
Certificate in Medical Journalism

Medical Journalism Capstone Project

Absolute Risk Reduction refers to the difference in the risk of a particular outcome between two groups, such as the risk of developing a disease in a group that receives a treatment versus a group that does not. The concept is often used in clinical trials to determine the effectiveness of a new treatment. For example, if a study finds that a new medication reduces the risk of heart disease by 20% in the treatment group compared to the control group, the absolute risk reduction would be 20%. This concept is related to relative risk reduction, which is the percentage reduction in risk in the treatment group compared to the control group.

Accountability in medical journalism refers to the responsibility of journalists to ensure that the information they provide is accurate, reliable, and unbiased. This includes being transparent about sources, methods, and potential conflicts of interest. Journalists must also be accountable for correcting errors and mistakes in their reporting. Accountability is essential in medical journalism, as it helps to maintain the trust of readers and audiences in the information being reported.

Adverse Event is an undesirable and unintended medical occurrence that is associated with the use of a medical treatment or product. Adverse events can range from mild to severe and can include side effects, allergic reactions, and overdose reactions. In medical journalism, it is essential to report adverse events accurately and in context, to help readers understand the potential risks and benefits of a treatment or product.

Alternative Medicine refers to medical practices and treatments that are not part of conventional Western medicine. Examples of alternative medicine include acupuncture, herbalism, and homeopathy. Alternative medicine is often used in conjunction with conventional medicine, and medical journalists should approach the topic with a critical and open-minded perspective.

Bias in medical journalism refers to a systematic distortion or deviation from the truth in reporting. Bias can occur due to various factors, including the selection of sources, the interpretation of data, and the language used in reporting. Medical journalists should be aware of their own biases and strive to present a balanced and objective view of the information.

Case-Control Study is a type of research study that compares people with a specific outcome or disease (cases) with people without the outcome or disease (controls). The study aims to identify factors that may be associated with the outcome or disease. Case-control studies are commonly used in medical research to investigate the causes of diseases and to identify risk factors and protective factors.

Clinical Trial is a type of research study that evaluates the safety and effectiveness of a new medical

treatment or product. Clinical trials involve human participants and are typically divided into phases, including phase 1, phase 2, and phase 3. Each phase has a specific purpose, such as assessing the safety of a new treatment or comparing its effectiveness to an existing treatment.

Cohort Study is a type of research study that follows a group of people over time to examine the development of a specific outcome or disease. Cohort studies can be prospective or retrospective, depending on whether the study starts with the present or looks back in time. Cohort studies are useful for identifying causal relationships and temporal relationships between risk factors and outcomes.

Confidence Interval is a statistical concept that represents the range of values within which a population parameter is likely to lie. Confidence intervals are commonly used in medical research to estimate the effect size of a treatment or to compare the outcomes between two groups. For example, a confidence interval might indicate that the true effect size of a new medication is likely to be between 10% and 20%.

Conflict of Interest refers to a situation in which an individual's personal or financial interests may influence their professional judgment or decision-making. In medical journalism, conflicts of interest can occur when a journalist or a source has a financial or personal stake in the outcome of a story. Journalists should be transparent about potential conflicts of interest and strive to maintain their objectivity and independence.

Data Mining is the process of analyzing large datasets to identify patterns and relationships. In medical journalism, data mining can be used to identify trends and outliers in healthcare data, such as hospitalization rates or medication usage. Data mining can also be used to identify potential fraud or abuse in healthcare systems.

Decision Analysis is a method used to evaluate the potential outcomes of different decisions or interventions. In medical journalism, decision analysis can be used to evaluate the cost-effectiveness of a new treatment or to compare the outcomes of different treatment options. Decision analysis involves estimating the probabilities and outcomes of different scenarios and using this information to inform decision-making.

Dose-Response Relationship refers to the relationship between the dose of a treatment or exposure and the resulting effect or outcome. In medical journalism, it is essential to report the dose-response relationship accurately, as it can help readers understand the potential risks and benefits of a treatment. For example, a dose-response relationship might indicate that a higher dose of a medication is associated with a greater response rate but also a higher risk of side effects.

Economic Evaluation is a method used to assess the costs and benefits of a healthcare intervention or program. Economic evaluations can be used to compare the cost-effectiveness of different treatments or to evaluate the return on investment of a healthcare program. Economic evaluations involve estimating the costs and benefits of an intervention and using this information to inform decision-making.

Effect Size is a statistical concept that represents the magnitude of the effect of a treatment or intervention.

In medical journalism, effect size is often reported as a percentage change or a relative risk reduction. For example, a study might find that a new medication reduces the risk of heart disease by 20%, which would be reported as a 20% effect size.

Evidence-Based Medicine refers to the use of current best evidence in making decisions about the care of individual patients. Evidence-based medicine involves integrating clinical experience and patient values with the best available research evidence. In medical journalism, evidence-based medicine is essential for providing accurate and reliable information to readers.

False Positive is a test result that incorrectly indicates the presence of a disease or condition. False positives can have significant consequences, including unnecessary treatment and anxiety for patients. In medical journalism, it is essential to report the risk of false positives accurately and in context, to help readers understand the limitations of medical testing.

Gene Therapy is a medical treatment that involves modifying an individual's genes to prevent or treat a disease. Gene therapy is a rapidly evolving field, and medical journalists should be aware of the latest developments and advances in this area.

Health Disparities refer to the unequal distribution of health resources and outcomes among different populations. Health disparities can be based on factors such as race, ethnicity, and socioeconomic status. In medical journalism, it is essential to report on health disparities accurately and in context, to help readers understand the complexities of healthcare systems.

Health Economics is the study of the allocation of resources in healthcare systems. Health economics involves analyzing the costs and benefits of healthcare interventions and programs. In medical journalism, health economics is essential for providing accurate and informative information to readers.

Health Literacy refers to the ability of individuals to obtain, process, and understand basic health information and services. Health literacy is essential for informed decision-making and self-care. In medical journalism, it is essential to report on health literacy accurately and in context, to help readers understand the importance of this concept.

Health Policy refers to the decisions and actions of governments and other organizations that affect the healthcare system. Health policy can include laws, regulations, and guidelines that shape the delivery of healthcare services. In medical journalism, it is essential to report on health policy accurately and in context, to help readers understand the complexities of healthcare systems.

Incidence refers to the number of new cases of a disease or condition that occur within a population over a specific period. Incidence is often reported as a rate or a ratio, such as the number of cases per 100,000 people per year.

Informed Consent is the process by which patients provide their consent for a medical treatment or

procedure. Informed consent involves providing patients with accurate and complete information about the risks and benefits of a treatment, as well as any alternatives that may be available.

Intervention Study is a type of research study that evaluates the effect of a specific intervention or treatment on a particular outcome. Intervention studies can be used to evaluate the effectiveness of a new treatment or to compare the outcomes of different treatment options.

Journal Impact Factor is a metric that measures the frequency with which the average article in a journal has been cited in a given year. Journal impact factor is often used to evaluate the quality and influence of a journal.

Lifetime Risk refers to the probability that an individual will develop a specific disease or condition over the course of their lifetime. Lifetime risk is often reported as a percentage or a ratio, such as the risk of developing breast cancer by age 80.

Medical Error refers to an adverse event or injury that results from a medical intervention or treatment. Medical errors can be caused by a variety of factors, including human error, system failures, and communication breakdowns.

Meta-Analysis is a statistical method that combines the results of multiple studies to draw more general conclusions. Meta-analyses are often used in medical research to evaluate the effectiveness of a treatment or to compare the outcomes of different treatment options.

Morbidity refers to the state of being diseased or ill. Morbidity can be measured in terms of the prevalence or incidence of a disease, as well as the severity of the disease.

Mortality refers to the number of deaths that occur within a population over a specific period. Mortality is often reported as a rate or a ratio, such as the number of deaths per 100,000 people per year.

Narrative Medicine is a field of study that focuses on the use of narrative and storytelling in medical practice and education. Narrative medicine involves using storytelling techniques to convey complex medical information and to promote empathy and understanding between healthcare providers and patients.

Number Needed to Treat is a statistical concept that represents the number of patients who need to be treated with a specific intervention to prevent one adverse outcome. Number needed to treat is often reported as a ratio or a percentage, such as the number of patients who need to be treated with a medication to prevent one heart attack.

Observational Study is a type of research study that observes the outcomes of patients without intervening or manipulating any variables. Observational studies can be used to identify associations and correlations between risk factors and outcomes.

Outcome Measure is a variable that is used to assess the effect of a treatment or intervention on a specific

outcome. Outcome measures can include clinical outcomes, such as disease progression or symptom relief, as well as patient-reported outcomes, such as quality of life or satisfaction.

p-Value is a statistical concept that represents the probability of obtaining a result at least as extreme as the one observed, assuming that the null hypothesis is true. p-Values are often used to determine the significance of a result, with a p-value of less than 0.05 indicating statistical significance.

Patient-Centered Care is an approach to healthcare that focuses on the needs and preferences of individual patients. Patient-centered care involves providing personalized and responsive care that takes into account the unique needs and values of each patient.

Phase 1 Trial is the first phase of a clinical trial, which involves evaluating the safety and tolerability of a new treatment or intervention. Phase 1 trials typically involve a small number of healthy volunteers or patients with a specific disease or condition.

Placebo Effect refers to the phenomenon in which patients experience an improvement in symptoms or outcomes when they receive a treatment that has no therapeutic effect. Placebo effects can be caused by a variety of factors, including expectations and suggestion.

Prevalence refers to the total number of cases of a disease or condition that exist within a population at a specific point in time. Prevalence is often reported as a percentage or a ratio, such as the percentage of people with diabetes.

Primary Outcome Measure is the main outcome variable that is used to assess the effect of a treatment or intervention. Primary outcome measures can include clinical outcomes, such as disease progression or symptom relief, as well as patient-reported outcomes, such as quality of life or satisfaction.

Publication Bias refers to the tendency of researchers and journals to publish studies with positive or significant results, while failing to publish studies with negative or non-significant results. Publication bias can lead to an overestimation of the effectiveness of a treatment or intervention.

Quality of Life is a broad concept that encompasses various aspects of an individual's life, including physical health, mental health, and social functioning. Quality of life is often measured using questionnaires and scales, such as the SF-36 or the EQ-5D.

Randomized Controlled Trial is a type of research study that involves randomly assigning participants to an intervention or control group. Randomized controlled trials are considered the gold standard of clinical research, as they provide the most reliable evidence of the effectiveness of a treatment or intervention.

Relative Risk is a statistical concept that represents the ratio of the probability of an event occurring in the exposed group versus the non-exposed group. Relative risk is often reported as a ratio or a percentage, such as the relative risk of developing a disease.

Risk Factor is a variable that is associated with an increased risk of developing a disease or condition. Risk factors can include genetic and environmental factors, as well as behavioral and lifestyle factors.

Secondary Outcome Measure is a outcome variable that is used to assess the effect of a treatment or intervention, in addition to the primary outcome measure. Secondary outcome measures can include clinical outcomes, such as disease progression or symptom relief, as well as patient-reported outcomes, such as quality of life or satisfaction.

Sensitivity refers to the ability of a test or diagnostic tool to detect true cases of a disease or condition. Sensitivity is often reported as a percentage or a ratio, such as the percentage of true cases that are detected by a test.

Specificity refers to the ability of a test or diagnostic tool to detect true negatives, or the absence of a disease or condition. Specificity is often reported as a percentage or a ratio, such as the percentage of true negatives that are detected by a test.

Survival Analysis is a statistical method that is used to analyze the time to a specific event, such as death or disease progression. Survival analysis can be used to compare the outcomes of different treatment options or to evaluate the prognosis of patients with a specific disease or condition.

Systematic Review is a type of research study that involves systematically searching, appraising, and synthesizing the existing literature on a specific topic. Systematic reviews can be used to evaluate the effectiveness of a treatment or intervention, or to identify the best available evidence on a particular topic.

Target Population refers to the group of people that a treatment or intervention is intended to benefit. Target populations can be defined in terms of demographic and clinical characteristics, such as age, sex, and disease severity.

Tertiary Outcome Measure is a outcome variable that is used to assess the effect of a treatment or intervention, in addition to the primary and secondary outcome measures. Tertiary outcome measures can include clinical outcomes, such as disease progression or symptom relief, as well as patient-reported outcomes, such as quality of life or satisfaction.

Type I Error refers to the error of rejecting a true null hypothesis, or the error of concluding that a treatment or intervention is effective when it is not. Type I errors can occur due to chance or random variation, and can be minimized by using statistical tests and confidence intervals.

Type II Error refers to the error of failing to reject a false null hypothesis, or the error of concluding that a treatment or intervention is not effective when it is. Type II errors can occur due to sample size or statistical power, and can be minimized by using larger sample sizes and more sensitive statistical tests.

Validity refers to the degree to which a test or diagnostic tool measures what it is supposed to measure. Validity can be assessed in terms of content validity, construct validity, and criterion validity.

Vulnerable Population refers to a group of people that is at increased risk of harm or exploitation, such as children, older adults, or people with disabilities. Vulnerable populations require special protections and considerations in medical research and practice.