

SUPPLEMENTARY MATERIAL

Supplementary Table 1: Prevalence and Odds Ratios of Drug Allergy Labels by Drug Class in Hong Kong and Shenzhen Cohorts

Drug class	Hong Kong Cohort n=552,897	Shenzhen Cohort n=85,286	OR	95% CI
Anti-Infectives	245,832 (44.5%)	71,987 (84.4%)	6.76	(6.63, 6.89)
- <i>Beta-lactams</i>	143,925 (26.0%)	54,009 (63.3%)	4.91	(4.84, 4.99)
- <i>Non-beta-lactams</i>	101,907 (18.4%)	17,978 (21.1%)	1.18	(1.16, 1.20)
Non-Steroidal Anti-Inflammatory Drugs	106,843 (19.3%)	874 (1.02%)	0.043	(0.040, 0.046)
Nervous System	45,802 (8.28%)	1,159 (1.36%)	0.153	(0.143, 0.161)
Cardiovascular System	27,977 (5.06%)	1,097 (1.29%)	0.244	(0.230, 0.260)
Musculoskeletal System	19,721 (3.57%)	321 (0.376%)	0.102	(0.091, 0.114)
Skin	18,484 (3.34%)	1,399 (1.64%)	0.482	(0.457, 0.510)
Gastrointestinal System	16,978 (3.07%)	344 (0.403%)	0.128	(0.114, 0.142)
Endocrine System	13,983 (2.53%)	504 (0.591%)	0.229	(0.209, 0.250)
Immune System & Malignant Diseases	13,743 (2.49%)	154 (0.181%)	0.071	(0.060, 0.083)
Respiratory System	11,693 (2.11%)	699 (0.820%)	0.383	(0.354, 0.413)
Eye	8,775 (1.59%)	45 (0.0528%)	0.033	(0.024, 0.044)
Blood and Nutrition	3,348 (0.606%)	426 (0.499%)	0.825	(0.745, 0.912)
Genito-urinary System	2,989 (0.541%)	344 (0.403%)	0.745	(0.667, 0.834)
Vaccines	2,897 (0.524%)	711 (0.834%)	1.60	(1.47, 1.73)
Anaesthesia	2,746 (0.497%)	822 (0.964%)	1.95	(1.80, 2.11)
Emergency treatment of poisoning	1,441 (0.261%)	4 (0.00469%)	0.018	(0.007, 0.048)
Ear, Nose and Oropharynx	1,195 (0.216%)	27 (0.0317%)	0.146	(0.100, 0.214)
Others†	8,450 (1.53%)	4,369 (5.12%)	3.48	(3.35, 3.61)

† Traditional Chinese medicines, excipients, preparations for diagnostics and unclassifiable.

Supplementary Table 2: Prevalence and Odds Ratios of Anti-Infective Allergy Labels in Hong Kong and Shenzhen Cohorts

Drug class	Hong Kong Cohort n=245832	Shenzhen Cohort n=71987	OR	95% CI
Penicillins	119274 (48.5%)	40199 (55.8%)	1.34	(1.32, 1.36)
Cephalosporins	23279 (9.47%)	13779 (19.1%)	2.26	(2.21, 2.32)
Others Beta-lactams	1372 (0.586%)	31 (0.0431%)	0.077	(0.054, 0.110)
Sulfomamides	531 (0.216%)	8290 (11.5%)	60.18	(55.2, 65.9)
Macrolides	17301 (7.04%)	3185 (4.42%)	0.612	(0.588, 0.636)
Quinolones	16844 (6.85%)	2401 (3.34%)	0.470	(0.449, 0.490)
Anti-mycobacterials	1928 (0.784%)	1044 (1.45%)	1.86	(1.72, 2.01)
Aminoglycosides	3803 (1.55%)	729 (1.01%)	0.652	(0.601, 0.706)
Tetracyclines	22711 (9.24%)	705 (0.979%)	0.097	(0.090, 0.105)
Nitroimidazole	5975 (2.43%)	704 (0.978%)	0.397	(0.366, 0.429)
Other anti-infectives	9826 (3.99%)	518 (0.720%)	0.174	(0.159, 0.190)
Anti-virals	2107 (0.857%)	175 (0.243%)	0.282	(0.241, 0.329)
Lincosamides	1715 (0.712%)	97 (0.135%)	0.192	(0.157, 0.236)
Anti-protouales	1287 (0.524%)	64 (0.0889%)	0.169	(0.131, 0.216)
Anti-fungals	17797 (7.24%)	58 (0.0806%)	0.0103	(0.0080, 0.0134)
Anti-helminths	82 (0.0334%)	8 (0.0111%)	0.333	(0.161, 0.689)