

OPRE 6398.001 Prescriptive Analytics

Reading 9*

Some major airlines are beefing up their food budgets this year, but thousands of passengers still will go hungry because of a problem the airlines haven't licked. Last month, on a Northwest flight from Minneapolis to Orlando, only 240 meals were put on board for the DC-10's 250 passengers, even though the flight had been overbooked for four days.

Providing in-flight meals to airline passengers is big business. Northwest's and Continental's food budgets are each around \$300 million per year. Delta serves about 135,000 meals per day. American Airlines spends approximately \$800 million each year on food, with each meal averaging \$8.20. With these huge expenses for meals, airlines are very interested in accurately forecasting the number of meals that will be needed on each flight.

Factors that make airline meal forecasting difficult include passenger no-shows, last-minute ticket purchases, and cancelled flights. To further complicate matters, some passengers decide not to have meals, others request special-diet meals, children can ask for a kid's meal, and first-class passengers receive different meals than economy-class passengers and may have two or more meal choices. Moreover, some flights may be only 60 percent full while others may be 100 percent full. Finally, an airline gate agent must occasionally decide between getting a flight out on time or waiting until extra meals arrive.

If too many meals for a flight are ordered, the extra meals must be thrown away albeit some items such as boxed cereal might be given to charity. If it does not order enough meals, then hungry passengers may be upset and may not fly on that airline again in the future even if they receive meal vouchers, frequent-flier coupons, or free mixed drinks. The stakes are indeed high to accurately predict the number of meals needed.

In the entire airline industry, meal shortfalls run around 1 percent. Last year, Continental had an average meal shortage of 0.6 percent and had excess meals that averaged 3.5 percent at outlying hubs and 5 percent at its home base in Houston. To help ensure that first-class passengers are satisfied with their choice of meal, Northwest raised the ratio of meals on board to passengers boarded from 100 percent to as much as 125 percent.

"People expect to be fed," says Linda Zane, senior director of dining services at Continental. "Good food is something we take very seriously." The ability to provide accurate demand forecasts is critical to quality customer service in a cost-efficient manner.

* Adapted from Blank, D. Meal shortfalls still gnaw at some airlines. *USA Today*, 2000, February 22, p. 5B.