FOCUS on Emergency Departments: Technical Data Definitions and Data Sourcing[1,2]

Overall patient experience with emergency department communication	
Survey question(s)	Each of the following questions asked about different aspects of communication with patients by emergency department staff. These questions were asked separately for doctors and nurses. During this emergency department visit, how often did doctors/nurses introduce themselves to you? ○ Never ○ Sometimes ○ Usually ○ Always During this emergency department visit, how often did doctors/nurses treat you with courtesy and respect? ○ Never ○ Sometimes ○ Usually ○ Always During this emergency department visit, how often did doctors/nurses listen carefully to you? ○ Never ○ Sometimes ○ Usually ○ Always During this emergency department visit, how often did doctors/nurses explain things in a way you could understand? ○ Never

[1] Documentation and sourcing for the reported emergency department measures is the result of collaborative work between members of the HQCA's Health System Analytics team and members of AHS' Analytics team. Credit regarding determining the appropriate data definitions should be attributed to the AHS Analytics team for most of the measures below.

[2] While the HQCA used all reasonable efforts to ensure the accuracy, completeness, and reliability of the data used in this website, data continues to expand in scope and completeness. As such, the values reported may change over time.

	○ Sometimes ○ Usually ○ Always
Calculation	A principle components analysis was performed to identify sets of variables (targeting quality) that share common underlying "themes". Based on these results, and a subsequent analysis of internal consistency (reliability) for the survey questions within each component, composite measures were constructed. Record-level composite scores were calculated following principles established in the HQCA's 2007 *Emergency Department Patient Experience Survey*.[3] In keeping with the principles established in the HQCA's 2007 emergency department survey, regarding the composite scale the HQCA has adopted the standardized response scoring scheme (0-100 scale) employed by the Healthcare Commission for the British *Emergency Department Survey*.[4] According to this scoring scheme, responses to individual survey questions are scored on a scale from 0 to 100; a score of 0 indicates the lowest ranking of patient experience (suggesting considerable room for improvement), while a score of 100 indicates the highest and best ranking of patient experience. For response options in between the most-negative (0) and most-positive (100) responses, scores are assigned at appropriate positions along the scale (i.e., for the questions that make up this composite, never = 0, sometimes = 33, usually = 67, always = 100). Average scores are calculated across all non-missing question responses within the composite for each respondent: $$Q_i = \frac{\sum(\text{nonmissing composite question response scores for respondent } i)}{\text{Total number of nonmissing composite question responses for respondent } i}$$ Average composite scores are then calculated for each facility: $$Avg(COMP) = \frac{\sum(Q_i)}{\text{Total number of respondents with nonmissing composite scores}}$$
Description	Reported separately, based on responses from the four survey questions listed above: • Average rating of patients' overall experience communicating with emergency department doctors (0-100 rating). • Average rating of patients' overall experience communicating with emergency department nurses (0-100 rating).
Data source(s)	HQCA Emergency Department Patient Experience of Care (EDPEC) Survey
Assumptions	Composite measures are essentially summary scores that capture broad themes

[3] For more information on the calculation of composite measures, including the consideration of alternative methods, please see the HQCA's 2007 *Emergency Department Patient Experience Survey*, accessible at: http://hqca.ca/surveys/emergency-department-patient-experience/emergency-department-patient-experience-survey/.

[4] More information about this scoring scheme can be found in the User Guide for the British *Emergency Department Survey*, accessible at: http://doc.ukdataservice.ac.uk/doc/5092/mrdoc/pdf/5092userguide2004.pdf.

	of patient experience in the emergency department. These broad themes are generally not measureable in and of themselves; rather they are only measurable through specific survey questions that contribute to the theme[5] (are shown to be related via the above-mentioned principle components analysis). The responses to these survey questions are combined (see Calculation section) to score the theme as a whole.
Exclusions	1. General exclusion criteria for the HQCA EDPEC Survey include the following: • Children aged 0 to 15 for the 14 large urban and regional adult emergency department sites. • Patients older than 12 for the two Children's Hospital emergency department sites. • Patients who left the emergency department before being seen or treated. • Patients who died in the context of their emergency department or inpatient stay. • Patients without contact information (phone number). • Privacy-sensitive cases (e.g., domestic abuse, attempted suicide, etc.) 2. The questions that make up this composite were asked of all respondents. Specific to the questions about communication by doctors, a small number of respondents who indicated that they did not see a doctor during their emergency department visit were classified as "not applicable," were not assigned a response score, and were not included in the composite calculation. These cases were excluded because they do not contribute to our understanding of patients' experiences communicating with emergency department doctors. 3. Results from April to July 2016 are not reported for the Northern Lights Regional Health Centre due to the forest fire that affected Fort McMurray and forced the closure of the Northern Lights Regional Health Centre.
Limitations	1. This method of calculating composites is sensitive to missing data and, when respondents have not answered all survey questions that make up the composite, individual survey questions count more than they do for respondents that answered all composite questions.[6] 2. Sampling for the HQCA EDPEC Survey purposely excludes patients in specific age groups at specific sites (see Exclusions section). As a result, data collected for these sites does not represent the experiences of all patients treated at these emergency department sites, but does represent the majority. 3. Sample sizes per site, per month have been determined to reflect the principles of statistical process control (SPC) methods, and allows for the monitoring of patient experience over time.[7] The number of patients surveyed per site per month/quarter are not statistically representative of the population

[5] Lakhani, A. Indicators for Measuring Patient Experience. *NHS Patient Experience Journal: Measures and Metrics*; 2012. Accessed November 28, 2016 via: http://patientexperienceportal.org/wp-content/uploads/2012/07/Inspiration-NW-Journal-2.pdf.

[6] This method has the advantage of producing a composite score for each respondent. Record-level composite scores are valuable because they make it possible to perform various multivariate analyses.

[7] See Appendix A for an explanation of the sample size determination and the principles of SPC methods.

	treated at each site for that given time period; the sample is statistically representative at the site-level every 6 months[8] – caution is urged when interpreting specific data points.

[8] More information about the statistical representativeness calculation (with finite population correction) can be found at: http://www.sut.ac.th/im/data/read6.pdf.