

Abstract:

There are two extreme positions working with applied mathematics:

- (i) Dig where you stand, but very deep, using the underlying applied problem more as a source of inspiration, or colourful introduction to the area of mathematics you work in.
- (ii) Put the applied problem, or rather the reformulated real underlying problem, in the center and use whatever (mathematical) tools you need to solve the problem.

The main drawback with (ii) is that you feel like a beginner and amateur most of the time. However, the reward can be very sweet if you will be able to actually help someone with a real problem.

We will discuss one very old problem, originally stated by Hippocrates, in category (i) and at least four problems of type (ii) that all are real problems in current vascular surgery.