

References

Chapter 6

- 1 WHO Collaborating Centres for Drug Statistics Methodology. *Guidelines for ATC Classification and DDD Assignment 2014*. Oslo, World Health Organization, 2013
- 2 WHO Collaborating Centre website: www.whocc.no.
- 3 Rønning M, Blix HS, Strøm H, Skovlund E, Andersen M, Stichele RV. Problems in collecting comparable national drug use data in Europe: the example of antibacterials. *European Journal of Clinical Pharmacology*. 2003;**58**(12):843–9.
- 4 Teng L, Xin HW, Blix HS, Tsutani K. Review of the use of defined daily dose concept in drug utilisation research in China. *Pharmacoepidemiology and Drug Safety*. 2012;**21**(10):1118–24.
- 5 Rønning M, Blix HS, Harbø BT, Strøm H. Different versions of the anatomical therapeutic chemical classification system and the defined daily dose – are drug utilisation data comparable? *European Journal of Clinical Pharmacology*. 2000;**56**(9–10):723–7.
- 6 Coenen S, Gielen B, Blommaert A, Beutels P, Hens N, Goossens H. Appropriate international measures for outpatient antibiotic prescribing and consumption: recommendations from a national data comparison of different measures. *Journal of Antimicrobial Chemotherapy*. 2014;**69**(2):529–34.
- 7 Wessling A, Boëthius G. Measurement of drug use in a defined population. Evaluation of the defined daily dose (DDD) methodology. *European Journal of Clinical Pharmacology*. 1990;**39**(3):207–10.
- 8 Merlo J, Wessling A, Melander A. Comparison of dose standard units for drug utilisation studies. *European Journal of Clinical Pharmacology*. 1996;**50**(1–2):27–30.
- 9 Walley T, Roberts D. Average daily quantities: a tool for measuring prescribing volume in England. *Pharmacoepidemiology and Drug Safety*. 2000;**9**(1):55–8.
- 10 Nosè M, Tansella M, Thornicroft G, Schene A, Becker T, Veronese A, et al. Is the Defined Daily Dose system a reliable tool for standardizing antipsychotic dosages? *International Clinical Psychopharmacology*. 2008;**23**(5):287–90.
- 11 Mandy B, Koutny E, Cornette C, Woronoff-Lemsi MC, Talon D. Methodological validation of monitoring indicators of antibiotics use in hospitals. *Pharmacy World & Science*. 2004;**26**(2):90–5.
- 12 Polk RE, Fox C, Mahoney A, Letcavage J, MacDougall C. Measurement of adult antibacterial drug use in 130 US hospitals: comparison of defined daily dose and days of therapy. *Clinical Infectious Diseases*. 2007;**44**(5):664–70.
- 13 Grimmsmann T, Himmel W. Discrepancies between prescribed and defined daily doses: a matter of patients or drug classes? *European Journal of Clinical Pharmacology*. 2011;**67**(8):847–54
- 14 de With K, Bestehorn H, Steib-Bauert M, Kern WV. Comparison of defined versus recommended versus prescribed daily doses for measuring hospital antibiotic consumption. *Infection*. 2009;**37**(4):349–52.
- 15 Haug JB, Reikvam Å. WHO defined daily doses versus hospital-adjusted defined daily doses: impact on results of antibiotic use surveillance. *Journal of Antimicrobial Chemotherapy*. 2013;**68**(12):2940–7.
- 16 Muller A, Monnet DL, Talon D, Hénon T, Bertrand X. Discrepancies between prescribed daily doses and WHO defined daily doses of antibacterials at a university hospital. *British Journal of Clinical Pharmacology*. 2006;**61**(5):585–91.
- 17 Valcourt K, Norozian F, Lee H, Raszynski A, Torbati D, Totapally BR. Drug use density in critically ill children and newborns: analysis of various methodologies. *Pediatric Critical Care Medicine*. 2009;**10**(4):495–9.
- 18 Bronzwaer SL, Cars O, Buchholz U, Mölstad S, Goettsch W, Veldhuijzen IK, et al.; European Anti-

- microbial Resistance Surveillance System. A European study on the relationship between antimicrobial use and antimicrobial resistance. *Emerging Infectious Diseases*. 2002;**8**(3):278–82.
- 19 Bitter I, Chou JC, Ungvari GS, Tang WK, Xiang Z, Iwanami A, Gaszner P. Prescribing for inpatients with schizophrenia: an international multi-center comparative study. *Pharmacopsychiatry*. 2003;**36**(4):143–9.
- 20 Bogle SM, Harris CM. Measuring prescribing: the shortcomings of the item. *British Medical Journal*. 1994;**308**(6929):637–40.
- 21 Folkhälsomyndigheten. Antibiotika och antibiotikaresistens: antibiotika är en grupp läkemedel som används för att behandla bakteriella infektioner. Available from: <http://folkhalsomyndigheten.se/amnesomraden/smittskydd-och-sjukdomar/antibiotika-och-antibiotikaresistens/> (last accessed 18 November 2015).
- 22 Castensson S, Eriksson V, Lindborg K, Wettermark B. A method to include the environmental hazard in drug prescribing. *Pharmacy World & Science*. 2009;**31**(1):24–31.
- 23 Simonsen GS, Urdahl AM, eds. *NORM/NORM-VET 2012. Usage of Antimicrobial Agents and Occurrence of Antimicrobial Resistance in Norway*. Norwegian Veterinary Institute. Available from: <http://www.vetinst.no/Publikasjoner/NORM-NORM-VET/NORM-NORM-VET-2012> (last accessed 18 November 2015).
- 24 One Health Initiative website: www.onehealthinitiative.com.
- 25 Korsgaard H, Høg BB, Agersø Y, eds. DANMAP 2012. Use of antimicrobial agents and occurrence of antimicrobial resistance in bacteria from food animals, food and humans in Denmark. Available from: http://www.danmap.org/Downloads/~media/Projekt%20sites/Danmap/DANMAP%20reports/DANMAP%202012/Danmap_2012.ashx (last accessed 18 November 2015).
- 26 European Medicines Agency. European Surveillance of Veterinary Antimicrobial Consumption (ESVAC). Available from: http://www.ema.europa.eu/ema/index.jsp?curl=pages/regulation/document_listing/document_listing_000302.jsp (last accessed 18 November 2015).
- 27 Sabuncu E, David J, Bernède-Bauduin C, Pépin S, Leroy M, Boëlle PY, et al. Significant reduction of antibiotic use in the community after a nationwide campaign in France, 2002–2007. *PLoS Med*. 2009;**6**(6):e1000084.
- 28 Jin XM, Lee J, Choi NK, Seong JM, Shin JY, Kim YJ, et al. Utilization patterns of disease-modifying antirheumatic drugs in elderly rheumatoid arthritis patients. *Journal of Korean Medical Science*. 2014;**29**(2):210–16.
- 29 Ubeda A, Cardo E, Sellés N, Broseta R, Trillo JL, Fernández-Llimós F. Antidepressant utilization in primary care in a Spanish region: impact of generic and reference-based pricing policy (2000–2004). *Social Psychiatry and Psychiatric Epidemiology*. 2007;**42**(3):181–8.
- 30 Damiani G, Federico B, Anselmi A, Bianchi CB, Silvestrini G, Iodice L, et al. The impact of regional co-payment and national reimbursement criteria on statins use in Italy: an interrupted time-series analysis. *BMC Health Service Research*. 2014;**14**:6.
- 31 Duong M, Salvo F, Pariente A, Abouelfath A, Lassalle R, Droz C, et al. Usage patterns of ‘over-the-counter’ vs. prescription-strength nonsteroidal anti-inflammatory drugs in France. *British Journal of Clinical Pharmacology*. 2014;**77**(5):887–95.
- 32 Ghannami I, Ahid S, Berrada G, Belaiche A, Hassar M, Cherrah Y. Trends in the use of antiasthmatic medications in Morocco (1999–2010). *Springerplus*. 2013;**2**(1):82.
- 33 Rahimtoola H, Egberts AC, Buurma H, Tijssen CC, Leufkens HG. Patterns of ergotamine and sumatriptan use in the Netherlands from 1991 to 1997. *Cephalalgia*. 2001;**21**(5):596–603.
- 34 Cooke C, Nissen L, Sketris I, Tett SE. Quantifying the use of the statin antilipemic drugs: comparisons and contrasts between Nova Scotia, Canada, and Queensland, Australia. *Clinical Therapy*. 2005;**27**(4):497–508.
- 35 Kalo Z, Abonyi-Toth Z, Bartfai Z, Voko Z. Pitfalls associated with the therapeutic reference pricing practice of asthma medication. *BMC Pulmonary Medicine*. 2012;**12**:35.
- 36 Wirtz VJ, Mol PG, Verdijk J, Vander Stichele RH, Taxis K. Use of antibacterial fixed-dose combinations in the private sector in eight Latin American Countries between 1999 and 2009. *Tropical Medicine & International Health*. 2013;**18**(4):416–25.
- 37 Plet HT, Hallas J, Kjeldsen LJ. Adherence to hospital drug formularies and cost of drugs in hospitals in

- Denmark. *European Journal of Clinical Pharmacology*. 2013;**69**(10):1837–43.
- 38 Kuster SP, Ruef C, Ledergerber B, Hintermann A, Deplazes C, Neuber L, Weber R. Quantitative antibiotic use in hospitals: comparison of measurements, literature review, and recommendations for a standard of reporting. *Infection*. 2008;**36**(6):549–59.
- 39 Stolker JJ, Heerdink ER, Pullen SE, Santman FW, Hekster YA, Leufkens HG, Zitman FG. Determinants of psychotropic drug usage in a general intensive care unit. *General Hospital Psychiatry*. 1998;**20**(6):371–76.
- 40 Grau S, Fondevilla E, Mojal S, Palomar M, Vallès J, Gudiol F; VINCat Antimicrobial Group. Antibiotic consumption at 46 VINCat hospitals from 2007 to 2009, stratified by hospital size and clinical services. *Enfermedades Infecciosas y Microbiología Clínica*. 2012;**30**(Suppl. 3):43–51.
- 41 Liew YX, Krishnan P, Yeo CL, Tan TY, Lee SY, Lim WP, et al.; Network for Antimicrobial Resistance Surveillance Singapore. Surveillance of broad-spectrum antibiotic prescription in Singaporean hospitals: a 5-year longitudinal study. *PLoS ONE*. 2011;**6**(12):e28751.
- 42 Zarb P, Ansari F, Muller A, Vankerckhoven V, Davey PG, Goossens H. Drug utilization 75% (DU75%) in 17 European hospitals (2000–2005): results from the ESAC-2 Hospital Care Sub Project. *Current Clinical Pharmacology*. 2011;**6**(1):62–70.
- 43 Kuster SP, Ruef C, Bollinger AK, Ledergerber B, Hintermann A, Deplazes C, et al. Correlation between case mix index and antibiotic use in hospitals. *Journal of Antimicrobial Chemotherapy*. 2008;**62**(4):837–42.
- 44 Polk RE, Hohmann SF, Medvedev S, Ibrahim O. Benchmarking risk-adjusted adult antibacterial drug use in 70 US academic medical center hospitals. *Clinical Infectious Diseases*. 2011;**53**(11):1100–10.
- 45 AMC Tool: the antimicrobial consumption tool. Available from: <http://amu-tools.org/amctool/amctool.html> (last accessed 18 November 2015).
- 46 European Centre for Disease Prevention and Control. European Surveillance of Antimicrobial Consumption Network (ESAC-Net). Available from: <http://www.ecdc.europa.eu/en/activities/surveillance/esac-net/pages/index.aspx> (18 November 2015).
- 47 Filius PM, Liem TB, van der Linden PD, Janknegt R, Natsch S, Vulto AG, Verbrugh HA. An additional measure for quantifying antibiotic use in hospitals. *Journal of Antimicrobial Chemotherapy*. 2005;**55**(5):805–8.
- 48 Blix HS, Røed J, Sti MO. Large variation in antibacterial use among Norwegian nursing homes. *Scandinavian Journal of Infectious Diseases*. 2007;**39**(6–7):536–41.
- 49 Pittrow D, Krappweis J, Rentsch A, Schindler C, Hach I, Bramlage P, Kirch W. Pattern of prescriptions issued by nursing home-based physicians versus office-based physicians for frail elderly patients in German nursing homes. *Pharmacoepidemiological Drug Safety*. 2003;**12**(7):595–9.
- 50 Nhachi CF, Zvaraya P, Kasilo J. Drug utilisation in the geriatric population in the nursing homes and central hospitals of urban Harare. *Central African Journal of Medicine*. 1994;**40**(5):126–31.
- 51 Eriksen HM, Sæther AR, Viktil KK, Andberg L, Munkerud MW, Willoch K, Blix HS. Use of antibiotics in nursing homes – surveillance with different methods. *Tidsskrift for den Norske laegeforening*. 2013;**133**(19):2052–6.
- 52 Majic T, Pluta JP, Mell T, Aichberger MC, Treusch Y, Gutzmann H, et al. The pharmacotherapy of neuropsychiatric symptoms of dementia: a cross-sectional study in 18 homes for the elderly in Berlin. *Deutsches Ärzteblatt International*. 2010;**107**(18):320–7.
- 53 Sicras-Mainar A, Peláez-de-Loño J, Castellá-Rosales A, Rodríguez-Darriba M. Consumption of inappropriate psychotropic drugs in residential homes for the elderly: comparative study between 2001 and 2006. *Farmacia Hospitalaria*. 2008;**32**(2):96–101.
- 54 Irwin A, Sharland M. Measuring antibiotic prescribing in hospitalised children in resource-poor countries: a systematic review. *Journal of Paediatric Child Health*. 2013;**49**(3):185–92.
- 55 Porta A, Hsia Y, Doerholt K, Spyridis N, Bielicki J, Menson E, et al. Comparing neonatal and paediatric antibiotic prescribing between hospitals: a new algorithm to help international benchmarking. *Journal of Antimicrobial Chemotherapy*. 2012;**67**(5):1278–86.