IDENTIFYING INFORMATION	
Name:	**Communication with patients about possible side effects of medicines**
Survey question(s):	Before giving you any new medicine, did the doctors or nurses describe possible side effects to you in a way you could understand? ○ Yes, definitely ○ Yes, somewhat ○ No Before giving you pain medicine, did the doctors and nurses describe possible side effects in a way you could understand? ○ Yes, definitely ○ Yes, somewhat ○ No
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*.[46] 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*.[47] 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, no = 0, yes somewhat = 50, yes definitely = 100).

[46] 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/.
[47] 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.

	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: $\text{Avg(COMP)} = \frac{\sum(Q_i)}{\text{Total number of respondents with nonmissing composite scores}}$
Description:	Average rating of patients' overall experience with communication about possible side effects of medicines (0-100 rating) based on responses from the two survey questions listed above.
Data source:	HQCA Emergency Department Patient Experience of Care (EDPEC) Survey
Assumptions:	Composite measures are essentially summary scores that capture broad themes of patient experience in the emergency department. These broad themes are generally not measurable in and of themselves; rather they are only measurable through specific survey questions that contribute to the theme[48] (are shown to be related via the above-mentioned principle components analysis). 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. Additional exclusion criteria for this composite measure are the product of the constituent questions only being asked of a subset of survey respondents:

[48] 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.

	New medicine ▪ Only respondents who indicated they were given new medicines they had not taken before during their emergency department visit were asked this question *Pain medicine* ▪ Only respondents who indicated that they were in pain and got medicine for pain while in the emergency department were asked this question Note: Although only approximately 30% of respondents answered the question about whether doctors and nurses described possible side effects of new medicines to them, and only about 40% of respondents answered a similar question about pain medicine, those who are missing are in most cases ineligible to be asked the question (93-94% of respondents missing on these questions were gated[49] out due to previous responses). Therefore, despite the large number of missing data, we can be confident that these questions were asked of people whom it was appropriate.
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 questions count more than they do for respondents that answered all composite questions.[50] Scores for this composite may be more sensitive to missing data than the other composites due to the exclusion criteria listed above. 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.[51] The number of patients surveyed per site per month/quarter are not statistically representative of the population treated at each site for that given time period; the sample is statistically representative at the site-level every 6 months[52] – caution is urged when interpreting specific data points.

[49] 'Gating' or 'screening' is a commonly used method in surveys to ensure respondents are only being asked questions that are appropriate for them, based on their experience and their answers to previous survey questions. For example, if a respondent indicates that they were not in pain or given pain medicine, it would not be appropriate to then ask them if staff described the possible side effects of pain medicine to them.
[50] 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.
[51] See Appendix A for an explanation of the sample size determination and the principles of SPC methods.
[52] More information about the statistical representativeness calculation (with finite population correction) can be found at: http://www.sut.ac.th/im/data/read6.pdf.