With increasing age, the risk for type 2 diabetes increases. Little is known about the relative importance of other risk factors for different age groups. Pharmacy customers in Germany completed the FINDRISK questionnaire. An ANOVA with age category as between factor and the age-adjusted FINDRISK score as the dependent variable was conducted. Separate linear regression analyses for each age group were performed to predict the relative risk score from the risk factors.

A total of 292 people participated. The ANOVA revealed that while the age-adjusted risk score for the first age category (<35 years) was significantly different from all other age categories (p < .01 for all comparisons), there were no differences between the different age categories ≥ 35 years [p > .35 for all] indicating a similar risk exposition across these age groups. Results of the linear regression analyses (Table 1) revealed that the relative importance of genetic factors in younger people (< 35 years) is more pronounced and relatively more important than other factors. Additionally, fat distribution played an important role only in the youngest age groups. In older people, the importance of genetic factors for the overall risk score dropped while previously elevated blood sugar levels were more important.

Understanding possible risk factors beyond age are helpful to develop targeted educational material or raise awareness for specific age groups.

### Results

#### Characteristics
- A total of 292 people completed the FINDRISK questionnaire. Thus, each week, 73 people could be informed about the risk of type 2 diabetes.
- Figure 1 shows that an even age distribution could be achieved.
- 33.2% of the individuals had a FINDRISK score <7 and thus only a low type 2 diabetes risk. Figure 2: 47.3% had a moderate type 2 diabetes risk (FINDRISK score 7-14). 19.5% had a high type 2 diabetes risk (FINDRISK score >14).
- Within the FINDRISK categories, there is the expected pattern of age distribution (Figure 3).

#### ANOVA
- Only the age-adjusted FINDRISK score of the first age category (<35 years) was significantly different from all other age categories (p < 0.01 for all comparisons).
- There were no significant differences between the other age categories (≥ 35 years) in the age-adjusted FINDRISK score (p > 0.35 for all comparisons, Figure 4).

#### Linear Regression
- Table 1 contains the standardized beta weights of the separate linear regressions.
- The relative importance of genetic factors seemed to be more pronounced (β = 0.41) in younger people (<45 years) than other factors within this age category. Waist circumference seemed to play an important role only in the youngest age group (β = 0.46).
- In the elderly, the importance of genetic factors for the overall risk score declined, whereas elevated blood sugar levels in the past (β = 0.46) were more important for the overall risk score.

#### Discussion

Screening with the FINDRISK questionnaire was well received in pharmacies. The procedure of the screening as well as the automated feedback on the tablet PC were highly accepted by the participants and proved to be practical.

The comparison of the age-adjusted FINDRISK scores showed that age groups <35 had a similar exposure of age-independent risk factors of the FINDRISK score compared to all other age categories (p < .01 for all comparisons). Within this age category, waist circumference seemed to play an important role only in the youngest age group (β = 0.46).

In the elderly, the importance of genetic factors for the overall risk score declined, whereas elevated blood sugar levels in the past (β = 0.46) were more important for the overall risk score.