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# Visualisation of Coding Intensity by Mosaic Displays

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| Introduction | **"Has there been a change in the coding intensity in the course of time?" The answer to this question can help when we judge changes of the DRG casemix index. The graphic presented provides an overview of volumes of codes and changes in the average number of codes per case applied in several departments.** |
| Data | The necessary data comprises the number of medical and procedural codes for each inpatient case during a sequence of years (e. g.: five years from one hospital). |
| Methods | A mosaic plot is capable of showing proportions of numbers of several variables. We constructed a plot based on four variables: (1) type of code (diagnosis/procedure), (2) main department, (3) year, (4) number of codes. on the upper ribbon of the plot, we see the coding of diagnoses, on the lower ribbon the coding of procedures. The plot shows the portions of cases in the departments by the widths of the main graphic blocks. Within each block, the change in the number of cases in each department from year to year can be seen by the widths of the vertical strips. Within each strip the portions of cases with one, two, three, or more diagnoses is shown by the height of the rectangles which are coloured from orangered to blue. |
| Results | Slow and steady changes as well as irregular coding habits can be detected. For instance, it can be seen in most blocks of the example plot that in most cases,the number of codes increased in the course of time (from right to left). The three eye catching orangered rectangles in the lower left block of the example plot "tell" that the number of coded procedures for cases in the medical department which was generally one during the first two years, changed continuously down to zero by the fifth year. |

**Table 1:**

Hospital H217: Number of diagnosis and procedure codes used
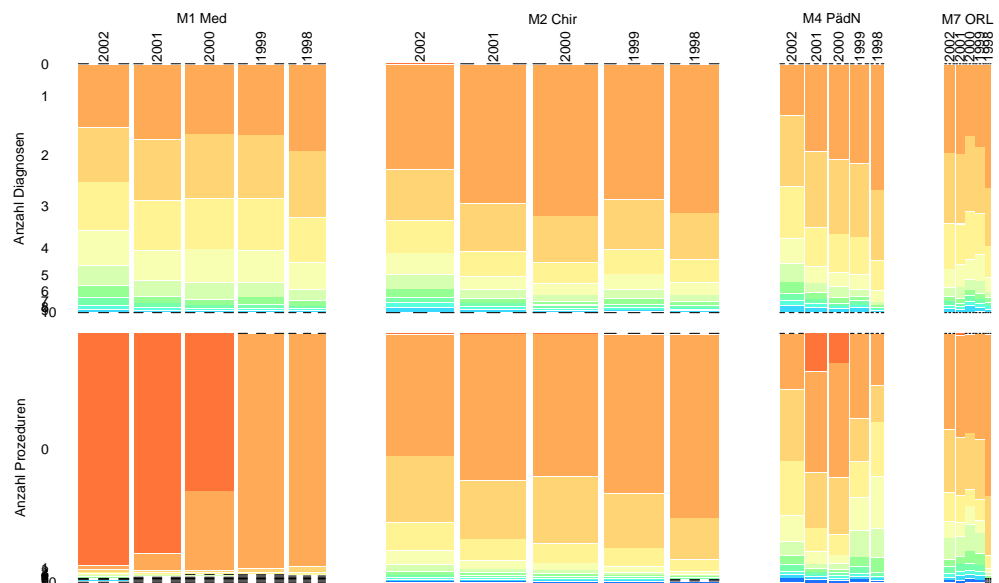


Datenquelle: Bundesamt für Statistik:
Medizinische Statistik der Krankenhäuser

Z I M – Test . 37
[BFSMS.04Z.mosaic.HKST.nC..jahr−2002−0548]

*Source: Fischer [Krankenhaus-Betriebsvergleiche, 2005]: 33.*

This kind of graphic is well adapted to data from not too many departments and not too many years. Yet if these numbers increase a great deal, the plot can easily be split up. – When we compare coding habits of several hospitals, the names of the departments could be replaced by the names of the hospitals.

Discussion

Mosaic displays that show coding intensities are capable of giving an informative overview on coding habits within a hospital, a group of hospitals, or a whole country.

Conclusions

## References

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