# Part 1

## What are the most useful things you learned from this chapter or video?

My understanding of the important players and their interactions with one another has been enhanced by the significance of all the participants and the life cycle of health data. I have experience with healthcare data analysis, thus the majority of my domain knowledge was gained through practical application rather than thorough study of the life cycle of health data. I especially value chapter 2 since it lays the groundwork for the true applications of deep learning to health data.

## What are the typos in this chapter?

Page 10, Section 2.2, Line 12 : and **the** documentation of patient medical history. Page 12: Then the payer will verify and reimburse the associated **costs** to the providers or patients.

## What improvements do you want to see in this chapter?

Chapter 2 is my favorite chapter and I do not think that it needs to improve.

# Part 2

## What are the most useful health data for predicting patient outcome (e.g., mortality)?

EHR contains longitudinal records of medical services provided to patients as well as all of their medical histories, lab orders, lab results, physician notes, medications, diagnoses, clinical and safety guidelines, and medications. As a result, EHR is the most useful source of health data for predicting patient outcomes.

## What are the most accessible health data? And why?

After anonymizing and masking the MRN, DOB, Name, and SSN, all kinds of structured data are the most accessible because they are standardized and do not include any PHI. Clinical notes and discharge summaries are two examples of unstructured data that may contain patient information and reveal the patient's identity. Unstructured data is, therefore, less accessible than structured data.

## What are the most difficult health data (to access and to model)?

Unstructured data are the most difficult health data due to several reasons:

- High dimension: the text corpus contains a significant number of unique words.
- External knowledge: clinical guidelines and medical knowledge are always required.
- Privacy: Because health information is sensitive, it must be protected.

## What are the types of health data that you want to add to this chapter?

Another kind of time series health data that may be tracked using a smart watch is sleep pattern data.