

## Research Letter

### Prevalence and Type of Brand Name Fast Food at Academic-affiliated Hospitals

*To the Editor:* Many hospitals serve fast food at their on-site restaurants and cafeterias for patients, visitors, and staff. Fast food has been correlated with poor diets and poor health outcomes in numerous studies. Several studies have shown that people who eat fast food tend to eat more unhealthy fats,<sup>1-3</sup> more calories,<sup>1-3</sup> and eat fewer fruits and vegetables.<sup>2-4</sup> Two studies have also correlated fast food consumption with long-term weight gain.<sup>5,6</sup> Although this does not prove causation, other studies have shown that on the days people eat fast food, they take in more calories.<sup>7,8</sup>

A key part of the mission of most academic-affiliated hospitals is to improve the health of the communities they serve. The types of food served in their on-site food establishments might not be consistent with this mission. Brand name fast food (BNFF) is a type of fast food for which nutritional information is often available (eg, on the Internet). Thus, by determining the type and prevalence of BNFF at hospitals, those interested in public health can gain a general idea of the nutritional value of food publicly offered at hospitals. The purpose of this study was to determine the prevalence and type of BNFF at academic-affiliated hospitals.

#### Methods

This study used medical students to report on fast food franchises at the teaching hospitals through which they rotate. Students from all allopathic medical schools in the United States (including Puerto Rico) were surveyed. Respondents were obtained from active members of the American Medical Student Association, and through contacting schools for student representatives (eg, class presidents). One student at each medical school was instructed to list up to 5 of their main teaching hospitals/medical centers using a Web-based survey. For each, they identified which, if any, BNFF was sold on the hospital campus. This included franchise fast food served at a chain restaurant or in other venues (ie, snack bars and cafeterias). Students were provided a list of popular chains taken from an industry database. (The industry defines "limited service chain restaurants" as eating places where customers order items and pay before eating and where food can be eaten on the premises or taken out.<sup>9</sup>) Students were also instructed to fill in other brand-name fast food not on the list. Data were collected from January through October of 2005.

#### Results

Survey responses were received from a student at 113 of 125 medical schools (90% response rate) and represented 233 affiliated hospitals/medical centers. Ninety-eight of the 233 hospitals (42%) had at least one BNFF served on

campus. There were a total of 163 occurrences of BNFF served on hospital grounds, because many hospitals had more than one type. One hundred thirty five hospitals (58%) had no BNFF establishments on campus; 65 (28%) hospitals had one BNFF, whereas 15 (6%) had 2 on their campus, 10 (4%) had 3, 5 (2%) had 4, and 3 (1%) hospitals had >4 BNFF types on their grounds. When looking at the prevalence by medical school, 71/113 (63%) of medical schools had at least one affiliated teaching hospital/medical center that served BNFF. Table 1 shows the most common franchises represented at these hospitals/medical centers.

#### Conclusions

Among the 234 academic-affiliated hospitals surveyed, 42% had BNFF served on their campus. This percentage is similar to that reported by Cram et al,<sup>10</sup> who found that 38% of the top 16 hospitals in the United States had fast food establishments. McDonald et al<sup>11</sup> reported that 9% of children's hospitals (including academic and non-academic) in North America had BNFF franchises. However, in the present study we included food served in restaurants and also brand name products available in other venues on campus.

Others have studied the location of BNFF franchises. One study showed a positive association between the state level of obesity and the number of Burger Kings and McDonalds per person or per square mile.<sup>12</sup> Moreover,

**Table 1. Frequency of Brand Name Fast Food (BNFF) Franchises at 233 Academically Affiliated Hospitals**

Brand Name Fast Food Franchise	Number of Hospital Campuses Hosting a BNFF
Krispy Kreme	23
Subway	21
Burger King, McDonalds	16 of each
Au Bon Pain, Pizza Hut	10 of each
ChickfilA	7
Wendy's	6
Chipotle, Dunkin Donuts, Einstein's Bagels, KFC, Quizno's, Starbucks	4 of each
Taco Bell	3
Sbarro, TCBY, Freshen's Yogurt	2 of each
Amante's Pizza, Blimpie, Carvel, Chicken Kitchen, Dairy Queen, Dangelo's, Dominos, El Pollo Loco, Gloria Jean Coffee, Goldstar Chili, Hardees, Hovan, LaRosa's Pizza, Little Dino's, Miami Subs, Mr.Goodcent's, Mrs.Fields, Panda Express, Papa John's, Pizza Inn, Tim Hortons	1 of each

although 35% of Chicago schools had a fast food franchise within 400 meters,<sup>9</sup> this study confirms that they are also prevalent in close proximity to (ie, on the grounds of) many hospitals/medical centers.

Our study also reports the most common types of BNFF in hospitals. As nutritional information on BNFF is available on most company Web sites, the readership can use this data to make its own judgments on the nutritional quality of some of the food offered by academic-affiliated hospitals. Some hospital administrators have attempted, with some success, to remove what they deemed as unhealthy fast food from their premises. For instance, at the Cleveland Clinic, the Pizza Hut was removed from the hospital, but McDonalds remained.<sup>13</sup> Administrators at teaching hospitals should continue to consider whether the food they serve on their campuses is consistent with the mission of improving the health of their communities. Future studies should continue to characterize the types of food available in all venues on medical center campuses.

---

I would like to acknowledge Kris Friedrich, AMSA's Webmaster for logistic help with the survey and Martin L. Lesser, PhD, for statistical input and editorial comments.

Lenard I. Lesser, MD  
Tufts University Family Medicine Residency,  
Malden, MA

## References

1. Schmidt M, Affenito SG, Striegel-Moore R, et al. Fast-food intake and diet quality in black and white girls. *Arch Pediatr Adolesc Med* 2005;159:626–31.
2. Paeratakul S, Ferdinand DP, Champagne CM, Ryan DH, Bray GA, et al. Fast-food consumption among US adults and children: dietary and nutrient intake profile. *J Am Diet Assoc* 2003;103:1332–8.
3. French SA, Story M, Neumark-Sztainer D, Fulkerson JA, Hannan P. Fast food restaurant use among adolescents: associations with nutrient intake, food choices and behavioral and psychosocial variables. *Int J Obes Relat Metab Disord* 2001;25:1823–33.
4. Satia JA, Galanko JA, Siega-Riz AM. Eating at fast-food restaurants is associated with dietary intake, demographic, psychosocial and behavioural factors among African Americans in North Carolina. *Public Health Nutri* 2004;7:1089–96.
5. Pereira MA, Kartashov AI, Ebbeling CB, et al. Fast-food habits, weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis. *Lancet* 2005;365:36–42.
6. French SA, Harnack L, Jeffrey RW. Fast food restaurant use among women in the Pound of Prevention study: dietary, behavioral, and demographic correlates. *Int J Obes Relat Metab Disord* 2000;24:1353–9.
7. Ebbeling CB, Sinclair KB, Pereira MA, Garcia-Lago E, Feldman HA, Ludwig DS. Compensation for energy intake from fast food among overweight and lean adolescents. *JAMA* 2004;291:2828–33.
8. Bowman SA, Gortmaker SL, Ebbeling CB, Pereira MA, Ludwig DS, et al. Effects of fast-food consumption on energy intake and diet quality among children in a national household survey. *Pediatrics* 2004;113:112–8.
9. Austin SB, Melly SJ, Sanchez BN, Patel A, Buka S, Gortmaker SL. Clustering of fast-food restaurants around schools: a novel application of spatial statistics to the study of food environments. *Am J Public Health* 2005;95:1575–81.
10. Cram P, Brahmjee KN, Fendrick AM, Saint S. Fast food franchises in hospitals. *JAMA* 2002;287:2945–6.
11. McDonald C, Wengle JG, Gibson J, McCrindle BW. Food choices available for outpatients and visitors to children's hospitals in Canada and the United States. *Can J Cardiol* 2005;21 (Suppl C): Abstract 413.
12. Maddock J. The relationship between obesity and the prevalence of fast food restaurants: state-level analysis. *Am J Health Promot* 2004;19:137–43.
13. Deardorff J. McDonald's sits on its buns after clinic asks exit. *Chicago Tribune Chicago (IL)*: Jan 9, 2005. p. 6.