# Article information:

Research Methods in Healthcare Epidemiology and Antimicrobial Stewardship – Quasi-Experimental Designs - PMC
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5036994/>

# Article summary:

1. Quasi-experimental studies are frequently used in healthcare epidemiology and antimicrobial stewardship to evaluate the association between an intervention and an outcome using experiments in which the intervention is not randomly assigned.

2. Quasi-experimental studies can be categorized into three major types: interrupted time series designs, designs with control groups, and designs without control groups.

3. Researchers need to be aware of the biases that may occur in quasi-experimental studies that may lead to a loss of internal validity, especially selection bias in which the intervention group may differ from the baseline group.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Research Methods in Healthcare Epidemiology and Antimicrobial Stewardship – Quasi-Experimental Designs" provides an overview of quasi-experimental study designs in healthcare epidemiology and antimicrobial stewardship. The authors highlight the advantages and disadvantages of these designs, as well as potential pitfalls and biases that researchers should be aware of.

One potential bias in the article is its focus on the advantages of quasi-experimental studies, while downplaying their limitations. For example, the authors note that quasi-experimental studies are less expensive and time-consuming than randomized controlled trials (RCTs), but do not mention that they may also be less reliable due to selection bias and other sources of error.

Another potential bias is the article's emphasis on the interrupted time series design as a way to improve quasi-experimental study design. While this design can be useful for evaluating rapid responses to outbreaks or other patient safety problems, it may not be appropriate for all research questions. The authors do not discuss alternative designs or acknowledge that different research questions may require different approaches.

The article also makes unsupported claims about the generalizability of quasi-experimental studies compared to RCTs. While it is true that quasi-experimental studies may include patients who are often excluded from RCTs, such as those too ill to give informed consent, this does not necessarily mean that their findings are more generalizable or have better external validity.

Overall, while the article provides a useful introduction to quasi-experimental study designs in healthcare epidemiology and antimicrobial stewardship, it could benefit from a more balanced discussion of their strengths and limitations. Researchers should carefully consider the potential biases and limitations of these designs before using them in their own research.

# Topics for further research:

* Limitations of quasi-experimental study designs in healthcare research
* Selection bias in quasi-experimental studies
* Alternative study designs for healthcare epidemiology and antimicrobial stewardship research
* External validity of quasi-experimental studies compared to randomized controlled trials
* Advantages and disadvantages of interrupted time series design
* Best practices for using quasi-experimental study designs in healthcare research

# Report location:

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