



## SAS® helps power Avantas' innovative staffing solution

By taking years of data and industry expertise and pairing it with SAS® Forecast Server, Avantas helps client hospitals spend more time on patient care and less time staffing their units. With SAS®, Avantas has grown its staffing forecast business without increasing its work force.

### Industry

Healthcare Providers

### Business Issue

Improve forecasting capabilities to more accurately and more quickly predict hospital labor needs.

### Solution

SAS® Forecast Server

### Benefits

Forecasts that once took 80 hours to produce now take eight hours, accuracy has improved by 13 percent, business has grown fivefold without adding staff, dramatic decrease in the time nurses spend on staffing issues.

The Omaha, NE, company is recognized for proven, best-practice work strategies for the health industry and provides staffing forecasts to 22 hospitals (200 units) nationwide as part of its Smart Square® staffing solution. Avantas' offering helps hospitals spend less time on administrative staffing tasks and more time on improving the quality of patient care at the nursing-unit level. More effective staffing helps hospitals save money and improve morale by reducing dependence on contract nurses and last-minute schedule changes. With excellent forecasts, hospitals are better able to assign bonus dollars to the work shifts that are the hardest to fill, and use shift premiums and overtime more effectively.

Prior to using SAS, it took an Avantas staff member three to four weeks to generate forecasts. "We'd have to pull data out of SPSS, paste it into Excel and do it over and over again. It was very manual and very time consuming, and we could only update that forecast when something changed," explains Julie Kiefer, Manager of Analytics. "We wanted to automate our forecasts in order to provide our clients with a proactive solution." The company also wanted to expand and could not do so without either hiring additional staff or finding a more efficient forecasting method.

Avantas chose SAS because it can handle thousands of models and automate the process. "With other solutions, the amount of manual work would have been overwhelming. SAS has the ability to incorporate hundreds of different

models, allowing us to create a custom forecasting methodology. That is very important because every unit in a hospital behaves so differently," Kiefer says. Among the client successes using SAS Forecast Server:

- Hospital users have the information at their fingertips via a real-time, decision-support dashboarding tool.
- Nurse managers, who once spent 60 percent of their time on staffing issues, spend less than half that with the Avantas solution.
- Shift bonus dollars are targeted more accurately. Hospital clients now know the highest-need shifts far in advance and can offer the right amount of supplement pay to get them filled promptly.
- Nursing managers can decrease expenses by staffing more efficiently, which saves on overtime, contract-nursing costs and nursing turnover. Units are also staffed appropriately, leading to a higher quality of care.

For Avantas, SAS has brought other kinds of success:

- The company has grown its business fivefold without adding staff to the forecasting area. Avantas staffers can create a unit forecast in about eight hours versus 80 hours pre-SAS.
- The accuracy of unit-staffing models has increased 13 percent, on average (30 days out). The accuracy continues to improve dramatically as it gets closer to the shift date.



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The forecasting ability Avantas provides customers by using SAS is a huge selling point to hospitals. “It’s one of our sizzle points. We have 10 years of business intelligence experience and data that feed these models,” says Michelle Krapfl, Vice President of Operations and Administrative Services. “The ability to make adjustments to the models and immediately receive updated forecasts is crucial for the 24/7 ever-changing healthcare environment.”

SAS not only offered Avantas a product that could leverage their data, it provided domain experts through SAS

Professional Services to get the most out of the solution. “Our models aren’t run on just general data. It’s very specific to the healthcare industry and SAS experts supported us every step of the way,” Krapfl says.

Most importantly, the forecasts go a long way to making the harried life of a nurse manager a little easier. “It really gives them the peace of mind that they can see critical needs weeks in advance to proactively recruit the right staff, avoiding the last-minute chaos in staffing,” Krapfl says. “Nurses want to focus on patient care, not scheduling.”



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