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Study plan and project management

Dr. Sanjay Mehendale
MD, MPH, FAMS, FIMSA, FACE

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Principles of project management

To ensure that the defined objectives are met

To also ensure that products/ deliverables are delivered within the defined timeframe and budget at the expected quality standards

The end result should be to provide directions for future implications .. Basically for better tomorrow

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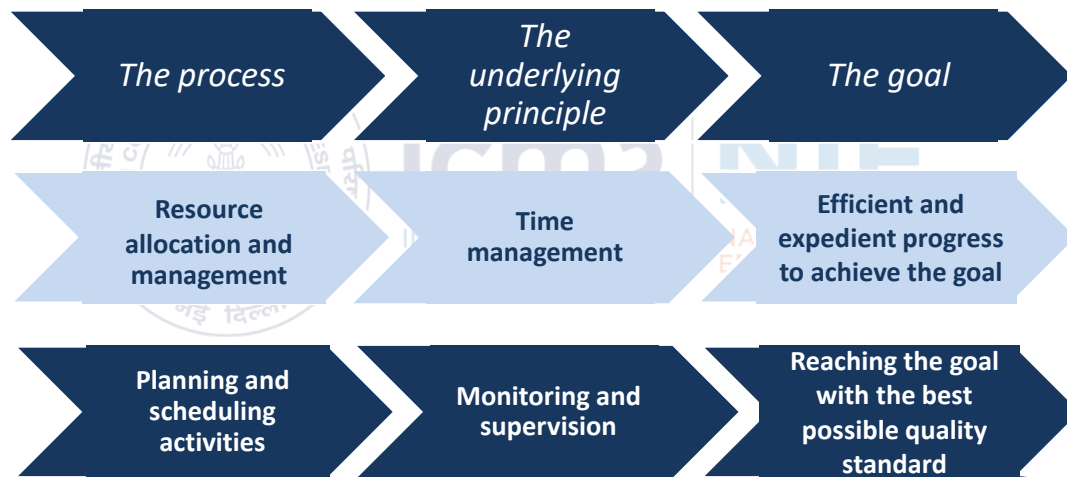
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Principles of project management



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Ad hoc approach to conducting a research study is often non-productive

The confusion at the beginning of the study

- I want to do a study, but I am not clear about the objectives
- I have prepared a questionnaire, but I am not clear about exact information I need
- I will collect data, but I am not clear how I will use that

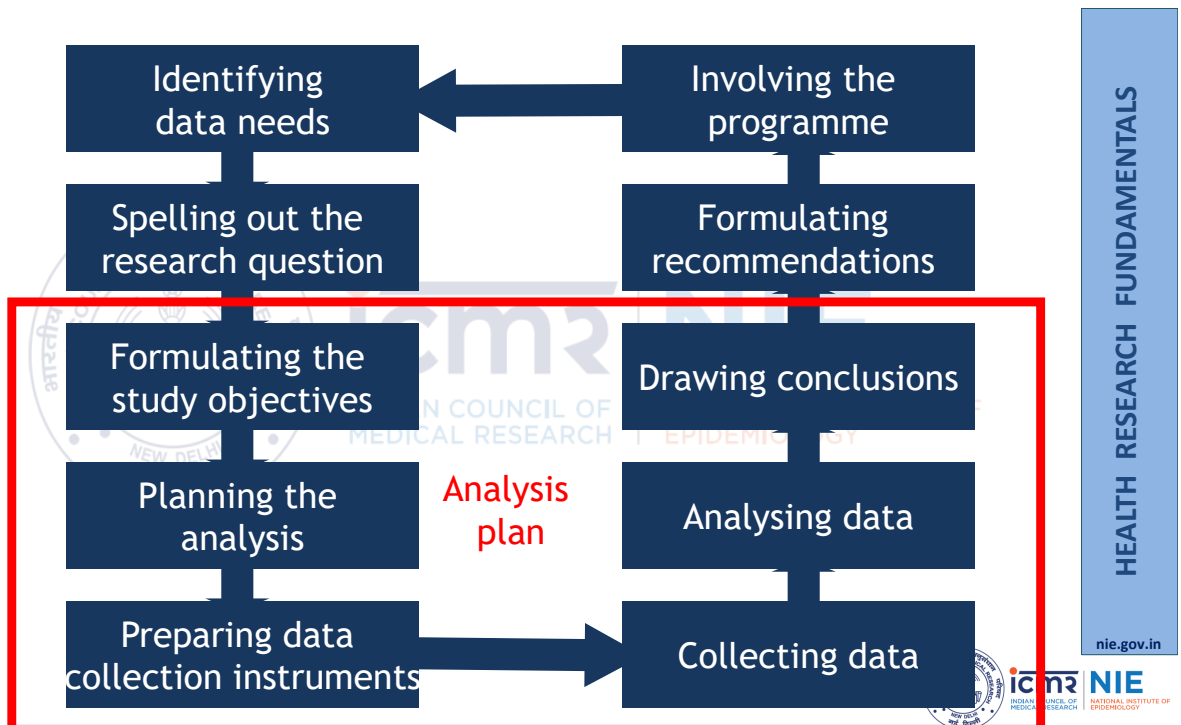
The disastrous end result

- I have data that are difficult to analyse
- I have analyzed the data but finding it difficult to interpret
- The interpretations are difficult to use in programs or for policy making

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A road map to study planning and management

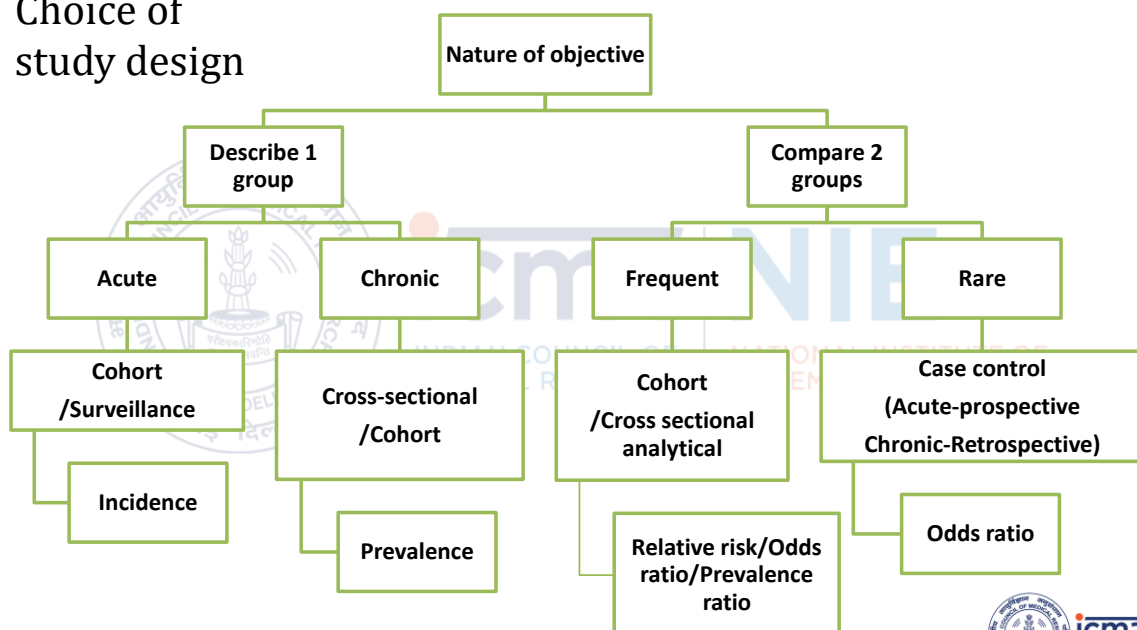
- Formulate appropriate objectives for the study
- Choose the right design to determine key indicators
- Identify parameters needed for the key indicators
- Prepare the analysis outline
- Estimate sample size

Framing the study objectives is critical

- Fewer the better ..
- May be mentioned as primary and secondary
- Should be clearly phrased:
 - Aimed at testing a hypothesis: **Determine** whether a contaminated well caused an outbreak
 - Aimed at measuring a quantity: **Estimate** the prevalence of diabetes



Choice of study design



Identification of information needed to calculate the indicator

- Decide the indicators that the study will generate
 - Rates, ratio, proportions or quantitative variables
- Identify the information elements that will be needed to calculate the indicators
 - Numerators
 - Denominators
- Also list information elements that will be used to calculate indicators
 - Outcome variable(s)
 - Covariate
 - Potential risk factors
 - Potential confounders



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Principles to be followed while collecting the information elements

- Use the variables that will best reflect the information element – it is important to review the available evidence
- Use validated or standardized methods and criteria
- Adopt standardized case definitions and laboratory criteria/ normal ranges
- Decide the most accurate way of collecting information on various elements – Observation, interview or laboratory methods



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Outcome measurement for iodine deficiency

Outcomes	Information element	Data collection method to obtain the variable
Chronic iodine deficiency	•Goitre	•Physical examination
Current exposure to iodine	•Urine iodine excretion	•Laboratory
Access to iodized salt	•Testing household salt for iodine	•Field spot test



Covariates in iodine deficiency

- Potential risk factors
 - Income
 - Community (e.g., minorities)
 - Caste
 - Education
- Potential confounding factors
 - Age
 - Sex
 - Residence



Advantages of making an analysis plan

- Helps to focus on the objectives of the study
- Start by preparing dummy tables
- Helps to avoid comparisons for which the study has not been designed
- Makes sure that only data that can be analysed is collected
- Saving time: quick publication, dissemination and policy feedback



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Sample size

- The analysis plan helps to determine the sample size
 - Measurement or testing?
 - Study design: Cohort, case control or survey
 - Level: Descriptive or analytical



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Common reasons for study failures

1. Badly defined research question and objectives
2. Unrealistic timescales - too short or too long
3. Inappropriate and incompetent staff: Lack of direction, motivation and training
4. Inadequate monitoring, failure to respond to contingent situations and carry out mid-course corrections

Attention points in study/project management



- Human resource management
- Communication
- Time management
- Financial management
- Quality management
- Data management
- Team work and coordination
- Monitoring the progress and targets



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Thank you
