

CDIP Domain 5: Research & Education Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. What determines the statistical power of a study?**
 - A. Alpha level alone**
 - B. Sample size alone**
 - C. P-value**
 - D. Effect size, alpha, sample size, and variability**

- 2. What does the message refer to in the communication process?**
 - A. Information sent**
 - B. The channel**
 - C. The rate of transmission**
 - D. The feedback**

- 3. Which tool is commonly used to assess risk of bias in non-randomized studies?**
 - A. ROBINS-I for non-randomized studies**
 - B. RoB 2 for randomized trials**
 - C. Cochrane risk of bias tool**
 - D. Jadad scale**

- 4. All Patient Refined (APR) - DRG expands DRGs by incorporating which factors?**
 - A. Severity of illness and risk of mortality**
 - B. Age only**
 - C. Insurance type**
 - D. Hospital size**

- 5. What is recommended about data sharing in research?**
 - A. Share data with no restrictions to maximize reuse.**
 - B. Share only after obtaining consent from each participant.**
 - C. Share data with no documentation.**
 - D. Share data with appropriate governance, access controls, and licensing to enable reuse while protecting privacy.**

6. Which term is used for variance based on a sample, often denoted by s^2 ?
- A. Sample variance
 - B. Population variance
 - C. Standard deviation
 - D. Range
7. Formative assessment is best described as:
- A. The final evaluation at the end of a course.
 - B. Not used in educational settings.
 - C. Ongoing feedback used to improve learning during the process.
 - D. A standardized test with broad content coverage.
8. Which professionals should be required to obtain CDI education?
- A. Registration staff
 - B. Medical staff
 - C. Pharmacists
 - D. Patients
9. What is the formula for sample variance?
- A. $s^2 = \sum (x - \bar{x})^2 / n$
 - B. $s^2 = \sum (x - \bar{x})^2 / (n - 1)$
 - C. $s^2 = \sum |x - \bar{x}|^2 / (n - 1)$
 - D. $s^2 = \sum (x - \mu)^2 / (n - 1)$
10. What dimensions define data quality in research databases?
- A. Color, size, novelty, popularity.
 - B. Only timeliness matters.
 - C. Accuracy, completeness, consistency, timeliness, validity, accessibility.
 - D. Speed of access, license cost, vendor support.

Answers

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1. D
2. A
3. A
4. A
5. D
6. A
7. C
8. B
9. B
10. C

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Explanations

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1. What determines the statistical power of a study?

- A. Alpha level alone
- B. Sample size alone
- C. P-value
- D. Effect size, alpha, sample size, and variability**

The power of a study is the probability of correctly detecting a real effect when one exists. It depends on four factors: the true effect size, the significance threshold (alpha), the number of observations (sample size), and how much variability or noise is in the data. A larger true effect is easier to detect, so power increases with effect size. More observations reduce the uncertainty around the estimated effect, so power goes up as sample size grows. A higher alpha makes it easier to declare a result significant, which increases power but also raises the chance of a false positive. Lower variability means the data are more precise, making it easier to distinguish the real effect from random fluctuation, which also raises power. P-value is not a determinant of power itself; it's a result that reflects all those factors after you collect the data. So you can't determine power from the p-value alone. The four factors together define power, and power analysis uses them to plan studies or interpret their findings.

2. What does the message refer to in the communication process?

- A. Information sent**
- B. The channel
- C. The rate of transmission
- D. The feedback

The message is the information the sender wants to convey—the content or meaning being transmitted. It's the actual idea, data, or content that travels from sender to receiver after encoding. The channel is the medium carrying that content (like email or speech), the rate of transmission is how fast that content moves or is delivered, and feedback is the receiver's response back to the sender. So, identifying the message as the information intended to be communicated best captures what is being transmitted in the exchange.

3. Which tool is commonly used to assess risk of bias in non-randomized studies?

- A. ROBINS-I for non-randomized studies**
- B. RoB 2 for randomized trials**
- C. Cochrane risk of bias tool**
- D. Jadad scale**

When evaluating studies that aren't randomized, you want a tool that specifically captures biases typical of observational designs. ROBINS-I, which stands for Risk Of Bias In Non-randomized Studies of Interventions, is designed for this purpose. It guides you through several bias domains that commonly affect non-randomized evidence: confounding (differences between groups that could influence outcomes), how participants and interventions are classified, deviations from planned interventions, missing data, how outcomes are measured, and how results are selected for reporting. The idea is to judge each domain and then form an overall risk of bias assessment that reflects how much the study's results might be distorted compared with a ideal randomized trial. RoB 2 is aimed at randomized trials, not non-randomized studies, so it isn't the right fit for observational evidence. The Cochrane risk of bias tool is typically associated with randomized trials as well (with newer versions focusing on randomized designs). The Jadad scale is an older, simpler measure that emphasizes only a few items like randomization, blinding, and withdrawals, which doesn't adequately capture the breadth of bias issues in non-randomized research.

4. All Patient Refined (APR) - DRG expands DRGs by incorporating which factors?

- A. Severity of illness and risk of mortality**
- B. Age only**
- C. Insurance type**
- D. Hospital size**

The main idea is that All Patient Refined DRGs add two extra dimensions to each base DRG: severity of illness and risk of mortality. By labeling patients within a DRG not just by the diagnosis and procedures, but also by how sick they are (severity) and how likely they are to have adverse outcomes (risk of mortality), APR-DRG creates finer categories that better reflect resource use and outcomes. This makes comparisons and reimbursement more accurate across patients who share a diagnosis but differ in complexity. Age, insurance type, and hospital size aren't the factors used to refine the DRG classifications.

5. What is recommended about data sharing in research?

- A. Share data with no restrictions to maximize reuse.**
- B. Share only after obtaining consent from each participant.**
- C. Share data with no documentation.**
- D. Share data with appropriate governance, access controls, and licensing to enable reuse while protecting privacy.**

When sharing data in research, the goal is to enable reuse and verification while protecting participant privacy and meeting ethical and legal obligations. The best approach is to share data under appropriate governance, with clear access controls and licensing. Governance establishes who can access the data and for what purposes, creating a formal framework for responsible use. Access controls ensure sensitive information is given only to authorized researchers and used within agreed terms, helping to prevent misuse. Licensing spells out how the data can be used, shared, attributed, and any restrictions, making the reuse permissible and transparent. This combination supports reproducibility and secondary analysis, collaboration, and meta-studies, all while reducing privacy risks and accountability gaps. Sharing data with no restrictions threatens privacy and misuse; requiring consent from each participant for every share is often impractical for large datasets or de-identified data; and sharing without documentation makes the data unusable to others. So, sharing with governance, access controls, and licensing is the balanced, responsible approach.

6. Which term is used for variance based on a sample, often denoted by s^2 ?

- A. Sample variance**
- B. Population variance**
- C. Standard deviation**
- D. Range**

Variance based on a sample is called the sample variance, and it is denoted by s^2 . It measures how spread out the sample values are around the sample mean, using the formula $s^2 = \frac{\sum (x_i - \bar{x})^2}{(n - 1)}$. The $n-1$ in the denominator makes this an unbiased estimate of the population variance (σ^2), which would use the population mean and divide by N . The standard deviation is simply the square root of variance (s is the sample standard deviation, σ is the population standard deviation). The range, in contrast, is just the difference between the maximum and minimum values and does not represent variance.

7. Formative assessment is best described as:

- A. The final evaluation at the end of a course.
- B. Not used in educational settings.
- C. Ongoing feedback used to improve learning during the process.**
- D. A standardized test with broad content coverage.

Formative assessment is ongoing feedback used to improve learning during the process. It happens while instruction is still happening, so teachers can check understanding, identify misconceptions, and adjust teaching, pacing, or practice to help students move forward. This approach keeps the focus on growth and learning, rather than just measuring what was learned at the end. Quick checks, exit tickets, observations, and short quizzes are common forms, all aimed at guiding next steps for both students and teachers. By contrast, a final evaluation at the end of a course summarizes what was learned after instruction is complete, and a standardized test with broad content coverage measures performance at a broader level, not the ongoing learning process.

8. Which professionals should be required to obtain CDI education?

- A. Registration staff
- B. Medical staff**
- C. Pharmacists
- D. Patients

CDI education targets how clinicians document patient care so the medical record supports accurate coding, reimbursement, and quality reporting. The people who generate the clinical documentation—the treating physicians, residents, nurse practitioners, physician assistants, and other medical staff—are the ones whose notes, discharge summaries, and problem lists determine what gets coded and billed. Providing CDI education to medical staff helps ensure their documentation clearly captures the patient's conditions, severity, and comorbidities in a way that aligns with coding guidelines, reducing undercoding or misclassification and improving data quality for outcomes and quality reporting. Registration staff, pharmacists, and patients don't routinely create the clinical diagnoses and rationale that drive ICD-10 coding and risk adjustment, so CDI education isn't typically mandated for them.

9. What is the formula for sample variance?

- A. $s^2 = \sum (x - \bar{x})^2 / n$
- B. $s^2 = \sum (x - \bar{x})^2 / (n - 1)$**
- C. $s^2 = \sum |x - \bar{x}|^2 / (n - 1)$
- D. $s^2 = \sum (x - \mu)^2 / (n - 1)$

Estimating variability from a sample uses the idea that you don't know the true population mean, so you rely on the sample mean to center the data. When you center by the sample mean, you've used up one degree of freedom, which is why the divisor is $n-1$ instead of n . This adjustment makes s^2 an unbiased estimator of the population variance. Thus, the standard formula for sample variance is the sum of squared deviations from the sample mean, divided by $n-1$: $\sum (x_i - \bar{x})^2 / (n - 1)$. This captures how spread out the data are around the mean you actually observed. The other forms reflect related ideas but aren't the conventional way to estimate variance from a sample. Using the population mean μ and dividing by n would be the variance of the entire population, not an estimate from a sample. The version with an absolute value is basically the same in value as the squared form (since squaring removes sign), but it's not the standard expression taught for the sample variance.

10. What dimensions define data quality in research databases?

- A. Color, size, novelty, popularity.
- B. Only timeliness matters.
- C. Accuracy, completeness, consistency, timeliness, validity, accessibility.**
- D. Speed of access, license cost, vendor support.

Data quality in research databases is assessed across several interconnected dimensions that reflect how trustworthy and usable the data are. The key ones are accuracy (how close data values are to the true values), completeness (whether all required data and records are present), consistency (data align without contradictions across datasets or within fields), timeliness (how up-to-date the data are), validity (data conform to defined rules, formats, and constraints), and accessibility (data can be retrieved and used by authorized users in usable formats). Together, these aspects ensure researchers can rely on the data for accurate analyses and conclusions. The other options miss essential parts of data quality: color, size, novelty, and popularity aren't standard quality dimensions; focusing only on timeliness ignores accuracy, completeness, and other critical factors; and speed of access or costs relate to performance or procurement rather than the intrinsic quality of the data itself.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://cdipdomain5.examzify.com>

We wish you the very best on your exam journey. You've got this!

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