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Short Communication

An evaluation of hospital attractiveness and primary care availability leading to increasing emergency department visits

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It has been reported that primary care availability in the neighborhood surroundings of each emergency department (ED) may have an impact on ED activity trends,[1,2] and that the number of asthma and acute respiratory syndromes associated with ED visits has been linked with the continuity of care and with poor access to healthcare.[3,4] Therefore ED-related visits may be considered as an indicator of primary care. Otherwise, patients have the free choice of their hospital and ED and some parameters may show a preference from one hospital to another.[5] In most cases, hospital choice has been linked with patients' satisfaction and hospital quality but also with activities such as research.[6] This is the attractiveness of the hospital for patients.[5,7]

We hypothesized that primary care availability in surrounding areas and the attractiveness of hospital and ED could be linked to ED visits. We conducted a 5-year observational study including all ED visits to BCB and BJN, two urban teaching hospitals located 1.2 km from each other, from 2010 to 2014. Data were completely anonymous. This project was approved by the Emergency Ethics Committee (Assistance Publique-Hôpitaux de Paris) as a part of ED quality improvement program. Primary care availability was calculated in terms of the surrounding area's number and density of: (i) physicians, (ii) specialists, (iii) nurses; and number of (iv) non-urgent care, (v) urgent care, and (vi) ED facilities. For each of these variables, data were obtained from the government regional health agency and has been corrected based on regional means standardized to allow presentation in a graph. We evaluated the patients' choice or attractiveness by interviewing 200 patients consulting ED (100 patients in each site). We used a 10-point assessment for each of the following previously proposed components:[7] (i) accessibility; (ii) specialized medical and surgical wards available in the hospital; (iii) clinical support including the availability of radiology, laboratory, and interventional exams; (iv) hospital buildings; (v) ED buildings; and (vi) ED quality indicators. The average value was used for each component.

Finally, 511,836 visits (BJN 144,769 [28.3%], BCB 367,067 [71.7%]) were included. The number of ED visits rose by +10.9% (95% confidence interval [CI] 8.6–14.2), but differences

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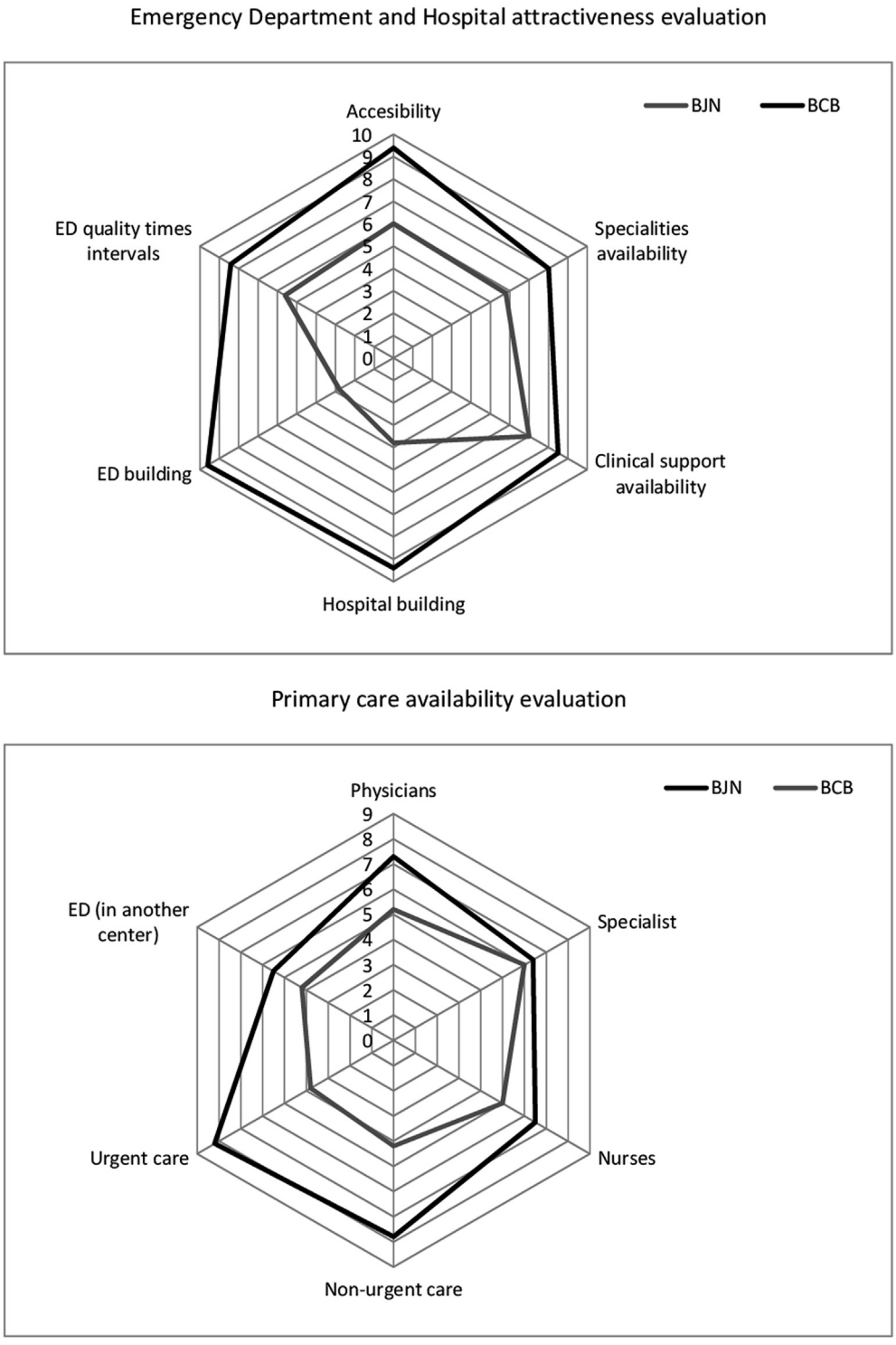

Fig. 1 – Evaluation of components defining attractiveness and primary care availability.

were found between BJN +0.2% (95% CI −0.8 to 0.9) and BCB +15.4% (95% CI 13.6–19.4). An increasing trend for asthma visits (+57.3% [95% CI 52.1–64.2]; $P < 0.00001$) was found, but while we found an increasing trend at BCB (+90.8% [95% CI 85–109]; $P < 0.000001$), a decreasing trend was shown at BJN (−2.9% [95% CI −4.1 to −0.4]; $P = 0.07$). For influenza-like syndromes (ILSs), increasing trends were found (+19.6% [95% CI 15.2–26.1]; $P < 0.00001$) at BJN (+7.7% [95% CI 4.2–12.6]; $P < 0.0001$) and BCB (+18% (95% CI 14.3–25.3); $P < 00001$).

In the cities within the sector of BJN, the density of physicians, specialists, and nurses is within the national and regional averages. For BCB, the density of physicians and