Review of: "When a Cluster Is a Cluster"

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The manuscript "When a Cluster Is a Cluster" by Enzo Grossi provides a comprehensive overview of the significance of spatial clustering in epidemiological studies, particularly in the context of infectious diseases like COVID-19. It effectively highlights the importance of identifying spatial clusters for effective epidemic management and control. However, there are some areas where the essay could be improved:

Clarity and Organization: While the manuscript covers a broad range of topics related to spatial clustering, it could benefit from clearer organization and structure. Breaking down the content into distinct sections with clear headings would help readers navigate through the material more easily.

Example:

- Original: "Several breakthroughs and triumphs in infectious disease control have resulted from the epidemiologic evaluation of spatial clusters of cases."
- Correction: "The epidemiologic evaluation of spatial clusters of cases has led to numerous breakthroughs in infectious disease control."

In-text Citations: The manuscript references several studies and methodologies without providing in-text citations. Adding citations within the text would enhance the credibility of the information presented and allow readers to easily locate the sources for further reference.

Example:

- Original: "Computerized dot maps constitute an attractive way to achieve this."
- Correction: "Computerized dot maps constitute an attractive way to achieve this [citation needed]."

Conciseness: Some sections of the manuscript contain lengthy descriptions or explanations that could be condensed for brevity. Streamlining the content would make it more concise and improve readability.

Example:

- Original: "From an epidemiological point of view, understanding the clustering of individual cases in space to identify potential risk factors or outbreak identification, requires methods that are not limited by pre-defined administrative boundaries that may cause a pre-selection bias."
- Correction: "Epidemiologists must use methods not limited by pre-defined administrative boundaries to understand

spatial clustering and identify potential risk factors or outbreaks, thereby avoiding pre-selection bias."

Recommendations for Further Research: While the manuscript discusses various statistical methods and approaches for identifying spatial clusters, it could include recommendations for future research directions or areas that require further investigation. This would add depth to the discussion and provide readers with insights into potential avenues for advancing the field of spatial epidemiology.

Example:

- Original: "In summary, today several statistical methods allow to establish the existence of geographical clusters, some of them with a bottom-up data driven approach."
- Correction: "In summary, while several statistical methods exist for establishing the existence of geographical clusters, further research is needed to explore bottom-up data-driven approaches."

Grammar and Language: There are a few instances of grammatical errors and awkward phrasings throughout the manuscript. Proofreading the text for grammatical accuracy and clarity of expression would enhance its overall quality.

Example:

- Original: "The effectiveness of surveillance systems in differentiating a forthcoming outbreak from just sporadic cases could have important implications for analytical studies that assume independence among cases."
- Correction: "The effectiveness of surveillance systems in differentiating forthcoming outbreaks from sporadic cases could have important implications for analytical studies that assume independence among cases."

Visual Aids: Incorporating visual aids such as figures, tables, or maps could help illustrate key concepts or findings discussed in the manuscript. Visual representations can enhance comprehension and engage readers more effectively.

Example:

- Original: "The algorithm produced the coordinates and heat map of the area considered to be around the outbreak of the epidemic."
- Correction: "The algorithm produced coordinates and a heat map illustrating the area considered to be around the outbreak of the epidemic."