Exercise 3

Task 1

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It is impossible to clearly state which visualization focuses on what aspect without knowing the purpose of the visualisation. However, visualisation 1 focuses rather on effectiveness than expressiveness, whereas visualisation rather focuses on expressiveness. Visualisation 2 only uses position (length of the bars) as a visual variable, all others are constant. It uses no marks other than the area of the bar, however the width is constant. Visualisation 2 is better at the task of informing the observer about the differences in injuries and the order of their occurrence. It does not convey any potentially misleading information.

Visualisation 1 uses much more marks: points (red data points), areas (size of the point),

and visual variables: position (to indicate where the injury is), size (area of the points), colour hue (beige text boxes and red circles), and to some extent texture (numbers in bold). Visualisation 1 is easier to understand, showing where the injuries are exactly and more intelligible for illiterate users. Further, the combination of colour and area immediately attracts the attention to the large areas. Due to the additional text boxes, it also conveys more information. It is worse at showing the actual difference between the number of injuries, but the visual cues make it more accessible and quicker to understand.