichuan province.	Self-collected by questionnaires and anthropometric measurements	Multi-stage stratified sampling	N=8,448 Age: 20–80	By residential status	Rural residents only	Multivariate regression analysis
15	Wang,2012 ⁴⁵	Cross-sectional	Municipal level: Liangshan Yi Autonomous Prefecture, Sichuan province	Self-collected by questionnaires and anthropometric measurements	Multi-stage stratified sampling	N=2848 Age:18-87	By residential status	Rural residents only	Multivariate regression analysis
16	Fang, 2017 ⁴⁶	Cross-sectional	Nationally	China Health and Retirement Longitudinal Study (CHARLS)	Not specified	N=4926 Age: 45 and over	By health insurance	Rural& urban residents	Multivariate regression analysis
17	Chen,2013 ⁴⁷	Cross-sectional	Nationally	Migration and Quality of Life survey in 2011	Spatial probability sampling	N=1278 Age: 18 to 70	By hukou status	Urban residents only	Multivariate regression analysis
18	Xu,2015 ⁴⁸	Cross-sectional	Nationally	China Health and Retirement Longitudinal Study (CHARLS) in 2011	Not specified	N=17,708 Age: aged over 45	By hukou status	Rural& urban residents	Multivariate regression analysis

19	Li, 2017 ⁴⁹	Cross-sectional	City level: Shenzhen	Self-collected by questionnaires and anthropometric measurements	Multi-stage stratified sampling	N=1676 Age: 18 to 70	By hukou status	Urban residents only	Multivariate regression analysis
20	Li, 2020 ⁵⁰	Cross-sectional	Nationally	China Health and Retirement Longitudinal Study (CHARLS) in 2015	Not specified	N=3460 Age: 50 to 65	By residential status	Rural residents only	Multivariate regression analysis

Appendix 4. Quality assessment table of included studies

Appendix 4.1.NIH quality assessment result table

Criteria	Hou, 2018 ³¹	Chen, 2009 ³²	Gong, 2016 ³³	Hou, 2019 ³⁴	Yi, 2019 ³⁵	Oyebode, 2015 ³⁶	Qi, 2013 ³⁷	Tong, 2017 ³⁸	Wang, 2018 ³⁹	Yang, 2015 ⁴⁰	Yu, 2010 ⁴¹	Shan, 2011 ⁴²	Bi, 2016 ⁴³	Zhang, 2018 ⁴⁴	Wang, 2012 ⁴⁵	Fang, 2017 ⁴⁶	Chen, 2013 ⁴⁷	Xu, 2015 ⁴⁸	Li, 2017 ⁴⁹	Li, 2020 ⁵⁰
1. Was the research question or objective in this paper clearly stated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Was the study population clearly specified and defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Was the participation rate of eligible persons at least 50%?	NA	NR	NA	NA	NA	Yes	NA	NA	NA	NA	NR	NR	NA	NA	NA	NA	Yes	NA	Yes	Yes
4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5. Was a sample size justification, power description, or variance and effect estimates provided?	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	No	No	No	No	No	No
6. For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as continuous variable)?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10. Was the exposure(s) assessed more than once over time?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12. Were the outcome assessors blinded to the exposure status of participants?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13. Was loss to follow-up after baseline 20% or less?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quality Rating	Good	Good	Fair	Good	Fair	Good	Good	Fair	Good	Good	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good

NR = not reported

NA= not applicable

Appendix 4.2. Risk of bias assessment result table

Section/topic	Hou, 2018 ³¹	Chen, 2009 ³²	Gong, 2016 ³³	Hou, 2019 ³⁴	Yi, 2019 ³⁵	Oyebode, 2015 ³⁶	Qi, 2013 ³⁷	Tong, 2017 ³⁸	Wang, 2018 ³⁹	Yang, 2015 ⁴⁰	Yu, 2010 ⁴¹	Shan, 2011 ⁴²	Bi, 2016 ⁴³	Zhang, 2018 ⁴⁴	Wang, 2012 ⁴⁵	Fang, 2017 ⁴⁶	Chen, 2013 ⁴⁷	Xu, 2015 ⁴⁸	Li, 2017 ⁴⁹	Li, 2020 ⁵⁰
Selection Bias Quality	2	1	2	2	2	2	2	2	2	1	2	2	2	2	1	2	2	2	1	2
Study Design Quality	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Confounder Quality	2	2	3	2	2	2	2	3	3	2	3	2	2	2	3	2	2	2	2	3
Blinding Quality	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Data Collection Methods Quality	2	2	2	2	2	2	2	2	1	2	2	2	2	1	2	2	1	2	2	2
Withdrawals & Drop-Outs Quality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Intervention Quality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Analysis Quality	1	1	2	2	2	1	1	1	2	1	2	1	1	1	1	1	1	1	1	2
Global Rating	2	2	3	2	3	3	2	3	3	2	3	2	2	2	3	2	2	3	2	3
Discrepancy (Reason)	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Final Decision	2	2	3	2	3	3	2	3	3	2	3	2	2	2	3	2	2	3	2	3

Appendix 5. Characteristics and results on NCD risk factors

Author(year)	Settings	Data sources	Participants	Variable description	Reference /Comparison group	Coefficient
Tobacco use						
Hou (2018) ³¹	Nationally	China Health and Retirement Longitudinal Study (CHARLS)	N= 17,000 Age: 45 and over	ever smoking quit smoking	rural non-migrants	Ever smoking: Rural-to-urban migrants: AOR=0.87, 95%CI (0.36-2.09), P>0.05 Quit smoking: Rural-to-urban migrants AOR = 7.1, 95%CI (2.46–20.46) P < 0.001
Chen (2009) ³²	National level (Beijing, Hebei, Henan, Sichuan, Jiangsu, Anhui, Shandong, Hubei, and Hunan Province)	NIH-funded exploratory project in 2004 and 2005	N = 3,026, Age: 18-40	ever smoking	Rural migrant	Rural male: AOR=1.41, P<0.05 Urban male: AOR=1.32, P>=0.05 Rural female: AOR=0.88, P<0.01 Urban female: AOR=1.90, P<0.01
Gong (2016) ³³	National level (excluding Tibet and Hainan)	2014 Chinese Labor Dynamic Survey (CLDS)	N= 23,594 Age: 15-49 (women)	Second-hand smoking	Non-migrant	Migrant vs non-migrant: 43.9% vs 35.2%
Oyebode(2015) ³⁶	Nationally	WHO Study on global AGEing and adult health (SAGE) surveyed between 2007 and 2010 (Wave 1)	N = 39,436 Age: 18 & over	ever/current smoking	rural	Ever smoking Migrant: RR=0.90 (0.66-1.17) P>=0.1 Current smoking Migrant: RR= 0.84 (0.59–1.14)) P>=0.1

Li(2020) ⁵⁰	Nationally	China Health and Retirement Longitudinal Study (CHARLS) in 2015	N=3460 Age: 50 to 65	Ever smoking	rural	Migrant vs rural: 27.44% vs 18.22% p = 0.072
Alcohol use						
Chen (2009) ³²	National level (Beijing, Hebei, Henan, Sichuan, Jiangsu, Anhui, Shandong, Hubei, and Hunan Province)	NIH-funded exploratory project in 2004 and 2005	N = 3,026, Age: 18-40	ever drinking	Rural migrant	Rural: male AOR=1.48 P<0.01 Urban: male AOR=1.49 P<0.01 Rural: female AOR=0.65 P<0.01 Urban: female AOR=1.35 P<0.05
Oyebode(2015) ³⁶	Nationally	WHO Study on global AGEing and adult health (SAGE) surveyed between 2007 and 2010 (Wave 1)	N = 39,436 Age: 18 & over	current drinking	rural	Migrant: RR= 0.44 (0.24–0.79) P<0.01
Li(2020) ⁵⁰	Nationally	China Health and Retirement Longitudinal Study (CHARLS) in 2015	N=3460 Age: 50 to 65	Ever drinking	rural	Migrant vs rural: 35.35% vs 25.02% p = 0.092
Unhealthy diet						

Oyebode(2015) ³⁶	Nationally	WHO Study on global AGEing and adult health (SAGE) surveyed between 2007 and 2010 (Wave 1)	N = 39,436 Age: 18 & over	Fruit and veg consumption (> 5 portions/day)	rural	Migrant: RR= 0.97 (0.85–1.03) P>=0.1
Physical inactivity						
Oyebode(2015) ³⁶	Nationally	WHO Study on global AGEing and adult health (SAGE) surveyed between 2007 and 2010 (Wave 1)	N = 39,436 Age: 18 & over	75 minutes of vigorous or 150 minutes of moderate exercise/week through either work, leisure or active travel	rural	Occupational Migrant: RR= 0.59 (0.35–0.87)) P<0.05 Leisure time Migrant: RR= 5.10 (3.02–7.86) P<0.01 Active Travel Migrant: RR= 1.22 (1.12–1.30) P<0.01
Overweight/Obesity						
Oyebode(2015) ³⁶	Nationally	WHO Study on global AGEing and adult health (SAGE) surveyed between 2007 and 2010 (Wave 1)	N = 39,436 Age: 18 & over	Overweight: BMI>=25, obese: BMI>=30, central obese: raised waist circumference>=80cm for women,>=94cm for men)	Rural	Overweight: Migrants: RR=0.99 (0.71–1.32) P>=0.1 Obesity: Migrants: RR=1.24 (0.58–2.54)P>=0 Central obesity Migrant: RR= 0.94 (0.64–1.30) P>=0.1

Qi (2013) ³⁷	Nationally	Internal Migration and Health in China (IMHC)	N = 3000 Age: 18-64	Obese: BMI>30	Migrant	Obesity: Rural non-migrants: AOR=1.547 (0.64, 3.73) P>=0.1 Urban residents: AOR=1.701 (0.70, 4.15) P>=0.1
Wang (2018) ³⁹	Municipal level: Liangshan Yi Autonomous Prefecture, Sichuan province	self-collected by questionnaires and anthropometrical measurements	N=3,395 Age: 20-80	Overweight: 25<=BMI<20 Obese: BMI>30	Rural	Rural vs migrant: (standardized prevalence) Overweight Total 5.54% vs 27.91% (2007); 16.54% vs 33.61% (2015) Male 3.86% vs 34.15% (2007); 16.86% vs 34.28% (2015) Female 7.27% vs 21.52% (2007); 16.44% vs 32.91% (2015) Obesity Total 0.37% vs 5.01% (2007); 3.13% vs 6.31% (2015) Male 0.07% vs 3.38% (2007); 3.3% vs 6.56% (2015) Female 0.68% vs 6.67% (2007); 2.96% vs 6.04% (2015)
Yang (2015) ⁴⁰	District level: Longhua district, Shenzhen City	Self-collected by face-to-face interview	N=6,934 Age:15-69	Overweight & obese: BMI>24	Urban	Migrant: AOR= 0.78 (0.64, 0.96) P<0.05
Shan (2011) ⁴²	Municipal level: Liangshan Yi Autonomous Prefecture,	Self-collected by questionnaires and	N = 3,132 Age: 20 and over	Overweight or Obesity: BMI>=30	Rural	Migrant: AOR = 5.52(3.62,8.42) P<0.0001

Bi(2016) ⁴³	Nationally	2012 China Noncommunicable Disease and Risk Factor Surveillance in Migrant Workers study	N=48,704 Age: 18-59	Overweight: 25≤BMI<20 Obese: BMI>30 Central obesity: waist circumference ≥90 cm in men and 80 cm in women	general population	Migrant vs general population (age-standardized prevalence) Overweight ○ Male 33.5% vs 29.2%, P<0.0001 ○ Female 24.8% vs 25.8%, P=0.0001 Obesity ○ Male 5.6% vs 5.1%, P=0.008 ○ Female 4% vs 5%, P<0.0001 Central obesity ○ Male 29% vs 23.7%, P<0.001 ○ Female 40% vs 38.9%, P=0.05
Raised Blood Pressure						
Oyebode(2015) ³⁶	Nationally	WHO Study on global AGEing and adult health (SAGE) surveyed between 2007 and 2010 (Wave 1)	N = 39,436 Age: 18 & over	BP>=140/90	rural	Migrant: RR= 0.72 (0.55–0.91) P<0.01 Urban: RR= 0.83 (0.68–0.99) P<0.05
Qi (2013) ³⁷	Nationally	Internal Migration and Health in China (IMHC)	N = 3000 Age: 18-64	BP>=140/90	migrant	Rural non-migrants: AOR=1.114 (0.72, 1.73) P>=0.1 Urban residents: AOR=1.061 (0.68, 1.66) P>=0.1
Bi(2016) ⁴³	Nationally	2012 China Noncommunicable Disease and Risk Factor Surveillance in Migrant Workers study	N=48,704 Age: 18-59	blood pressure ≥130/85 mm Hg or use of antihypertensive medications	general population	Migrant vs general population: (age-standardized prevalence) Male 26.6% vs 29.9%, P<0.0001 Female 17.3% vs 24.4, P<0.0001

Fang (2017) ⁴⁶	Nationally	China Health and Retirement Longitudinal Study (CHARLS)	N=4926 Age: 45 and over	diagnosed by physicians or self-reported to be hypertensive	rural	Urban: AOR = 1.51 (0.94-2.42), P < 0.1 migrants: AOR = 0.65 (0.40-1.07), P = 0.070
Raised Blood Sugar						
Oyebode(2015) ³⁶	Nationally	WHO Study on global AGEing and adult health (SAGE) surveyed between 2007 and 2010 (Wave 1)	N = 39,436 Age: 18 & over	doctor-diagnosed diabetes	rural	Migrant: AOR= 0.80 (0.48, 0.91) P<0.05
Bi(2016) ⁴³	Nationally	2012 China Noncommunicable Disease and Risk Factor Surveillance in Migrant Workers study	N=48,704 Age: 18-59	fasting glucose ≥ 6.1 mmol/L or self-reported history of diabetes	general population	Migrant vs general population: (age-standardized prevalence) Male 8.6% vs 10.6%, P<0.0001 Female 6.3% vs 8.2%, P<0.0001
Raised Blood Lipids						
Bi(2016) ⁴³	District level: Longhua district, Shenzhen City	2012 China Noncommunicable Disease and Risk Factor Surveillance in Migrant Workers study	N=48,704 Age: 18-59	triglycerides ≥ 1.7 mmol/L, HDL cholesterol <1.0 mmol/L in men and 1.3 mmol/L in women	general population	Migrant vs general population: (age-standardized prevalence) Male 44% vs 58.3%, P<0.0001 Female 26.4% vs 44.6%, P<0.0001

Wang(2012) ⁴⁵	Municipal level: Liangshan Yi Autonomous Prefecture, Sichuan province	Self-collected by questionnaires and anthropometrical measurements	N=2848 Age:18-87	High TC, Hypertriglyceridemia, Low HDL-C, High LDL-C	rural	Rural vs migrant: (age and gender-adjusted prevalence) High TC: 1.55(1.00,2.38) vs 4.22(3.19,5.56) Hypertriglyceridemia: 5.76(4.48,7.39) vs 19.62(17.48,21.96) Low HDL-C: 43.91(41.13,46.74) vs 39.27(36.50,42.11) High LDL-C: 1.50(0.94,2.37) vs 2.94(2.12,4.08)
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*This table only includes studies that applied multivariable regression models.

*For standardized prevalence, odds ratio and risk ratio reported, 95% confidence intervals are in brackets

Appendix 6. Characteristics and results on NCD management

Author(year)	Settings	Data sources	Participants	Variable description	Reference group	Coefficient (95 CI)
NCD treatment						
Fang(2017) ⁴⁶	Nationally	China Health and Retirement Longitudinal Study (CHARLS)	N=4926 Age: 45 and over	hypertension treatment (Medication use)	rural	Urban: AOR = 1.55 (0.80-3.01), P >= 0.1 Migrants: AOR = 0.95 (0.47-1.91), P >= 0.1
Chen(2013) ⁴⁷	Nationally	Migration and Quality of Life survey in 2011	N=1278 Age: 18 to 70	treatment (in the past 12 months) for any chronic conditions	urban	Migrant: AOR=0.51 (0.11, 2.43) P>=0.05
Xu(2015) ⁴⁸	Nationally	China Health and Retirement Longitudinal Study (CHARLS) in 2011	N=17,708 Age: aged over 45	diabetes treatment	urban	Migrant: AOR = 1.07 (0.67-1.69) P=0.779 Rural: AOR = 0.64 (0.42-0.98) P=0.042
Li(2017) ⁴⁹	City level: Shenzhen	Self-collected by questionnaires and anthropometrical measurements	N=1676 Age: 18 to 70	hypertension treatment (Medication use)	migrant	Urban: AOR = 0.65 (0.30 to 1.40) P>=0.05

NCD control						
Fang(2017) ⁴⁶	Nationally	China Health and Retirement Longitudinal Study (CHARLS)	N=4926 Age: 45 and over	Hypertension Control	rural	Urban: AOR = 0.92 (0.52-1.63), P >= 0.1 migrants: AOR = 0.91 (0.53-1.57), P >= 0.
Li(2017) ⁴⁹	City level: Shenzhen	Self-collected by questionnaires and anthropometrical measurements	N=1676 Age: 18 to 70	Control for hypertension	migrant	Urban: AOR = 1.33 (0.61 to 2.89) P>=0.05

*This table only includes studies that applied multivariable regression models.

*For standardized prevalence, odds ratio and risk ratio reported, 95% confidence intervals are in brackets

Appendix 7. Key findings and quality of included studies

	Author, year	Key findings	Study quality
1	Hou, 2018 ³¹	<p>Tobacco Use</p> <ul style="list-style-type: none"> • Rural: <ul style="list-style-type: none"> ❖ rural (reference group) vs rural-to-urban migrants • Ever smoking 40% vs 33% <ul style="list-style-type: none"> ○ Rural-to-urban migrants OR = 0.87 (0.36–2.10) P > 0.05 • Quit smoking 19% vs 28% <ul style="list-style-type: none"> ○ Rural-to-urban migrants OR = 7.1 (2.46–20.46) P < 0.001 	high
2	Chen, 2009 ³²	<ul style="list-style-type: none"> ❖ Migrant (reference group) vs rural vs urban <p>Tobacco use</p> <ul style="list-style-type: none"> • Ever smoking <ul style="list-style-type: none"> • Male 66.9% (P>=0.05) vs 74.7% (P>=0.05) vs 70.2% (P<0.05) <ul style="list-style-type: none"> ○ Rural male OR=1.41, P<0.05 ○ Urban male OR=1.32, P>=0.05 • Female 11.6% (P>=0.05) vs 10.8% (P>=0.05) vs 20.8% (P<0.01) <ul style="list-style-type: none"> ○ Rural female OR=0.88, P<0.01 ○ Urban female OR=1.90, P<0.01 <p>Alcohol use</p> <ul style="list-style-type: none"> • Ever drinking <ul style="list-style-type: none"> • Male 53% (P>=0.05) vs 74.6% (P>=0.05) vs 62.8% (P<0.05) <ul style="list-style-type: none"> ○ Rural male OR=1.48, P<0.01 ○ Urban male OR = 1.49, P<0.01 • Female 19.9% (P>=0.05) vs 14.8% (P>=0.05) vs 26.1% (P<0.01) <ul style="list-style-type: none"> ○ Rural female OR = 0.65, P<0.01 ○ Urban female OR = 1.35, P<0.05 	high
3	Gong, 2016 ³³	<ul style="list-style-type: none"> ❖ Migrant vs non-migrant (women) <p>Tobacco use</p> <ul style="list-style-type: none"> • Ever smoking <ul style="list-style-type: none"> ○ 2% vs 2.2% (with second-hand smoke exposed) ○ 0.6% vs 0.7% (without second-hand smoke exposed) • Second hand smoking <ul style="list-style-type: none"> ○ 43.9% vs 35.2% <p>Alcohol use</p> <ul style="list-style-type: none"> • Once a week or more <ul style="list-style-type: none"> ○ 3.8% vs 3.3% (with second-hand smoke exposed) ○ 1.8% vs 1.6% (without second-hand smoke exposed) 	moderate
4	Hou, 2019 ³⁴	<ul style="list-style-type: none"> ❖ rural vs Rural-to-rural migrant vs rural-to-urban migrant, with rural hukou vs rural-to-urban migrants with urban hukou vs urban vs urban-to-urban migrant <p>Tobacco use</p> <ul style="list-style-type: none"> • Ever smoking: 7.47% vs 5.33% vs 9.38% vs 14.29% vs 7.99% vs 9.09% • Current smoking: 32.41% vs 17.58% vs 23.75% vs 20.25% vs 25.69% vs 18.55% <p>Alcohol use</p>	high

		<ul style="list-style-type: none"> • Ever drinking: 5.34% vs 2.84% vs 2.95% vs 7.79% vs 5.72% vs 5.47% • Current drinking: 34.75% vs 25.75% vs 27.73% vs 27.54% vs 32.30% vs 32.85% 	
5	Yi, 2019 ³⁵	<ul style="list-style-type: none"> ❖ Migrant vs urban vs rural: <p>Tobacco use</p> <ul style="list-style-type: none"> • Ever or current smoking: 28.2% vs 25.1% vs 24.8% (P<0.05) <p>Alcohol use</p> <ul style="list-style-type: none"> • Ever or current drinking: 23.0% vs 20.0% vs 17.7% (P<0.05) 	mode rate
6	Oyebo de, 2015 ³⁶	<ul style="list-style-type: none"> ❖ Urban vs migrant vs rural (reference group) <p>Tobacco use</p> <p>Current smoking</p> <ul style="list-style-type: none"> ○ Migrant RR= 0.84 (0.59–1.14)) P>=0.1 ○ Urban RR= 0.79 (0.62–1.00)) P<0.05 <p>Ever smoking</p> <ul style="list-style-type: none"> ○ Migrant RR=0.90 (0.66–1.17) P>=0.1 ○ Urban RR=0.73 (0.57–0.93) P<0.001 <p>Alcohol use (weekly or more frequently)</p> <ul style="list-style-type: none"> ○ Migrant RR= 0.44 (0.24–0.79) P<0.01 ○ Urban RR= 0.46 (0.30–0.65) P<0.01 <p>Unhealthy diet</p> <ul style="list-style-type: none"> • Fruit and veg consumption (> 5 portions/day) <ul style="list-style-type: none"> ○ Migrant RR= 0.97 (0.85–1.03) P>=0.1 ○ Urban RR= 0.97, 95% CI (0.89–1.02) P>=0.1 <p>Physical inactivity</p> <ul style="list-style-type: none"> • Occupational physical activity <ul style="list-style-type: none"> ○ Migrant RR= 0.59 (0.35–0.87)) P<0.05 ○ Urban RR= 0.62 (0.44–0.81) P<0.05 • Leisure time Physical Activity (>150 minutes) <ul style="list-style-type: none"> ○ Migrant RR= 5.10 (3.02–7.86) P<0.01 ○ Urban RR= 4.52 (3.07–6.37) P<0.01 • Active Travel (>150 minutes) <ul style="list-style-type: none"> ○ Migrant RR= 1.22 (1.12–1.30) P<0.01 ○ Urban RR= 1.18 (1.07–1.26) P<0.01 <p>Overweight</p> <ul style="list-style-type: none"> ○ Migrants RR=0.99 (0.71–1.32) P>=0.1 ○ Urban RR=1.05 (0.83–1.28) P>=0.1 <p>Obesity</p> <ul style="list-style-type: none"> ○ Migrants RR=1.24 (0.58–2.54) P>=0.1 ○ Urban RR 1.16 (0.68–1.95) P>=0.1 <p>Central obesity</p> <ul style="list-style-type: none"> ○ Migrant RR= 0.94 (0.64–1.30) P>=0.1 ○ Urban RR =1.17 (0.92–1.46)) P>=0.1 <p>Raised blood pressure</p> <ul style="list-style-type: none"> ○ Migrant RR= 0.72 (0.55–0.91) P<0.01 ○ Urban RR= 0.83 (0.68–0.99) P<0.05 <p>Diagnosed Diabetes</p> <ul style="list-style-type: none"> ○ Migrant RR=1.86(1.05–3.25) P<0.01 ○ Urban RR=2.18(1.35–3.47) P<0.01 	high

7	Qi, 2013 ³⁷	<ul style="list-style-type: none"> ❖ Rural vs migrant (reference group) vs urban Tobacco use <ul style="list-style-type: none"> • Current smoking: 23.9% vs 28.1% vs 19.2% • Ever smoking: 3.9% vs 3.0% vs 2.6% Alcohol use <ul style="list-style-type: none"> • Weekly or less: 21.1% vs 30.2% vs 27.8% • More than once a week: 14.9% vs 15.3% vs 13.8% Physical inactivity <ul style="list-style-type: none"> • Weekly or less: 13.4% vs 20.2% vs 230% • More than once a week 17.5% vs 15.6% vs 37.1% Obesity <ul style="list-style-type: none"> ○ 6.4% vs 2.4% vs 6.2% ○ Migrants OR=1.547 (0.64, 3.73) P>=0.1 ○ Urban OR=1.701 (0.70, 4.15) P>=0.1 Raised blood pressure <ul style="list-style-type: none"> ○ 26.7% vs 13.9% vs 24.5% ○ Rural OR=1.114 (0.72, 1.73) P>=0.1 ○ Urban OR=1.061, 95 CI (0.68, 1.66) P>=0.1 NCD diagnosis <ul style="list-style-type: none"> ○ Rural OR=1.599 (1.13, 2.26) P<0.01 ○ Urban OR=1.804 (1.27, 2.56) P<0.001 	high
8	Tong, 2017 ³⁸	<ul style="list-style-type: none"> ❖ Rural vs urban vs migrant Tobacco Use <ul style="list-style-type: none"> • Ever smoking: 24% (SD=0.43) vs 23% (SD=0.42) vs 36% (SD=0.48) Alcohol Use <ul style="list-style-type: none"> • Current drinking: 16% (SD=0.37) vs 18% (SD= 0.39) vs 23% (SD=0.42) Physical Inactivity <ul style="list-style-type: none"> • Regular exercise: 13% (SD=0.34) vs 37% (SD=0.48) vs 15% (SD=0.35) 	mode rate
9	Wang, 2018 ³⁹	<ul style="list-style-type: none"> ❖ Rural vs migrant Tobacco use <ol style="list-style-type: none"> 1) Ever smoking Male: 1.96% vs 8.23% (2007); 6.66% vs 13.8% (2015) <ul style="list-style-type: none"> ○ Female: 0% vs 0.9% (2007); 0.96% vs 1.68% (2015) 2) Current smoking (20+ pack year) <ul style="list-style-type: none"> ○ Male: 29.81% vs 30.34% (2007); 45.98% vs 39.58% (2015) ○ Female: 2.13% vs 0.90% (2007); 1.77% vs 2.32% (2015) Alcohol use <ol style="list-style-type: none"> 1) Ever drinking <ul style="list-style-type: none"> ○ Male: 2.43% vs 7.62% (2007); 20.71% vs 18.49% (2015) ○ Female: 0.00% vs 1.58% (2007); 1.60% vs 3.08% (2015) 2) Current drinking (high risk) <ul style="list-style-type: none"> ○ Male: 14.47% vs 13.72% (2007); 14.53% vs 15.10% (2015) ○ Female: 0.90% vs 2.03% (2007); 0.72% vs 1.41% (2015) Physical Inactivity <ul style="list-style-type: none"> • Heavy <ul style="list-style-type: none"> ○ Male: 95.33% vs 6.26% (2007); 67.08% vs 7.81% (2015) ○ Female 88.14% vs 12.61% (2007); 66.56% vs 7.84% (2015) • Moderate <ul style="list-style-type: none"> ○ Male 2.99% vs 14.35% (2007); 7.73% vs 13.28% (2015) ○ Female 10.22% vs 22.75% (2007); 5.13% vs 15.94% (2015) 	high

		<ul style="list-style-type: none"> • Light <ul style="list-style-type: none"> ○ Male: 1.68% vs 79.39% (2007); 25.19% vs 78.91% (2015) ○ Female: 1.64% vs 64.64% (2007); 28.31% vs 76.22% (2015) <p>Overweight (standardized prevalence)</p> <ul style="list-style-type: none"> ○ Total 5.54% vs 27.91% (2007); 16.54% vs 33.61% (2015) ○ Male 3.86% vs 34.15% (2007); 16.86% vs 34.28% (2015) ○ Female 7.27% vs 21.52% (2007); 16.44% vs 32.91% (2015) <p>Obesity (standardized prevalence)</p> <ul style="list-style-type: none"> ○ Total 0.37% vs 5.01% (2007); 3.13% vs 6.31% (2015) ○ Male 0.07% vs 3.38% (2007); 3.3% vs 6.56% (2015) ○ Female 0.68% vs 6.67% (2007); 2.96% vs 6.04% (2015) 	
10	Yang, 2015 ⁴⁰	<ul style="list-style-type: none"> ❖ Urban (reference group) vs migrant <p>Tobacco use Current smoking: 13.6% vs 20.3% P<0.001</p> <p>Alcohol use Safe drinking 79.1% vs 73.8%, P<0.001</p> <p>Physical activity</p> <ul style="list-style-type: none"> • Regularly 18.1% vs 11.5%, P<0.001 • Irregularly 61.2% vs 54.9%, P<0.001 <p>Overweight or obese (BMI>=24)</p> <ul style="list-style-type: none"> • 20.3% vs. 16.4%, P =0.01 • Migrant OR= 0.78 (0.63, 0.96) P<0.05 	high
11	Yu, 2010 ⁴¹	<ul style="list-style-type: none"> ❖ Urban vs migrant <p>Tobacco use Yes: 28.5% vs 28.2%, P>0.05</p> <p>Alcohol use Yes: 31.7% vs 26.4%, P<0.05</p> <p>Diet A regular habit of eating pickled vegetables: 17.7% vs 29.22%, P<0.05</p> <p>Food Intake per Day Mean (SD)</p> <ul style="list-style-type: none"> • Intake of Cereal 343.7 (169.4) vs 316.0 (159.5), P<0.05 • Intake of Fruits 251.2 (270.8) vs 204.5 (267.8), P<0.05 • Intake of Vegetables 326.1 (207.0) vs 266.1 (206.1), P<0.05 • Intake of Meat 105.2 (127.0) vs 71.9 (106.6), P<0.05 • Intake of Salt 7.1 (3.5) vs 8.6 (4.3), P<0.05 • Intake of Egg 134.7 (82.8) vs 60.6 (72.3), P<0.05 	mode rate
12	Shan, 2011 ⁴²	<ul style="list-style-type: none"> ❖ Migrant vs rural (reference group) 2007 statistics <p>Tobacco use</p> <ul style="list-style-type: none"> • Current smoking 41.01% (39.02,42.99) vs 39.44% (36.87,42.01) P>=0.05 <p>Alcohol use</p> <ul style="list-style-type: none"> • Current drinking 29.77% (27.93,31.62) vs 51.36% (48.74,53.99) P<0.05 <p>Overweight (BMI>=25 and BMI <30)</p> <ul style="list-style-type: none"> ○ standardized prevalence: 4.95% vs 0.13% <p>Obesity (BMI>=30)</p> <ul style="list-style-type: none"> ○ standardized prevalence: 29.29% vs 4.74% <p>Overweight or Obesity (BMI>=25)</p> <ul style="list-style-type: none"> ○ OR = 5.52(3.62,8.42) P<0.0001 	high

13	Bi,2016 ⁴³	<p>❖ Migrant vs general population (age-standardized prevalence)</p> <p>Overweight</p> <ul style="list-style-type: none"> ○ Male 33.5% vs 29.2%, P<0.0001 ○ Female 24.8% vs 25.8%, P= 0.0001 <p>Obesity</p> <ul style="list-style-type: none"> ○ Male 5.6% vs 5.1%, P=0.008 ○ Female 4% vs 5%, P<0.0001 <p>Central obesity</p> <ul style="list-style-type: none"> ○ Male 29% vs 23.7%, P<0.001 ○ Female 40% vs 38.9%, P=0.05 <p>Hypertension</p> <ul style="list-style-type: none"> ○ Male 26.6% vs 29.9%, P<0.0001 ○ Female 17.3% vs 24.4, P<0.0001 <p>Diabetes</p> <ul style="list-style-type: none"> ○ Male 8.6% vs 10.6%, P<0.0001 ○ Female 6.3% vs 8.2%, P<0.0001 <p>Dyslipidaemia</p> <ul style="list-style-type: none"> ○ Male 44% vs 58.3%, P<0.0001 ○ Female 26.4% vs 44.6%, P<0.0001 	high
14	Zhang, 2018 ⁴⁴	<p>❖ Rural vs migrant</p> <p>BMI (kg/m²)</p> <ul style="list-style-type: none"> ○ 20.3 (SD=2.1) vs 22.4 (SD=3.0) (1996) ○ 21.4 (SD=2.6) vs 23.5 (SD=3.7) (2007) ○ 22.3 (SD=3.6) vs 24.4 (SD=3.8) (2015) <p>Overweight (BMI 24–27.9)</p> <ul style="list-style-type: none"> ○ 2.5% vs 23.7% (1996) ○ 10.6% vs 30.1% (2007) ○ 21.8% vs 35.4% (2015) <p>Obesity (BMI ≥28)</p> <ul style="list-style-type: none"> ○ 0.4% vs 4.6% (1996) ○ 1.7% vs 11.1% (2007) ○ 7.1% vs 17.4% (2015) <p>Raised Blood Pressure</p> <ul style="list-style-type: none"> ○ 3.5% vs 8% (1996) ○ 5.5% vs 14.8% (2007) ○ 13% vs 23.7% (2015) 	high
15	Wang, 2012 ⁴⁵	<p>❖ Rural vs migrant</p> <p>Tobacco use</p> <ul style="list-style-type: none"> • Ever smoker <ul style="list-style-type: none"> ○ Male 79.76% vs 70.09% ○ Female 9.69% vs 7.18% <p>Alcohol use</p> <ul style="list-style-type: none"> • Ever drinker <ul style="list-style-type: none"> ○ Male 56.30 vs 73.35% ○ Female 10.10% vs 17.25% <p>Physical activity</p> <ul style="list-style-type: none"> • Light <ul style="list-style-type: none"> ○ Male 1.79% vs 78.26% ○ Female 1.52% vs 68.92% 	high

		<ul style="list-style-type: none"> • Moderate or heavy <ul style="list-style-type: none"> ○ Male 98.21% vs 21.74% ○ Female 98.48% vs 31.08% Hypertension <ul style="list-style-type: none"> ○ Male 4.60% vs 19.40% ○ Female 1.98% vs 9.69% Diabetes <ul style="list-style-type: none"> ○ Male 6.21% vs 11.53% ○ Female 2.90% vs 5.48% Dyslipidaemia (age and gender-adjusted prevalence) <ul style="list-style-type: none"> • High TC 1.55(1.00,2.38) vs 4.22(3.19,5.56) • Hypertriglyceridemia 5.76(4.48,7.39) vs 19.62(17.48,21.96) • Low HDL-C 43.91(41.13,46.74) vs 39.27(36.50,42.11) • High LDL-C 1.50(0.94,2.37) vs 2.94(2.12,4.08) 	
16	Fang, 2017 ⁴⁶	<ul style="list-style-type: none"> ❖ rural (reference group) vs urban vs Rural-to-urban migrant Hypertension Diagnosis <ul style="list-style-type: none"> ○ Urban: OR = 1.51 (0.94-2.42), P < 0.1 ○ migrants: OR = 0.65 (0.40-1.07), P = 0.070 Coefficient = -0.088(0.054) P = 0.091 Hypertension Treatment (medication use) <ul style="list-style-type: none"> ○ Urban: OR = 1.55 (0.80-3.01), P >= 0.1 ○ migrants: OR = 0.95 (0.47-1.91), P >= 0.1 Coefficient = -0.001(0.057) P = 0.985 Hypertension Control <ul style="list-style-type: none"> ○ Urban: OR = 0.92 (0.52-1.63), P >= 0.1 ○ migrants: OR = 0.91 (0.53-1.57), P >= 0.1 Coefficient = -0.029(0.073) P = 0.696 	high
17	Chen, 2013 ⁴⁷	<ul style="list-style-type: none"> ❖ Urban (reference group) vs rural-to-urban migrants vs urbanized rural migrants Treatment for chronic conditions (in the past 12 months) 1) Any chronic conditions <ul style="list-style-type: none"> ○ Rural-to-urban migrants: OR=0.51 (0.11, 2.43) P>=0.05 ○ Urbanized rural residents: OR=0.30 (0.05, 1.68) P>=0.05 2) Pain-related conditions <ul style="list-style-type: none"> ○ Rural-to-urban migrants: OR=1.45 (0.25, 8.61) P>=0.05 ○ Urbanized rural residents: OR=0.51 (0.10, 2.65) P>=0.05 3) Cardiovascular conditions diagnosis <ul style="list-style-type: none"> ○ Rural-to-urban migrants: OR=0.00 (0.00, 0.01) P<0.001 ○ Urbanized rural residents: OR=0.00 (0.00, 0.01) P<0.001 	high
18	Xu, 2015 ⁴⁸	<ul style="list-style-type: none"> ❖ Urban (reference group) vs migrant vs rural Treatment for diabetes <ul style="list-style-type: none"> • 76.7% vs 75.7% vs 67.1% (P<0.05 vs migrants) • Migrant OR = 1.07 (0.67-1.69) P=0.779 • Rural OR = 0.64 (0.42-0.98) P=0.042 • Traditional Chinese medicine comparing western medicine <ul style="list-style-type: none"> ○ Migrant OR = 0.30 (0.10 – 0.96) P<0.05 ○ Rural OR = 0.98 (0.48 – 1.98) P>=0.05 • Insulin injection comparing western medicine <ul style="list-style-type: none"> ○ Migrant OR = 0.40 (0.15-1.05) P>=0.05 	high

		<ul style="list-style-type: none"> ○ Rural OR = 0.44 (0.20-0.99) P<0.05 • Multiple treatments comparing western medicine <ul style="list-style-type: none"> ○ Migrant OR = 0.81 (0.36-1.82) P>=0.05 ○ Rural OR = 0.76 (0.35-1.64) P>=0.05 	
19	Li, 2017 ⁴⁹	<ul style="list-style-type: none"> ❖ Urban vs migrant (reference group) <p>Treatment for hypertension</p> <ul style="list-style-type: none"> • Antihypertensive medications: OR = 0.65 (0.30 to 1.40) P>=0.05 • Reduced salt intake: OR = 0.40 (0.15 to 0.94) P>=0.05 • Regular physical exercise: OR = 0.66 (0.25 to 1.80) P>=0.05 • Regular monitoring: OR = 0.14 (0.02 to 0.92) P>=0.05 • Under primary care management: OR = 1.98 (0.64 to 6.12) P>=0.05 <p>Control for hypertension OR = 1.33 (0.61 to 2.89) P>=0.05</p>	
20	Li, 2020 ⁵⁰	<p>Migrant vs rural: (after coarsened exact matching)</p> <p>Tobacco use Ever smoking: 27.44% vs 18.22% (after CEM) p = 0.072</p> <p>Alcohol use Ever drinking: 35.35% vs 25.02% (after CEM) p = 0.092</p>	

* for standardized prevalence, odds ratio and risk ratio reported, 95% confidence intervals are in brackets

* for coefficients reported, standard errors are in parentheses