



Using Excel Tables to Manipulate Billing Data

By Nate Moore, CPA, MBA, CMPE

If you are still waiting to make the jump from prior versions of Excel to Excel 2007 or 2010, tables are one of the best reasons to upgrade. If you have upgraded to Excel 2007 or 2010 but aren't using tables, this article will help you get started. To follow along with the data in this example, look for the download link with this article at mooresolutionsinc.com/articles.php.

Tables are a powerful way to sort, filter, and organize data. They have been available in prior versions of Excel, but they are so much better and easier to use in Excel 2007 and 2010 – the button to create a table is in a prime position on the “Home” tab of the ribbon (Figure 1). Once you have your data entered in Excel in rows and columns, the first step to create a table is to select all of the data that you want in the table and then click the “Format as a Table” icon on the ribbon. Excel will bring up a window that looks like Figure 2. Choose a table style from the window and Excel will prompt you to confirm the range for the data in your table and ask you whether the table has headers (Figure 3). Headers are descriptive column headings in the top row of your table that make it easier to understand and use. Click OK and you have created a table.

Easy Sorting

The first thing you will notice about your new table is that Excel has added a drop-down arrow next to each column heading (Figure 4). Each arrow contains sorting and filtering tools to manage the table. If you have sorted data in Excel, you'll remember that you have to be very careful to include all of the data that you want to sort. For example, assume you want to sort data in column A but have other related data in columns B through E. If you only select column A as the sort range, Excel would sort column A and leave columns B through E as is, scrambling the relationship between the columns. Tables make sorting much easier: instead of carefully selecting the entire range of data and then choosing which column to sort, you can simply click on the drop-down arrow next to the column you want to sort by. Excel will automatically include the entire table in your sort range to keep your data intact.

For our sample, we are using accounts receivable data, so

click on the drop-down arrow next to the *Balance* column and choose “Sort Largest to Smallest” (Figure 5) so that the largest receivables balances sort to the top. Excel will automatically sort the other columns in the table so that the patient, insurance, doctor, and other data stay with the appropriate balance. Notice how Excel changes the drop-down arrow in Figure 6 to show that the *Balance* column is sorted in descending order.

Manual Filtering

Tables make it fast and easy to filter data as well. Now that we have sorted our largest claims to the top of the list, we'll use filters to only select claims over 120 days. Click on the drop-down arrow next to *Aging*. Uncheck “Select All” and check “Over 120 Days” so that your filter looks like Figure 7. Your table should look like Figure 8. Again notice how Excel changes the drop-down filter next to *Aging*. The filter icon next to the drop-down arrow reminds you that your data is filtered. If you hover over the drop-down arrow, Excel displays a small message that says *Aging: Equals “Over 120 Days”* to remind you how your data is filtered. Also notice the row numbers in Figure 8. Instead of being in consecutive order, the row numbers are 1, 2, 6, 22, 25, etc. Since Excel has filtered the data, only the rows that met the filter criteria (*Aging* over 120 days) are displayed. Our receivables data is now filtered so that we are only looking at claims over 120 days, sorted by descending balance. We could use the same method to continue to filter the data to only select balances due from Blue Cross, only claims at a certain location, or only claims from one or more rendering physicians. To clear the filter and have Excel display all claims, click on the drop-down arrow next to *Aging* and choose “Clear Filter.”

Manually checking and unchecking filter boxes is fast and easy if there are only a limited number of choices. If you have hundreds of choices, unchecking “Select All” and checking each item you want to filter with can take a long time. Fortunately, Excel has several ways to make filtering easier.

Powerful Text, Number, and Date Filters

To make filtering easier, Excel creates additional filters based on the type of data stored in the column. (Continued on page 46)



FIGURE 1

The “Format as Table” button can be easily found on the “Home” tab ribbon

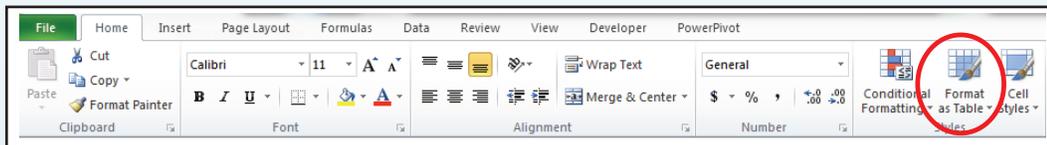


FIGURE 2

Excel provides many table styles to make formatting easy.

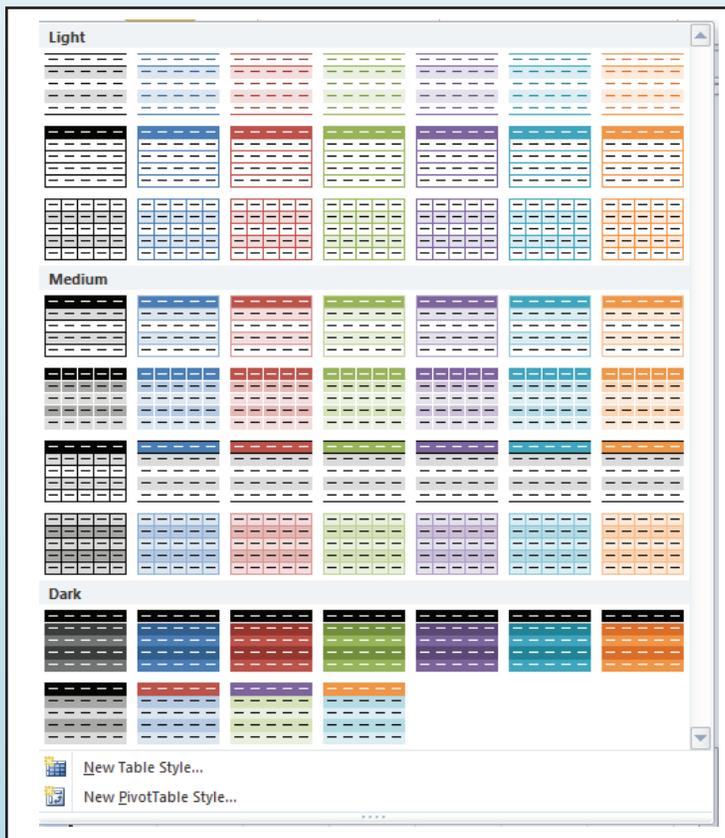


FIGURE 4

Once the table is formatted, sorting is easy using one of the drop-down arrows next to the column headings.

	A	B	C	D	E	F	G	H	I
1	Claim	Balance	Date	Due From	PSTP	Patient	Aging	Location	Doctor
2	30000	\$ 324.66	4/30/2012	CIGNA	Primary	Wise, Crystal	0-30 Days	Myakka	Dr. Ensoleillement
3	30001	\$ 815.58	4/17/2012	Medicare	Primary	Stephens, Annie	0-30 Days	Kissimmee	Dr. Sonnenschein
4	30002	\$1,790.46	5/12/2012	Patient	Patient	Bradley, Jesse	0-30 Days	Caloosahatchee	Dr. Luce Del Sole
5	30003	\$1,286.29	5/3/2012	CIGNA	Primary	Copeland, Patricia	0-30 Days	Okeechobee	Dr. Luce Del Sole
6	30004	\$1,878.94	12/10/2011	Blue Cross	Primary	Lambert, Brian	Over 120 Days	Kissimmee	Dr. Luce Del Sole

FIGURE 3

Excel will make its best guess at the range of cells for the table, which you can change.

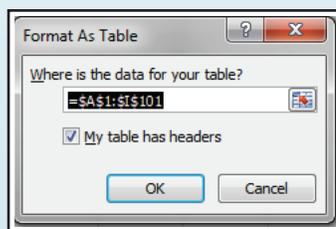


FIGURE 5

The drop-down sort menu is easy to follow.

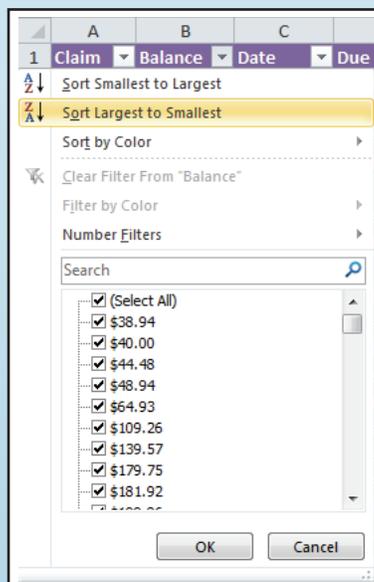


FIGURE 6

After a column has been sorted, the drop-down arrow button changes to depict the sort order – in this case, largest to smallest.

	A	B	C	D
1	Claim	Balance	Date	Due From
2	30071	\$1,997.75	10/5/2011	Patient
3	30089	\$1,966.98	5/11/2012	Medicare
4	30085	\$1,894.70	5/8/2012	Patient
5	30030	\$1,893.33	4/19/2012	Medicare

FIGURE 7

The drop-down menu also provides context-sensitive filtering, allowing you to select and view, in this case, only accounts over 120 days.

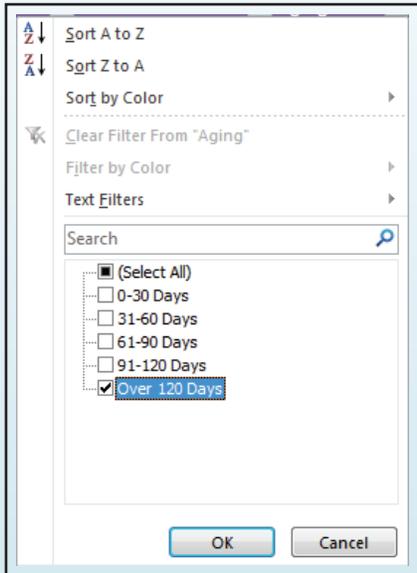


FIGURE 9

More specific filtering is available using the "Text Filters" option.

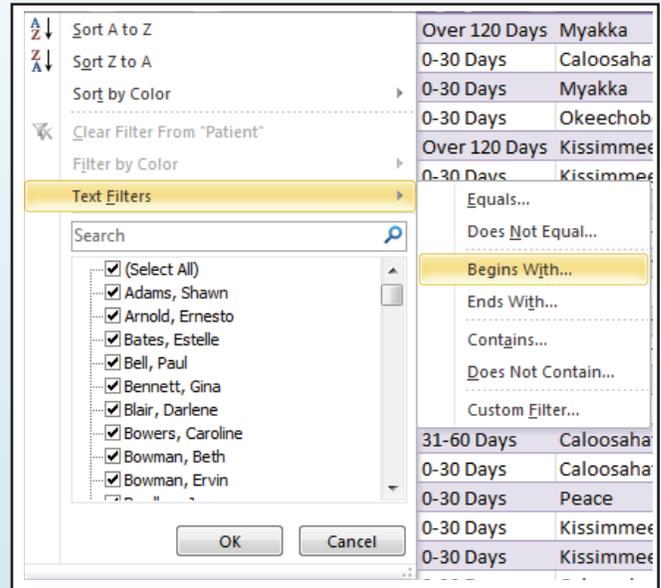


FIGURE 8

	A	B	C	D	E	F	G	H	I
1	Claim	Balance	Date	Due From	PSTP	Patient	Aging	Location	Doctor
2	30071	\$1,997.75	10/5/2011	Patient	Patient	Dennis, Laverne	Over 120 Days	Myakka	Dr. Luce Del Sole
6	30004	\$1,878.94	12/10/2011	Blue Cross	Primary	Lambert, Brian	Over 120 Days	Kissimmee	Dr. Luce Del Sole
22	30083	\$1,610.94	12/17/2011	Patient	Patient	Morales, Tara	Over 120 Days	Peace	Dr. Nisshou
25	30012	\$1,537.53	9/20/2011	CIGNA	Primary	Ellis, Lorene	Over 120 Days	Peace	Dr. Ensoleillement
26	30035	\$1,528.81	10/15/2011	Patient	Patient	Fowler, Philip	Over 120 Days	Caloosahatchee	Dr. Sonnenschein
31	30051	\$1,436.02	12/27/2011	Patient	Patient	Vaughn, Rufus	Over 120 Days	Peace	Dr. Sol
35	30027	\$1,296.84	10/29/2011	Patient	Patient	Buchanan, Gregory	Over 120 Days	Myakka	Dr. Yang Guang
38	30076	\$1,267.97	12/15/2011	Patient	Patient	Walker, Rogelio	Over 120 Days	Peace	Dr. Luce Del Sole
40	30013	\$1,238.11	10/1/2011	Patient	Patient	Logan, Jeannie	Over 120 Days	Okeechobee	Dr. Ensoleillement
43	30028	\$1,176.63	11/6/2011	AETNA	Primary	Bowman, Beth	Over 120 Days	Okeechobee	Dr. Nisshou
48	30094	\$1,086.85	1/13/2012	Patient	Patient	Williams, Janis	Over 120 Days	Myakka	Dr. Ensoleillement
53	30092	\$1,042.17	12/15/2011	Medicare	Primary	McLaughlin, Marlene	Over 120 Days	Kissimmee	Dr. Sonnenschein
81	30033	\$ 450.84	12/31/2011	Medicare	Primary	Crawford, Darrel	Over 120 Days	Caloosahatchee	Dr. Sol
89	30084	\$ 221.34	9/29/2011	Patient	Patient	Dean, Mona	Over 120 Days	Okeechobee	Dr. Yang Guang
92	30069	\$ 199.86	10/18/2011	Blue Cross	Primary	Ramirez, Lucia	Over 120 Days	Myakka	Dr. Ensoleillement
94	30048	\$ 179.75	9/26/2011	Medicare	Primary	Robinson, Wilbur	Over 120 Days	Peace	Dr. Nisshou

FIGURE 10

This shows the result of selecting a text filter where patient names begin with the letter "B."

	A	B	C	D	E	F	G	H	I
1	Claim	Balance	Date	Due From	PSTP	Patient	Aging	Location	Doctor
3	30089	\$1,966.98	5/11/2012	Medicare	Primary	Bell, Paul	0-30 Days	Caloosahatchee	Dr. Yang Guang
13	30002	\$1,790.46	5/12/2012	Patient	Patient	Bradley, Jesse	0-30 Days	Caloosahatchee	Dr. Luce Del Sole
21	30015	\$1,625.66	5/12/2012	Patient	Patient	Bowers, Caroline	0-30 Days	Caloosahatchee	Dr. Sonnenschein
33	30050	\$1,400.91	4/22/2012	Medicare	Primary	Briggs, Alicia	0-30 Days	Okeechobee	Dr. Luce Del Sole
34	30009	\$1,304.50	4/29/2012	Patient	Patient	Blair, Darlene	0-30 Days	Peace	Dr. Nisshou
35	30027	\$1,296.84	10/29/2011	Patient	Patient	Buchanan, Gregory	Over 120 Days	Myakka	Dr. Yang Guang
43	30028	\$1,176.63	11/6/2011	AETNA	Primary	Bowman, Beth	Over 120 Days	Okeechobee	Dr. Nisshou
51	30040	\$1,053.95	5/8/2012	Medicare	Primary	Bennett, Gina	0-30 Days	Peace	Dr. Sol
59	30029	\$ 916.42	3/24/2012	Patient	Patient	Bryant, Brandi	31-60 Days	Peace	Dr. Yang Guang
68	30098	\$ 656.87	5/14/2012	Patient	Patient	Bowman, Ervin	0-30 Days	Myakka	Dr. Nisshou
83	30063	\$ 397.73	5/15/2012	Blue Cross	Primary	Brown, Deborah	0-30 Days	Kissimmee	Dr. Sol
87	30090	\$ 283.97	4/28/2012	Medicare	Primary	Bates, Estelle	0-30 Days	Caloosahatchee	Dr. Nisshou
96	30074	\$ 109.26	2/8/2012	Patient	Patient	Buchanan, Jamie	91-120 Days	Kissimmee	Dr. Nisshou

FIGURE 11

“Number Filters” provides logical operators for numbers.

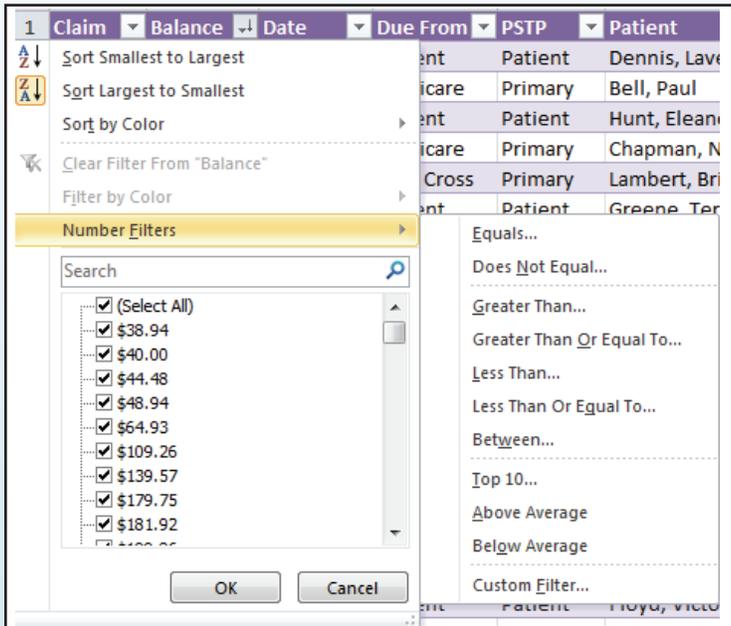


FIGURE 12

Choosing the “Top 10” filter gives you the option to specify a number other than “10” and by either “Items” or “Percent.”

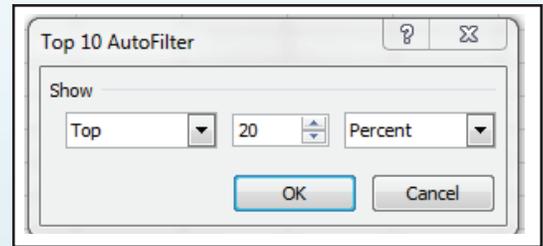
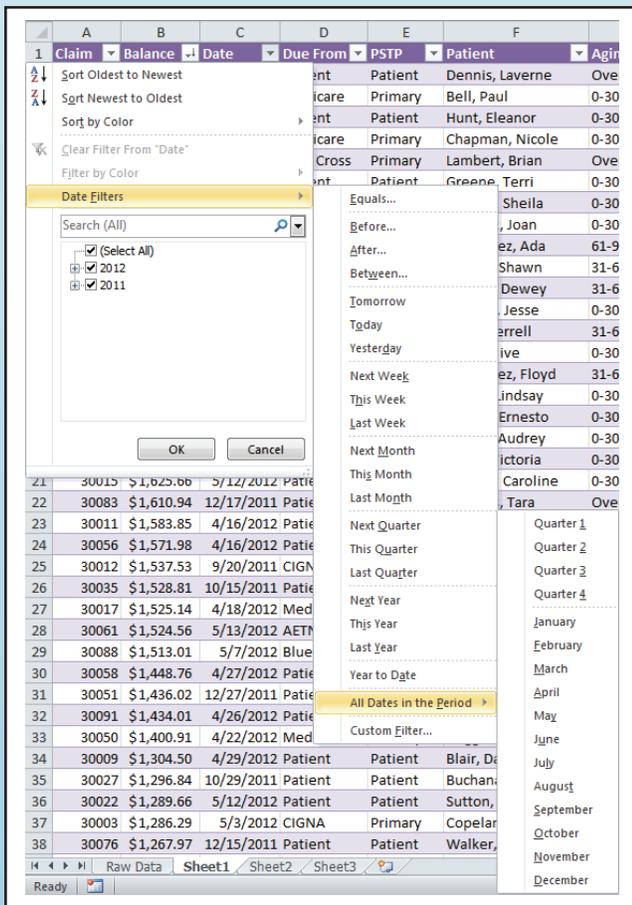


FIGURE 13

When working with dates, Excel provides very powerful date-calculation filtering options.





(Using Excel Tables to Manipulate Billing Data continued)

For example, Figure 9 shows that since the *Patient* column has text data, there are text filters available. Click the drop-down arrow next to *Patient*, choose “Text Filters,” “Begins With...,” and enter the letter B to select all patients whose last name begins with B. If you’re following along and have cleared the *Aging* filters, your screen should look like Figure 10. Clear the text filters by clicking the drop-down arrow next to *Patient* and choosing “Clear Filter” from *Patient*.

The *Balance* column tracks the amount due on each claim and is stored as a number. Figure 11 shows the options available as number filters. You can easily select from a variety of options, such as “Equals,” “Does Not Equal,” “Greater Than,” “Less Than,” and “Between.” Notice that you can also select all of the numbers “Above Average,” “Below Average,” and “Top 10.” Note that “Top 10” isn’t necessarily top or 10. You can select the top or bottom, any number, and either items or percent. For example, Figure 12 uses the “Top 10 AutoFilter” window to select the top 20 percent of claims by the dollar value in the *Balance* column.

Columns with dates have even more options. The *Date* field shows the date the claim was billed. Click the drop-down arrow next to *Date* and choose “Date Filters.” Excel offers a

tremendous list of choices for dates, as shown in Figure 13.

The filters work together. If you needed to, you could select all claims from Blue Cross (by manually checking in the *Due From* column) for patients whose last name starts with B (with a text filter) with a balance over \$1,000 (with a number filter) in the last quarter (with a date filter).

The possibilities for using sorting and filtering to analyze medical practice data are limitless, but this article does have a limit. Watch the next issue of *Billing* for more powerful tricks to use with tables. To learn more, watch Excel Videos 30–43 at kelapro.com/videos.php. ■

Nate Moore, CPA, MBA, CMPE speaks, consults, records, and writes about Microsoft Excel and data mining in medical practices throughout the country. His Excel Videos have been viewed over 75,000 times. Nate's latest project is KelaPro, software to automatically download critical practice data into Excel to create dashboards, reports, and analytic tools. Like PivotTableGuy on Facebook and follow PivotTableGuy on Twitter for more Excel tips and tricks.

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