Bootcamp Writing 3: Knowledge Gap, Conciseness, & Peer Review

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SCHOOL *of* MEDICINE

Today's objectives

1 Describe the knowledge gap your study fills

2 Say more in fewer words

3 Effectively respond to peer review

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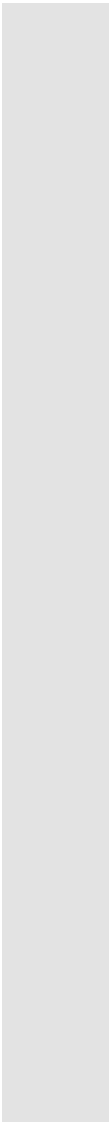
The
knowledge
gap

What is it?

- What we don't know yet

- What is missing, unclear, or contradictory

- Limitations, inconsistencies

- Understudied populations, mechanisms, diseases?

Example: "Although semaglutide has been shown to help patients lose weight, the factors predicting individual variability in response are poorly understood."

Your jobs

Convince your readers that...
1. The gap exists
2. The gap matters

The intro is not...

...a description of everything we know about the topic.

The gap

The gap

The intro is not…

…a description of everything we know about the topic.

The intro is…

…a path toward the gap in knowledge

The gap

There are *scads* of knowledge gaps

- **S**hortcoming
- **C**ontroversy
- **A**ssumption
- **D**eficit

Lingard L, Watling C. Problem/Gap/Hook Introductions. In: *Story Not Study*. Halifax, NS: Form & Formless Press; 2021

No studies have compared patient satisfaction after knee replacement according to the quantity of postoperative opioids prescribed.

Deficit

US surgeons commonly prescribe opioids after knee replacement, but how do we know how much opioid medication is necessary for patient satisfaction, or whether it is needed at all?

Assumption

Orthopaedic surgeons disagree on the use of BMI thresholds to determine eligibility for knee replacement.

Controversy

Although many studies have assessed radiographic success of knee replacement, they have not assessed patients' subjective views of their treatment experience.

Shortcoming

Which is which?

- **S**hortcoming
- **C**ontroversy
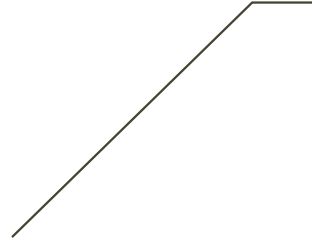- **A**ssumption
- **D**eficit

The gap

- The gap statement follows what is known
  - We know A
  - We know B
  - And we know C
  - However, we do not know D
- Tell readers why knowing D is important

Common pitfalls

- "Little is known about…"
- "Few studies have been conducted on…"
- "No studies have reported on…"

Common pitfalls

Indicates that *something* is known. Therefore, you must briefly describe & critique that knowledge

- "Little is known about…"
- "Few studies have been conducted on…"
- "No studies have reported on…"

Common pitfalls

- "Little is known about…"
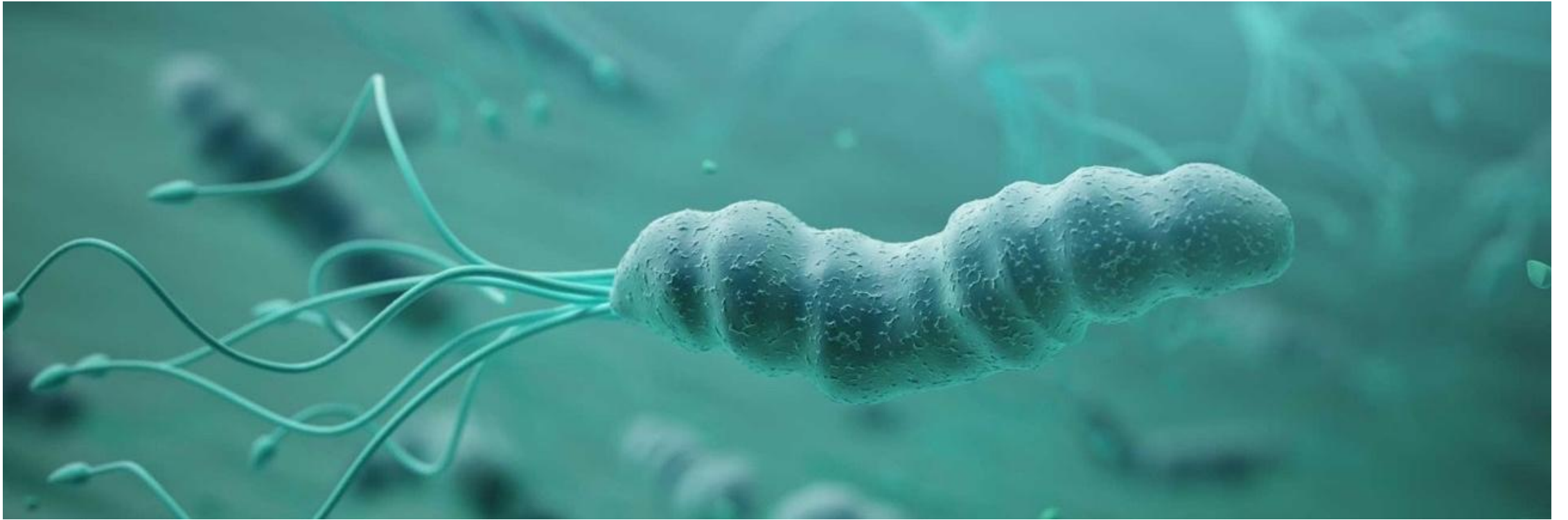- "Few studies have been conducted on…"
- "No studies have reported on…"

Cite those studies and briefly describe their findings

Common pitfalls

- "Little is known about…"
- "Few studies have been conducted on…"
- "No studies have reported on…"

What is *your* available evidence?

Historic example

Discovery of *Helicobacter pylori* as the cause of peptic ulcers

Marshall & Warren (1984)

Introduction

Gastric spiral bacteria have been repeatedly observed, reported, and then forgotten for at least 45 years.[1-3] In 1940 Freedburg and Barron stated that "spirochaetes" could be found in up to 37% of gastrectomy specimens,[4] but examination of gastric suction biopsy material failed to confirm these findings.[5]

Marshall BJ, Warren JR. Unidentified curved bacilli in the stomach of patients with gastritis and peptic ulceration. *Lancet*. 1984;323(8390):1311-1315.

Marshall & Warren (1984)

Knowledge claim #1

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The advent of fibreoptic biopsy techniques permitted biopsy of the antrum, and in 1975 Steer and Colin-Jones observed gram-negative bacilli in 80% of patients with gastric ulcer.[6] The curved bacilli they illustrated were said to be *Pseudomonas*, possibly a contaminant, and the bacteria were once more forgotten.

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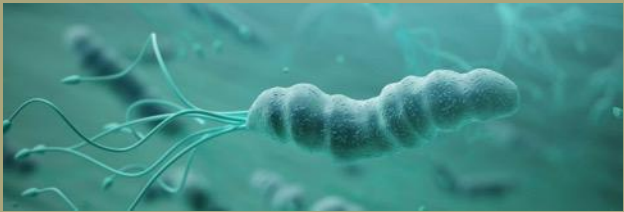
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Knowledge claim #3

The advent of fibreoptic biopsy techniques permitted biopsy of the antrum, and in 1975 Steer and Colin-Jones observed gram-negative bacilli in 80% of patients with gastric ulcer.[6] The curved bacilli they illustrated were said to be *Pseudomonas*, possibly a contaminant, and the bacteria were once more forgotten.

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The repeated demonstration of these bacteria in inflamed gastric antral mucosa[7] prompted us to do a pilot study in twenty patients. Typical curved bacilli were present in over half the biopsy specimens and the number of bacteria was closely related to the severity of the gastritis.

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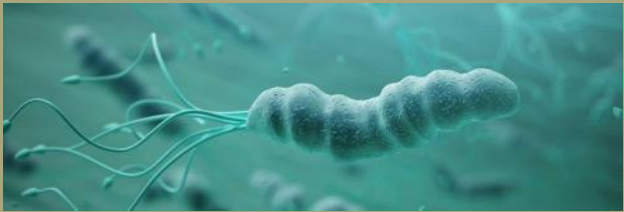
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Context

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Knowledge claim #6

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Marshall & Warren (1984)

The present study was designed to confirm the association between antral gastritis and the bacteria, to discover associated gastrointestinal diseases, to culture and identify the bacteria, and to find factors predisposing to infection.

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Marshall & Warren (1984)

Purpose #1

The present study was designed to **confirm** the association between antral gastritis and the bacteria, to discover associated gastrointestinal diseases, to culture and identify the bacteria, and to find factors predisposing to infection.

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Marshall & Warren (1984)

Purpose #2

The present study was designed to confirm the association between antral gastritis and the bacteria, to **discover** associated gastrointestinal diseases, to culture and identify the bacteria, and to find factors predisposing to infection.

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Marshall & Warren (1984)

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Purpose #4

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Conciseness

Less is more

Goals

Reduce redundancy without compromising rigor

Improve reader comprehension

The need

Conciseness isn't optional…it's necessary

* To conform to word limits
* To communicate your message to busy readers

Information overload

Vast amount of literature is published every day

- **Comprehension** hinges on **clarity**
- **Clarity** is supported by **conciseness**

Pop quiz

Pop quiz

Pop quiz

Due to the fact that

Because

Exactly the same

The same

2 out of 18 patients

2 of 18 patients

Past history

History

Pop quiz

Pop quiz

Challenge yourself

An Examination of Concussion Injury Rates in Various Models of Football Helmets in NCAA Football Athletes

Which words can go?

Challenge yourself

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Which words can go?

Responding to peer review

Crossing the finish line

Avoid 4 common pitfalls

1. Failing to address the critique in your response
2. Failing to adequately revise
3. Using an inappropriate tone
4. Missing the deadline (plan ahead; request extension)

Your response

Do you *have to* do everything the reviewers ask?

- No, but you must acknowledge every comment
- If you decline to take suggestions, you need a rationale

Your response

What are some common rationales?

- The request is beyond the scope of your study

- The data are unavailable

- Doing so would dilute your message

Decode the reviews

- Why is the reviewer requesting this change?
- Was our point unclear?
- Is their request impossible or just inconvenient?
- How strongly do they feel about it?
- Has more than one reviewer requested it?
- Can we remain open to doing it in a second revision?

Example

Reviewer 1

"Perhaps it might be helpful to explore the conceptual and theoretical issues around gender and reflect on how these fundamentally shape the way power works in clinical interactions in much more depth."

From Lingard and Watling (2021). *Story, Not Study: 30 Brief Lessons to Inspire Health Researchers as Writers*. Springer.

Example

Reviewer 1

Sounds optional

"**Perhaps it might be helpful** to explore the conceptual and theoretical issues around gender and reflect on how these fundamentally shape the way power works in clinical interactions in much more depth."

Example

Sounds like substantial revision/reframing

Reviewer 1

"Perhaps it might be helpful to **explore the conceptual and theoretical issues** around gender and reflect on how these fundamentally shape the way power works in clinical interactions in much more depth."

Example

Reviewer 1

"Perhaps it might be helpful to explore the conceptual and theoretical issues around gender and **reflect on** how these fundamentally shape the way power works in clinical interactions in much more depth."

Think about it? Or majorly revise?

Example

Sounds like a strong criticism

Reviewer 1

"Perhaps it might be helpful to explore the conceptual and theoretical issues around gender and reflect on how these **fundamentally** shape the way power works in clinical interactions **in much more depth**."

How to decode a review

- What are the theme(s)?
- Are the reviews overly polite? Overly harsh?
- Consult with coauthors when you're unsure of strategy

How to respond: content

- If you agree with comment
  - State that you agree and have followed the recommendation

- If you disagree with comment
  - Acknowledge the reviewer's concern
  - Explain your alternate point of view
  - Provide a robust rationale for not taking the suggestion

- If you agree in part
  - Start by addressing what you agree with
  - Then address the disagreement and provide a rationale

How to respond: tone

- Professional
- Diplomatic
- Grateful
- *Not* with excessive flattery
  - E.g. "We are grateful for the reviewer's insightful comment" in every response

How to respond: mechanics

- Copy and paste every comment into a Word document
- Put the article title, journal name, date, manuscript number at the top of the document
- Number every comment from every reviewer
- Provide the following for each comment
  - **Response:** tbd
  - **Modified text:** "tbd…" (lines xx-xx)

How it looks

Comment: Did type of surgery or indication have any correlation with depression/anxiety or PROMIS score (baseline or change)?

Response: We found no associations between type of surgery and depression/anxiety; therefore, this variable was not included in the primary regression models. However, we have added analysis of the relationship between type of surgery and PROMIS scores (both preoperative and change) to Table 2. Because of the large number of indications, it was not appropriate to include them (per statistical principles on the maximum number of variables that can be included in a model, in consultation with a biostatistician). For completeness, we have listed the indications in a new supplemental table.

Modified text: Please see Table 2 and Supplemental Table 1.

Questions for me?

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