

Exercise 3: Creating a string variable in EpiData Analysis

At the end of this exercise you should be able to:

- a. Create string (character) variables from character or numeric variables.
- b. Save the output of the program in 'html' or text format.

Sometimes it can be useful to create string (character) variables from character or numeric variables. If we use the B_EX02.REC created in the previous exercise, we note that the fields RES1, RES2, and RES3 are numeric variables where the values:

- 0 indicates a negative result
- 0.1, ..., 0.9, 1, 2, 3, 4, 8 indicate positive results
- 9 indicates an examination not done

Let us define that it matters what the sequential results are until there is a first one with any positive result, then we can define six essential patterns:

- NNN Three negative results
- NN9 Two negative results with the third examination not done
- N99 One negative result with the second and third examination not done
- NNP Two negative results followed by a positive result
- NPx The first negative result followed by a positive result
- Px The first result already positive

We would now like to create a new variable PATTERN that takes any of the above six values, created from the three results of sputum smear examinations.

To get the above patterns, we need to create a text variable from numeric variables (RES1, RES2, and RES3), because if we add:

```
RES1+RES2+RES3
```

We get a numeric result (the sum of the real numbers in these three fields), which is not what is required.

The grammar is as follows:

```
define textvar1 _
define textvar2 _
define textvar3 _

if numvar1= X then textvar1=Y
if numvar2 ...
...

define newstring ____
newstring=textvar1+textvar2+textvar3
```

where NUMVAR is an existing numeric variable.

The above is not new, you learned this in EpiData Entry when creating a unique identifier from three existing variables.

However, we will add one more thing and that is to write our output into a file. To this end, we modify the program as follows:

```
logopen "b_ex03.txt" /replace  
freq newstring  
logclose
```

We chose here B_EX03.TXT, a text file as output. EpiData Analysis can also create HTML output, such as B_EX03.HTML.

Tasks:

- o Write the program B_EX03.PGM to obtain patterns.*
- o Limit your analysis to patients with a diagnostic sputum smear examination. Create an output file with three tables. The first table shows the result (positive or negative) by all patterns, the second the result only by essential patterns (defined above). The third determines which proportion among cases with any positive result is positive on the first, which is negative on the first but positive on the second, and which proportion is positive for the first time on the third examination only.*
- o Write the output into a B_EX03.TXT output file.*