



Use Excel to Manipulate Patient Names and More

By Nate Moore, CPA, MBA, CMPE

To concatenate means to connect or link together, and the CONCATENATE function in Excel does just that. It's an easy way to combine two or more pieces of information into one cell. Once you're familiar with CONCATENATE, you'll wonder how you ever managed without it.

Billing software usually stores a patient's first name in one field and their last name in another field. After you import billing demographic data into Excel, it helps to be able to combine the first name and last name fields into one patient name cell.

For example, if *Nate* is in cell A1 and *Moore* in cell B1, you can combine the two fields together with the formula:

```
=CONCATENATE(A1, B1)
```

The result is *NateMoore*. It's easy to add a space between *Nate* and *Moore*. Simply put the space in quotes (we're using the *#* to represent the space in the examples here). The new formula is:

```
=CONCATENATE(A1, "#", B1)
```

Now the formula produces *Nate Moore*. What if you want to sort by a patient's last name first? Change your formula to:

```
=CONCATENATE(B1, "#", A1)
```

It's tricky to see the comma that I added to the formula since Excel separates the components of formulas with commas, but by adding a comma before the space in quotes, the result is now *Moore, Nate*. Need to add a middle initial (in cell C1) after the patient's first name? Now we'll change our formula to:

```
=CONCATENATE(B1, "#", A1, " ", C1, ".")
```

Again, look carefully amid all of the commas separating the components of our formula, and you'll see we're adding a comma and a space between the last name in cell B1 and the first name in cell A1. After the first name, we add another space, then the middle initial in cell C1, and then a period. If you're following along, the result should be *Moore, Nate D.*

A Shortcut & More

If you try these examples, you will notice that "concatenate" is a long word to type. Fortunately, there is a shortcut. Instead of CONCATENATE, you can use the ampersand ("&"), a *calculation operator*, between the data you want to combine. To combine *Nate* (A1) and *Moore* (B1) with a space in between, instead of using:

```
=CONCATENATE(A1, "#", B1)
```

you can enter the formula as:

```
=A1 & "#" & B1
```

You can try all of the examples above using the ampersand as a calculation operator instead of the CONCATENATE function.

There are advantages and disadvantages to the two ways to concatenate data. If I'm only combining two cells or two pieces of information, the ampersand is fast and easy. Once you start adding spaces, commas, periods, and more, you may find that CONCATENATE is easier to read than the ampersand shortcut. Both ways work fine, and you should choose the

FIGURE 1

	A	B	C	D	E
1	Nate	Moore	D	NateMoore	=CONCATENATE(A1,B1)
2				Nate Moore	=CONCATENATE(A1,"#",B1)
3				Moore, Nate	=CONCATENATE(B1,"#",A1)
4				Moore, Nate D.	=CONCATENATE(B1,"#",A1," ",C1,".")

method that you find easiest for you.

Once you're familiar with how to concatenate in Excel, there are all kinds of clever ways to improve your spreadsheets. For example, you might create a cell in your spreadsheet that says "Spreadsheet updated by Nate on 5/1/2012." The "Spreadsheet created by Nate on" part is simple. There are three tricks to adding the date at the end of the cell.

The first trick is easy. When concatenating data, you need to put any text you use in quotes, just like we did with the space, the comma, and the period in the earlier examples. You also need to start the formula with an equal sign so Excel knows we're creating a formula.

The second trick is that we don't want to have to type in



(Use Excel to Manipulate Patient Names and More continued)

You can use the ampersand (“&”), a calculation operator, between the data you want to combine.

today’s date every time we update the spreadsheet. Excel knows what day it is; the function TODAY() will return today’s date. Remember the parentheses, you’ll need them to make the TODAY function work.

The third trick is that Excel stores dates as numbers. If today is May 1, 2012, the TODAY function will return 41030, the day corresponding to 5/1/2012. The last step is to convert the number returned by the TODAY function to a date in text format

FIGURE 2

	A	B	C	D	E
1	Nate	Moore	D	NateMoore	=A1&B1
2				Nate Moore	=A1 & " " & B1
3				Moore, Nate	=B1 & ", " & A1
4				Moore, Nate D.	=B1&","&A1&" "&C1&".

FIGURE 3

	A	B	C	D	E	F	G
1	Spreadsheet created by Nate on 5/1/2012						
2							
3							
4	="Spreadsheet created by Nate on " & TEXT(TODAY(),"mm/dd/yyyy")						

so that we can concatenate the date in our cell. The TEXT function will do that for us. The formula to convert today’s date to a text format is:

```
=TEXT(TODAY(),"MM/DD/YYYY")
```

To put it all together using the ampersand, the formula is:

```
="SPREADSHEET CREATED BY NATE ON "  
& TEXT(TODAY(),"MM/DD/YYYY")
```

Notice the formula begins with an equal sign, puts the text in quotes, and then uses TEXT and TODAY to get the job done. Also notice the space after the word “on” at the end of the text. That space puts a space before today’s date as calculated by the rest of the formula.

Next Steps

You can see CONCATENATE in action at kelapro.com/videos.php (Excel Video 152). If you liked the trick at the end using TEXT and TODAY to use today’s date, also check out Excel Video 163 to learn more about how it works.

CONCATENATE sounds hard, but it is an easy function to use.

Combining data can be helpful when you’re working with data downloaded from billing software, using data received from an outside source, or making a spreadsheet more efficient and easier to maintain. Once you have learned how to concatenate, you’ll find plenty of useful ways to combine data. ■

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 50,000 times. Nate’s latest project is KelaPro, software to automatically download critical practice data into Excel to create dashboards, reports, and analytic tools. If you have a suggestion for a future column in Billing, please email Nate at hbma@kelapro.com.

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