

Quick Tips: “Prediction Comfort”

– By Randy Sotomayor, Budget Director, Charles County Public Schools

A quick and easy way to estimate future trends is to use a simple seasonal formula. I use this formula to project trends for the entire school system. Adjustments are considered after meeting with offices on a monthly basis to review current trends and to inform me of new upcoming events. This quick and easy formula is the starting point for future estimates.

The formula adjusts to certain seasonal trends and uses prior years information as the basis. The formula is as follows:

$$\left(\text{Current Year to date} \frac{\text{Expenditures}}{\text{(Prior year to date expenditures for the same period)}} \right) \times \text{Prior Year Expenditures} = \text{the Predicted Current Year Outcome}$$

This equation assumes that history will most likely repeat itself. The second part of this equation provides the basis or relevant point for the predicted outcome. I use this concept in predicting health insurance costs. Figure 1.0 lists health claim expenditures by calendar month for years 2012 and 2013. To predict claim expenditures for the month of October, you can apply the above formula to predict \$479,456 for the month of October. Year-to-date expenditures up to the month of September is 79 percent of last year’s September year-to-date expenditures ($[\$5,727,301/\$7,261,798]=.788689$). To predict October expenditures, the factor in the first part of the equation is multiplied by the month of October of the previous year. Predictions for the months of November and December can be calculated using the same methodology. Please note, the more data included in the formula, the more reliable the prediction.

Figure 1.0

Month	Actual Claims	
	2012	2013
Jan	794,387	543,750
Feb	938,533	516,090
Mar	660,848	610,554
Apr	735,401	713,545
May	1,088,650	643,081
Jun	907,937	586,099
Jul	611,736	589,700
Aug	982,324	1,097,025
Sep	541,983	427,456
Oct	607,916	479,456
Nov	874,558	689,755
Dec	585,069	461,437
Total	\$ 9,329,341	\$ 7,357,949