



# Sparklines Part 1

## PROVIDE CONTEXT FOR A NUMBER IN A CELL

By Nate Moore, CPA, MBA, CMPE

I hope you have enjoyed the last four *Billing* articles with charting tips. In this issue, I will introduce Sparklines. A Sparkline is like a chart that fits inside a cell. Sparklines are a concise way to provide context for a number in a cell and are especially useful when creating dashboards. There are three different types of Sparklines: Line, Column, and Win/Loss. All three Sparklines are created from the Insert tab on the Ribbon, as shown in Figure 1.

### Line Sparklines

A Line Sparkline is a great place to start. Assume that the number of new patients per month at a practice is declining. The underlying data is shown in Figure 2. One way to convey that data would be to simply display it as shown in Figure 2. The downward trend may have more impact with a picture. To add a Sparkline, I chose to select the cell just to the right

FIGURE 1

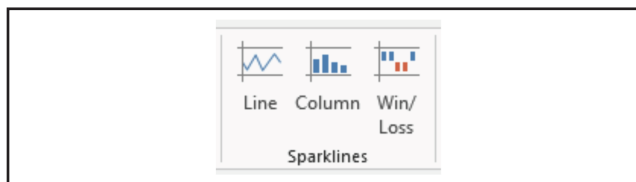
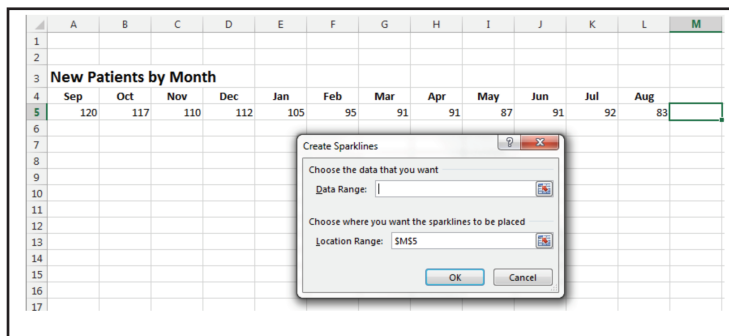


FIGURE 2

New Patients by Month											
Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
120	117	110	112	105	95	91	91	87	91	92	83

FIGURE 3



of the August data and selected Line from the Sparkline menu shown in Figure 1. If you are following along with my example, your screen should look like Figure 3. Notice how easy it is to add a Sparkline. I only need to provide two pieces of information: the range of data to feed the Sparkline and the cell where I want the Sparkline to be. In my example, the range of data in cells is A5:L5, so I clicked the red button next to Data Range and highlighted those cells. Since I selected cell M5 when I started the Sparkline, Excel uses M5 as my location for the Sparkline. Click OK. If you are following along, your screen should look like Figure 4.

Notice how Excel has created a very simple line chart in cell M5. I don't have a chart title, legend, axes, or many of the other features described in my previous *Billing* articles. What I do have is a simple representation of the downward trend in new patients. I could choose to display all of the raw data on a dashboard (cells A5 through M5), or I could simply display last month's number and the trend (cells L5 and M5) in much less space on a dashboard.

### Column Sparklines

There are two ways to show you what a Column Sparkline looks like. First, click in cell N5 and click Column from the Sparkline section of the Insert tab on the Ribbon. Fill in the

Data Range as A5:L5 and the Location Range as N5. Your screen should look like Figure 5. Another way to create a Column Sparkline is to change our existing Line Sparkline in cell M5 to a Column Sparkline. Click on cell M5. Excel recognizes that the cell contains a Sparkline and displays the Sparkline Tools menu shown in Figure 6. (Do not worry if you do not have all of the menu options along the top like Developer, Power Query, PowerPivot, and Data Mining. I have several advanced tools loaded in Excel, but you will not need any of those menus for Sparklines.) With cell M5 still selected, click Column as circled in red. The Sparkline in cell M5 will change from a Line to a Column.

There are plenty of options to discuss in the Sparkline Tools Design tab. We will review those options in the next *Billing* article. For now, compare the Line and Column



Sparklines, as shown in Figure 7. Both Sparklines display the same information, just in a different way. Choose whichever Sparkline best conveys the message you need to send.

### Win/Loss Sparklines

A third option is a Win/Loss Sparkline. Win/Loss Sparklines are different in that they only display whether the change was up (a win) or down (a loss). The magnitude of the change is not reflected in a Win/Loss Sparkline. In other words, if a number goes up by one or one million, the Win/Loss Sparkline simply displays that the number went up.

Figure 8 shows a Win/Loss Sparkline example. I copied our original data from cells A4:L5 to cells A10:L11. I added an extra row (row 12) to calculate whether the monthly change was up or down. (The formula in cell B12 is  $B11-A11$ .) The Win/Loss Sparkline in cell M12 has a Data Range of B12:L12. Watch what the Win/Loss Sparkline tells us. Each month that the number of new patients decreased is shown in red. Each month that the number of new patients increased is shown in blue in the Win/Loss Sparkline. Pay particular attention to April (noting that my Sparkline runs from September through August). Note that the number of new patients stayed constant from March to April, so the net change is zero. A Win/Loss Sparkline shows a zero change by leaving it blank. You can see the blank gap between the three red lines and the single red line in the Win/Loss Sparkline.

### Customizing a Sparkline

There are not nearly as many options to customize a Sparkline as there are to customize a chart, but there are several things you can do to change the appearance of a Sparkline. We will walk through those options in the next *Billing* article. In the meantime, there are Excel Videos in the playlist at [moore-solutionsinc.com/sparklines-2](http://moore-solutionsinc.com/sparklines-2) with more examples of using Sparklines in a medical practice. ■

*Nate Moore, CPA, MBA, FACMPE writes custom SQL Server code to mine practice management and clinical data for analysis in Excel, dashboards, and via email. Nate's first book, Better Data, Better Decisions: Using Business Intelligence in the Medical Practice, written with Mona Reimers, is an MGMA best seller.*

FIGURE 4

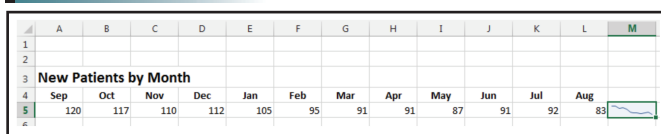


FIGURE 5

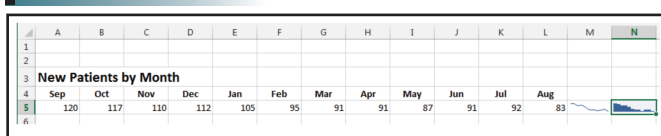


FIGURE 6



FIGURE 7

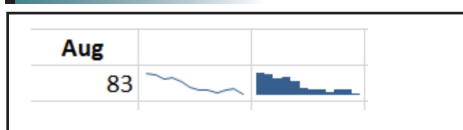
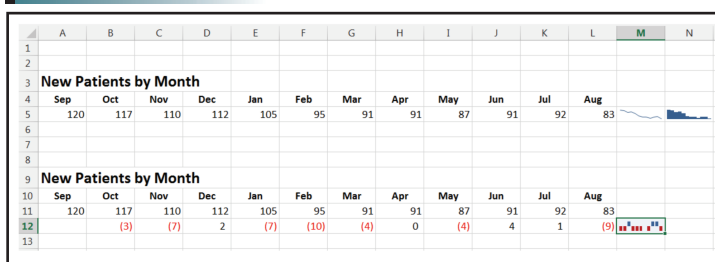


FIGURE 8



*His free Excel videos have been viewed over one million times and are available at [mooresolutionsinc.com](http://mooresolutionsinc.com). Like PivotTableGuy on Facebook or follow PivotTableGuy on Twitter to be notified each time an Excel Video is released.*