

Principles of Data Management

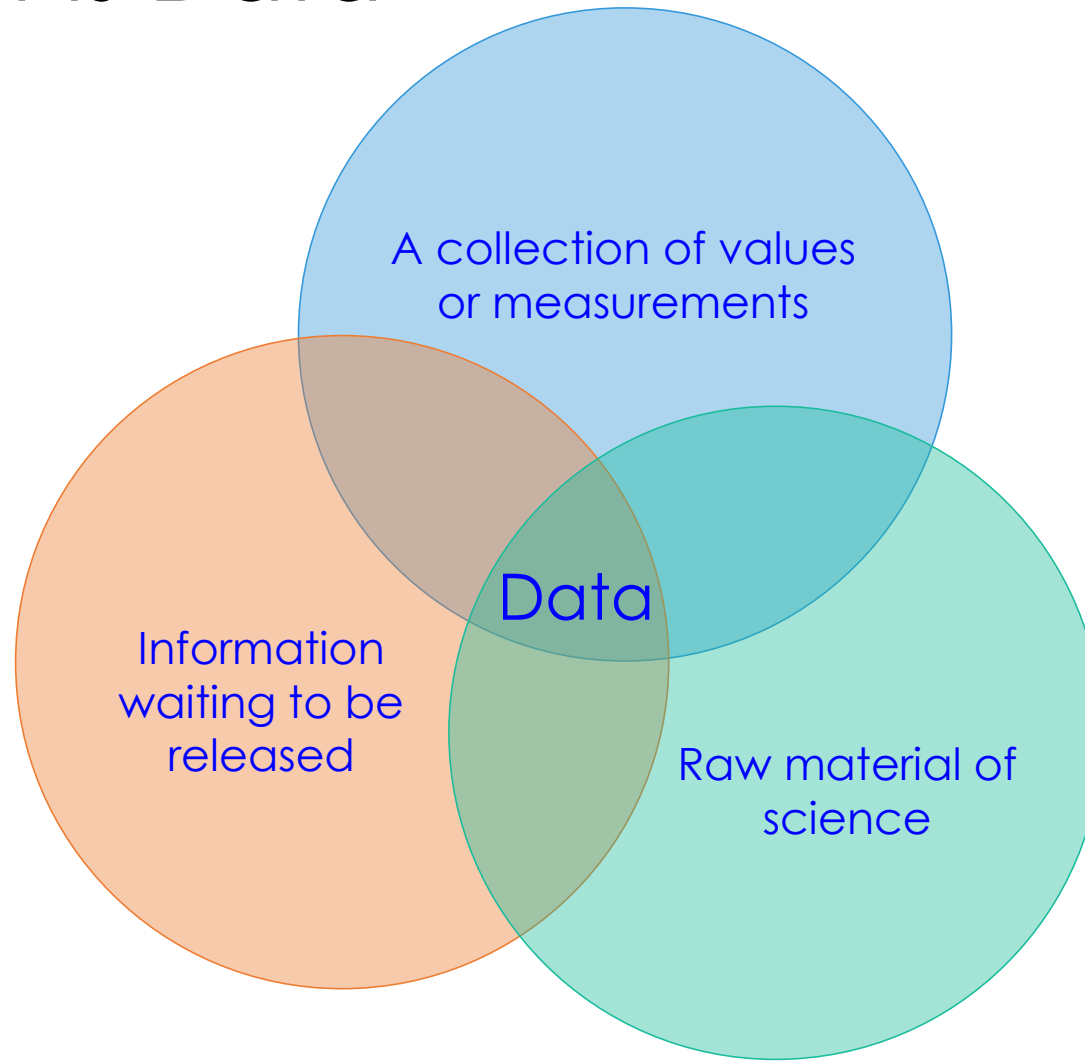


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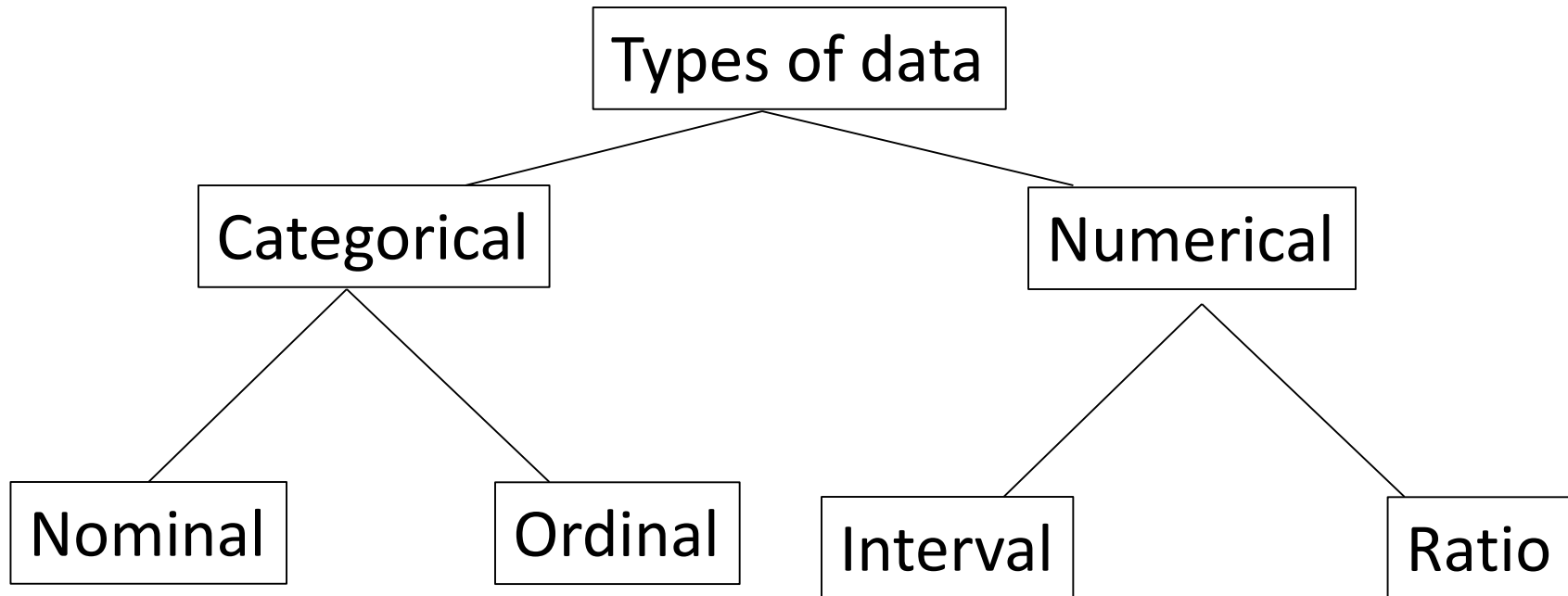
Outline

- Data Management: WHAT
- Data management: WHY
- Data Quality
- Process and basic requirements of data management
- Scope of the training workshop

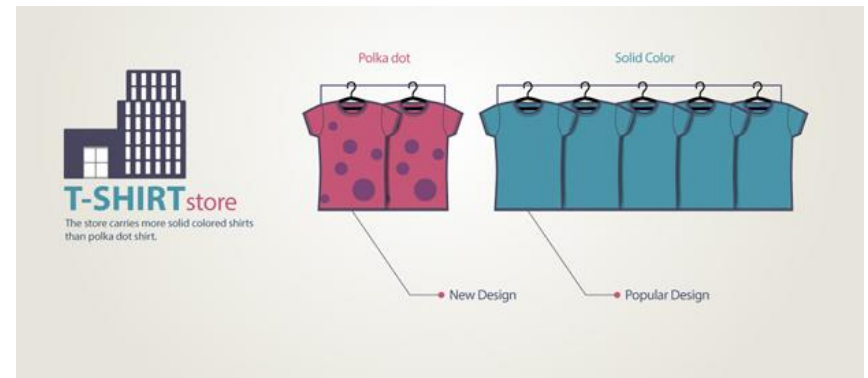
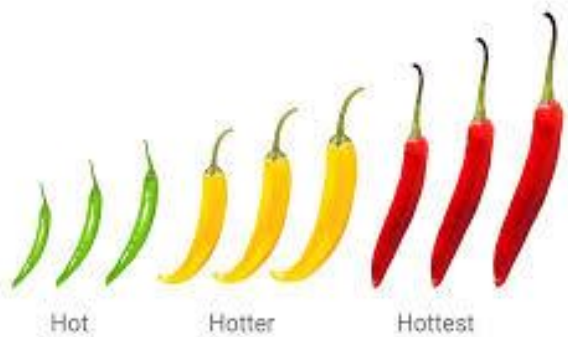
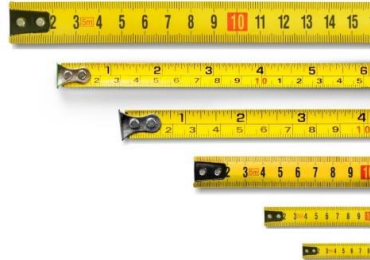
What is Data



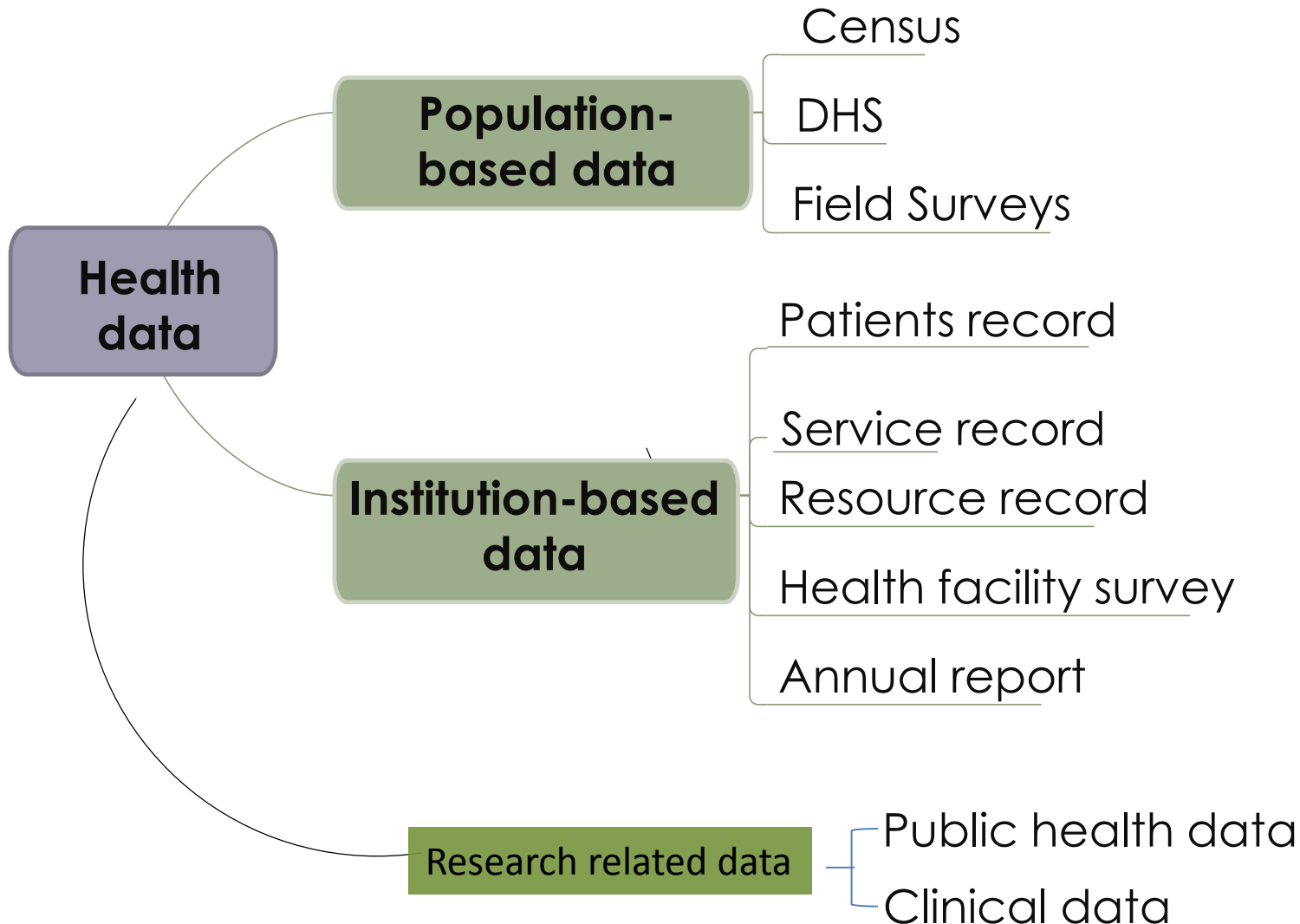
Different types of Data



Types of Data ?



Health data



What is Management?

- ***“Management is an art of knowing what to do, why to do and see that it is done in the best ...”.***

F.W. Taylor

What is Data Management

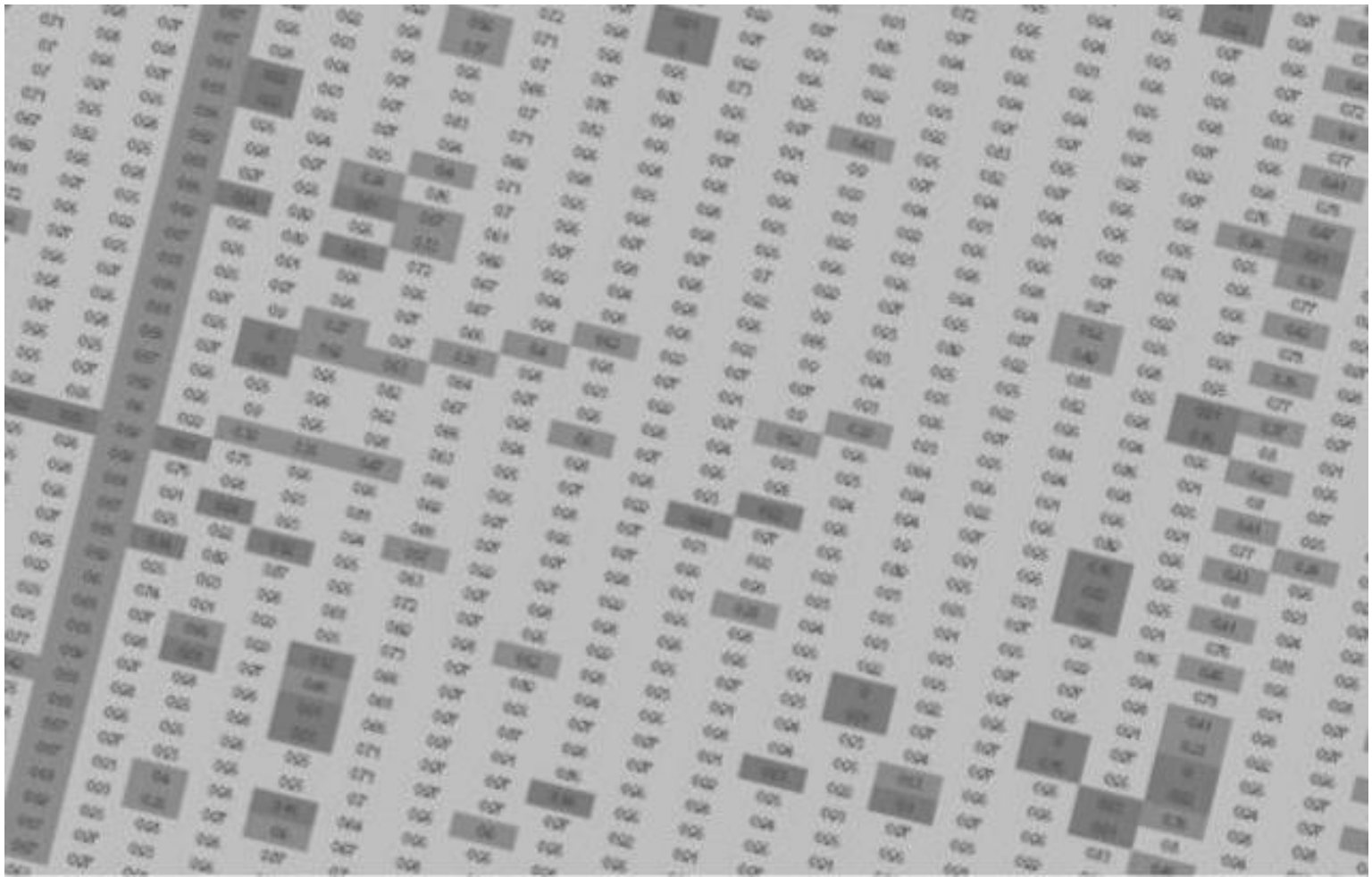
the process of producing data of the highest quality in a form suitable for statistical analysis

the process that includes acquiring, validating, storing, protecting, and processing required **data** to ensure the accessibility, reliability, and timeliness of the **data** for its users.



Data Management: Why?

Data does not speak for itself



You speak for your Data



But...first, you need to manage it



Raw data



Data Quality



Data are correct



Data are consistent



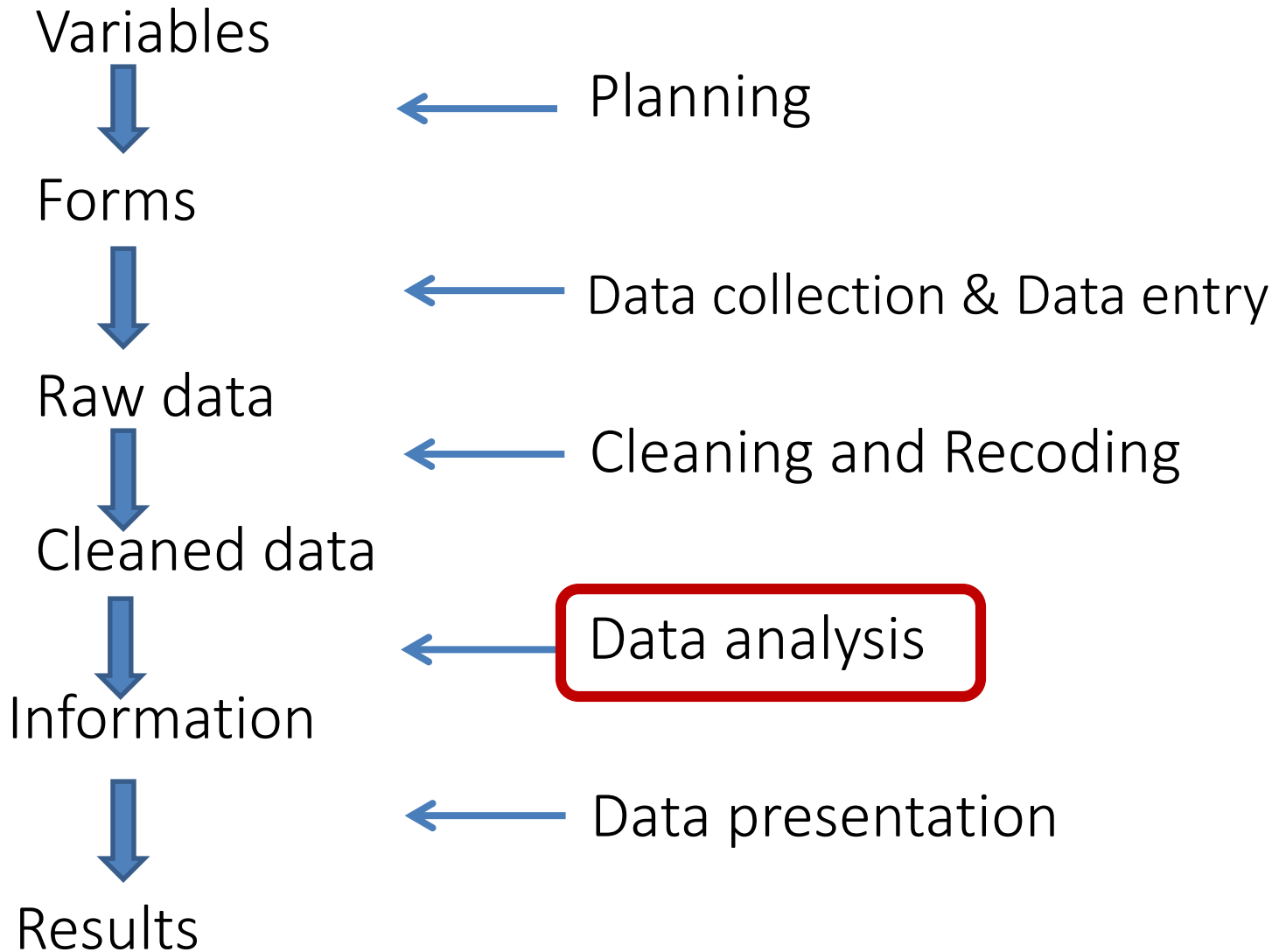
Data are complete



Data are reliable & comprehensible



Process of Data Management



Basic requirement for Data Management

- Understanding different types of data



- Understanding test statistics & appropriate choice of test statistics



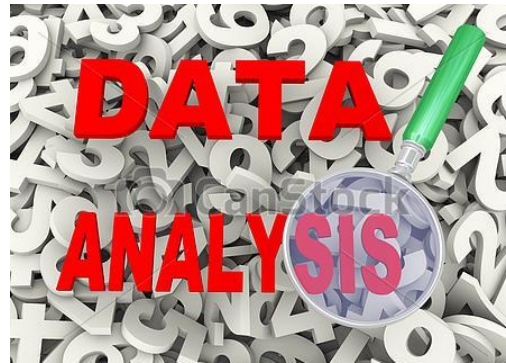
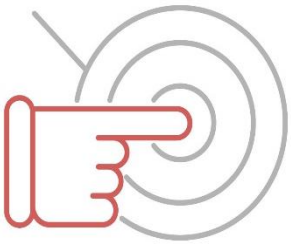
- Effective presentation, correct interpretation and inference making

Scope of the workshop:

Focus:

Data analysis of cleaned data

Interpretation

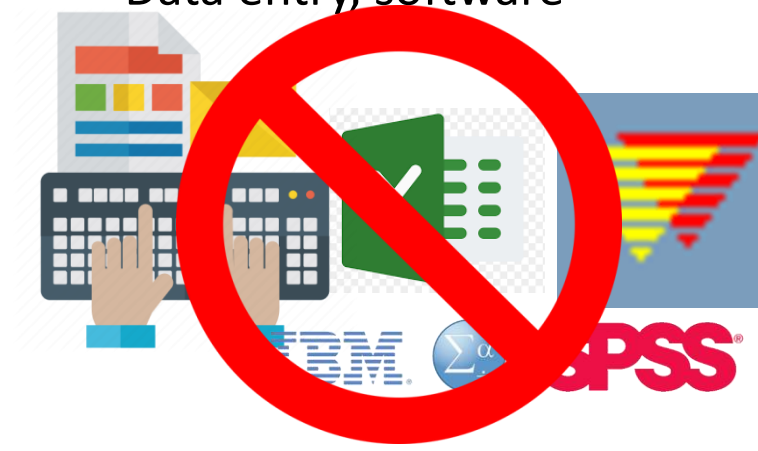


NOT cover...

Data cleaning



Data entry, software

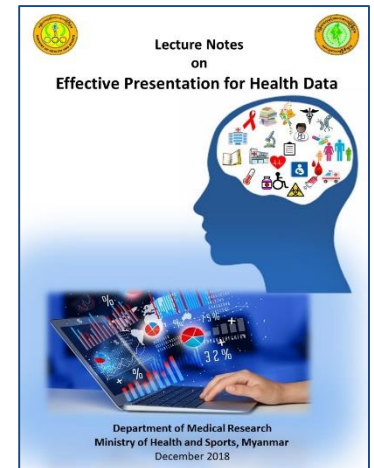


Data presentation



Future training workshops will cover..

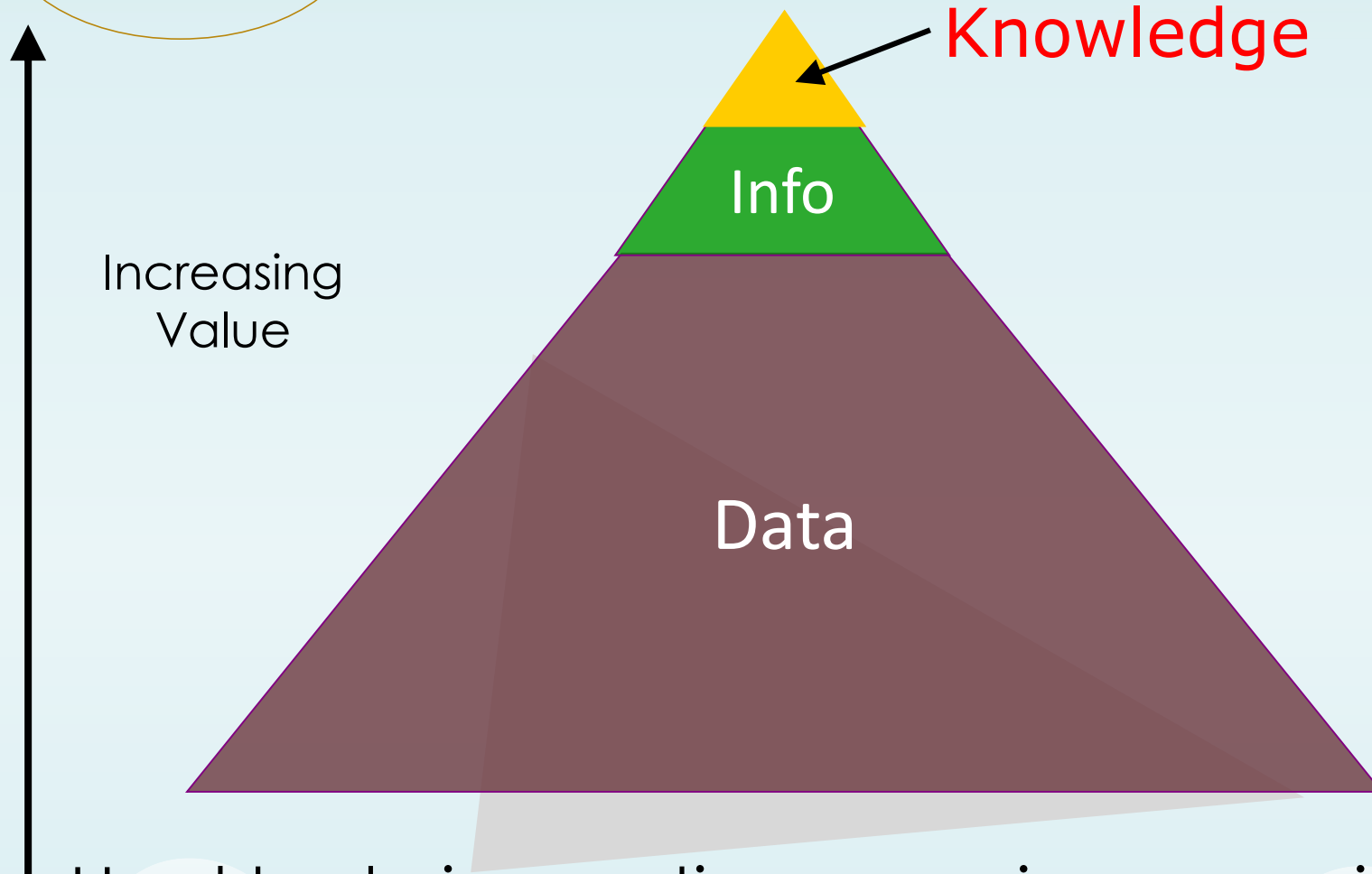
- Essentials of Medical statistics for health research (using SPSS)
- Efficient, Quality-assured Data Capture using EpiData
- Effective presentation for health data



Test statistics

- A test statistic is used in a hypothesis testing to decide to support or reject the null hypothesis.
- Descriptive test statistics: Normal distribution test statistics
- Comparative test statistics: Chi-square, t-test, ANOVA
- Correlation/Prediction: test of strength of association
- Logistic regression: RR, OR
- Time to event: Survival analysis

Goal: Convert Data to (Actionable) Knowledge



Hard to do in practice – requires commitment and effort.

Knowledge

Concept of understanding information
based on

statistic patterns
in a way that provides
insight to information

Data management

Thanks you

