

<i>ECHIM Indicator name</i>	D) Health interventions: health services 82. Surgical wound infections
<i>Definition</i>	To be developed: Surgical wound infection rate, as % of (all or selection of) surgical operations.
<i>Key issues and problems</i>	<p>Several efforts by ECDC, OECD, WHO, SImPatIE project to define indicator and collect data. However, data availability and comparability is restricted and definitions vary:</p> <p>1) ECDC:</p> <ul style="list-style-type: none"> a) the cumulative incidence of surgical site infections (SSI): which is the crude percentage of operations resulting in a SSI, b) the incidence density, which is the number of SSI per 1,000 post-operative days at risk (i.e. without prior SSI) in the hospital. <p>The incidence density is the preferred measure for the comparison of incidence between countries as it uses only observations during the hospital stay in both numerator and denominator, and comparisons are therefore less affected by variation in length of post-operative stay or intensity of case-finding post-discharge. However, the incidence density can only be calculated when the discharge date is known. Therefore, a third indicator was added in 2008: the cumulative incidence excluding postdischarge infections.</p> <p>2) WHO: Average rate (in all hospitals) of inpatient surgical operations with postoperative surgical wound infection (i.e. with code for postoperative wound infections, ICD-9: 998.5 and ICD-10: T81.4) during the given calendar year, expressed as percentage of all surgical operations.</p> <p>3) Safety Improvement for Patients in Europe, SImPatIE recommendation: Percent of patients experiencing a wound infection (ICD-9 998.51 and 998.52; secondary diagnosis only) out of all hospitalised patients. (Indicator PSI 11: Wound Infection)</p> <p>4) OECD: Assessment by Patient Safety Panel-project: It is unlikely that standardized comparable data to support the indicator of Wound Infection are available consistently across OECD countries. Therefore OECD has given up about five years ago to try to collect data on the indicator surgical wound infections. In recent years, OECD has focused their effort more specifically on catheter-related bloodstream infections, with:</p> <ul style="list-style-type: none"> • Numerator: Number of hospital discharges with a Catheter-Related Bloodstream Infection as a secondary diagnosis. Included are the following ICD-codes: <ul style="list-style-type: none"> - ICD-9-CM: Discharges with ICD-9-CM code of 999.3 or 996.62 in any secondary diagnosis field. - ICD-10-WHO: Discharges with ICD-10-WHO code of T80.2 or T82.7 or T88.0 in any secondary diagnosis field. • Denominator: All surgical and medical discharges, 15 years and older or MDC 14 (Major Diagnostic Categories) (pregnancy, childbirth, and puerperium). <p>It is as yet not clear whether one of the existing data collection initiatives can serve as an appropriate base for gathering high quality, comparable data in the future that can be used by ECHIM.</p>
<i>Preferred data type and data source</i>	<p>Preferred data type: Hospital (discharge) data</p> <p>Preferred data source: ?</p>
<i>Data availability</i>	<ul style="list-style-type: none"> - ECDC collects data on surveillance of surgical site infections for 14 countries and for the following operation categories: CABG: coronary artery bypass graft; CHOL: cholecystectomy; COLO: colon surgery; CSEC: Caesarean section; HPRO: hip prosthesis; KPRO: knee prosthesis; LAM: laminectomy - In the ECDC annual epidemiological report the following figures are published: <ul style="list-style-type: none"> - Trends in cumulative incidence of surgical site infections in Europe by category of surgical intervention, 2004–09 - Trends in cumulative incidence of surgical site infections in hip prosthesis by country, 2004–09 - WHO-HfA has data for some countries, but for many countries data are from 1990s. Data

	<p>are not truly comparable (different definitions, year of data varies, for example).</p> <ul style="list-style-type: none"> - Assessment by SImPatIE-project: Data definitions, data quality, and availability vary across institutions and across Europe, which makes this indicator unsuitable for nation wide comparison or benchmarking under the current conditions. - OECD catheter-related bloodstream infections: This indicator will need further development in terms of data availability and comparability before it can be published in regular OECD publications such as "Health at a Glance".
<i>Rationale</i>	<p>Indicator for the safety of operative interventions. Wound infection can lead to re-operation and prolonged hospital stay, to increased morbidity and mortality for patients and to increased costs for the health care system. Amenable to interventions: the incidence of wound infection can be reduced by proper pre-, intra- and post-operative care, in particular strict hygiene.</p>
<i>Remarks</i>	<ul style="list-style-type: none"> - ECDC: Inter-country comparisons of SSI rates should be made with caution because at least part of the inter-country differences can be explained by several factors, for example: <ul style="list-style-type: none"> - Differences in intensity of post-discharge surveillance methods - Differences in post-operative length of stay - Bias due to selection of hospitals with specific problems in countries with low participation in HAI-Net SSI (see references) - Differences in the mix of hospitals that participated each year. - Differences in patient case-mix and mix of types of intervention (some interventions have a higher intrinsic risk of infection) - Different interpretations of the same case definitions, resulting in different reported percentages of superficial infections - Organisational aspects such as mandatory participation with public disclosure of SSI indicators.
<i>References</i>	<ul style="list-style-type: none"> - Safety Improvement for Patients In Europe, SImPatIE: http://www.simpatie.org/ - SImPaTIE project, documentation on indicator 'Wound infection': http://www.simpatie.org/Main/pf1175587453/wp1175588035/wp1179316968 - Successor project SImPaTIE = EUNetPas: http://www.eunetpas.eu/ (NB no focus on data collection; focus on best practice exchange). - OECD Health Care Quality Indicators (HCQI) project: http://www.oecd.org/health/hcqi - OECD Work in Patient Safety: http://www.oecd.org/document/43/0,3343,en_2649_33929_37090539_1_1_1_37407.00.html - IPSE (Improving Patient Safety in Europe), a network for the surveillance of healthcare-associated infections (HCAI) in Europe: http://helics.univ-lyon1.fr/ In July 2008, the coordination of IPSE was transferred to ECDC - The Healthcare-Associated Infections Surveillance Network (HAI-Net, coordinated by ECDC. The activities of HAI-Net are largely based on the activities of the former IPSE network. http://www.ecdc.europa.eu/en/activities/surveillance/hai/Pages/default.aspx - European Centre for Disease Prevention and Control. Annual Epidemiological Report on Communicable Diseases in Europe 2009. Stockholm, European Centre for Disease Prevention and Control. http://ecdc.europa.eu/en/publications/Publications/0910_SUR_Annual_Epidemiological_Report_on_Communicable_Diseases_in_Europe.pdf
<i>Work to do</i>	<p>Solve key issues and problems; follow development existing data collections and discuss issues of availability and comparability with ECDC, WHO and OECD.</p>