

CONCORSO PUBBLICO, PER ESAMI, A N. 2 POSTI DI CATEGORIA D, POSIZIONE ECONOMICA D1, AREA TECNICA, TECNICO-SCIENTIFICA ED ELABORAZIONE DATI, PER LE ESIGENZE DEL DIPERTIMENTO DI MEDICINA CLINICA E CHIRURGIA DELL'UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II, DI CUI N. 1 POSTO RISERVATO ALLE CATEGORIE DI CUI AL D.LGS. N. 66 DEL 15 MARZO 2010, ARTT. 1014, COMMA 1, LETT. A) E 678, COMMA 9 (COD. RIF. 2220), INDETTO CON DECRETO DEL DIRETTORE GENERALE N. 898 DEL 15.09.2022

TRACCE ESTRATTE PROVA ORALE DEL 02.12.2022

PROVA 1

- Gli studi epidemiologici.

- “Despite the global shift in attention toward the SARS-CoV-2 infection, antimicrobial resistance (AMR) still represents a serious threat and it should be considered as a silent undervalued pandemic. The rate of multi-drug-resistant (MDR) strains of Gram-negative bacteria is of great concern across the Europe, with particular attention to *Klebsiella pneumoniae* and *Acinetobacter* spp.”

- Inserire una tabella a 5 colonne e 9 righe in una pagina Word e scrivere testo a piacere con spaziatura 6pt prima e dopo il testo.

PROVA 2

- Gli studi osservazionali.
- “According to the latest European Centre for Disease Prevention and Control (ECDC) report on antimicrobial resistance in Europe, referring to 2020 data, *K. pneumoniae* strains showed a very high rate of resistance to carbapenems (>25%) in about one-third of European countries, while the prevalence of MDR *Acinetobacter* spp. was even higher, with rates of strains resistant to carbapenems of >50% in more than half of the European countries.”
- Inserire una interruzione di sezione in un foglio Word e disporre il foglio successivo in orientamento orizzontale.

PROVA 3

- Gli studi interventistici.
- “The epidemiological situation of other MDR gram-negative bacteria was not acceptable, also considering that each year there are more than 670,000 infections due to antibiotic-resistant bacteria in Europe, with more than 30,000 people dying as direct consequence of these infections [2]. It is also becoming clear that the SARS-CoV-2 pandemic has had a negative impact on the implementation of Antimicrobial Stewardship Programs (ASP) and on the prevalence of MDR strains in countries particularly engaged in fighting COVID-19.”
- Inserire numero di pagina e numero di righe in un foglio Word dopo aver scritto 4 righe di testo a piacere.

PROVA 4

- Elementi di biometria e statistica applicati alla ricerca clinica.
- “In this scenario, an increase in the rate of MDR isolates, including Gram-negative strains, is expected. Fortunately, several drugs and combinations have been introduced in recent years to treat MDR bacteria. However, an appropriate and conscientious use of these drugs is needed to preserve their long-lasting efficacy. In this perspective, the five Ds of antimicrobial stewardship must always be applied when treating infections caused by MDR bacteria in the clinical setting.”
- Scrivere 4 righe a piacere in un foglio Word, suddividere il testo in due colonne e conteggiare il numero di caratteri totali.

PROVA 5

- Struttura base di un protocollo.
- “In 2019, the European Centre for Disease Prevention and Control (ECDC) documented an increasing prevalence of carbapenem-resistant Enterobacterales (CRE) in Europe, with 43% of countries reporting regional or inter-regional spread of CRE [4]. In 2017, a total of 137,728 invasive isolate of carbapenem-resistant E. coli and 32,461 invasive isolates of carbapenem-resistant K. pneumoniae were reported from European countries.”
- Scrivere 10 numeri a piacere in un foglio Excel e calcolare media e deviazione standard.

PROVA 6

- Principi etici della ricerca clinica.
- “Several mechanisms are responsible for carbapenem resistance among Enterobacterales (i.e., alterations of the penicillin-binding proteins, decrease in bacterial membrane permeability and increase in efflux pumps), although the production of carbapenemase enzymes is the most represented mechanism of resistance, with 85% of CRE worldwide producing carbapenemases.”
- Scrivere 10 numeri a piacere in un foglio Excel e calcolare mediana, 1° e 3° quartile.

PROVA 7

- La tutela dei soggetti negli studi clinici: consenso informato e copertura assicurativa.
- “P. aeruginosa is the most common cause of infection among non-fermenting Gramnegative bacteria, frequently involved in nosocomial setting and affecting fragile populations [9]. Carbapenem-resistant P. aeruginosa (CRPA) isolates represent a global health menace, similarly to Enterobacterales species as well as A. baumannii: they all are considered “top priority pathogens” for which novel antibiotics are urgently, needed according to the World Health Organization.”
- Scrivere 10 numeri a piacere in due colonne (5 numeri per colonna) in un foglio Excel ed eseguire un t-test per dati appaiati.

PROVA 8

La gestione della privacy. Il GDPR e il trattamento dei dati nei processi di ricerca.

“Subsequent European guidelines, endorsed by both the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) and the European Society of Intensive Care Medicine (ESICM), referred to DTR-CRPA [13]. Eventually, the very recent Italian guidelines addressing infections by MDR bacteria also focused on DTR-PA.”

- Scrivere 10 numeri a piacere in due colonne (5 numeri per colonna) in un foglio Excel ed eseguire un t-test per dati non appaiati.

PROVA 11

- La farmacovigilanza nella sperimentazione clinica.
- “Ceftolozane/tazobactam (CTT) belongs to the first wave of novel beta-lactam/betalactamase inhibitor combinations aimed at countering Gram-negative resistant bacteria [28]. Relying on the results of the ASPECT-cIAI and ASPECT-cUTI trials, it was approved by the Food and Drug Administration (FDA) in 2014 and by the European Medicines Agency (EMA) in 2015.”
- Inserire una tabella a 5 colonne e 9 righe in una diapositiva Power Point e scrivere testo a piacere con spaziatura 6pt prima e dopo il testo.

PROVA 13

- Gli attori della ricerca clinica.
- “As better explained in the dedicated paragraph, ceftolozane/tazobactam has become one of the reference drugs for *P. aeruginosa* infections in the case of resistance to all first-line options (quinolones, beta-lactams such as cefepime and piperacillin/tazobactam) plus carbapenems. Although related evidence from a randomized clinical trial is lacking, there are interesting data from observational studies informing this recommendation.”
- Creare una flow-chart a 3 passaggi in una diapositiva Power Point.

PROVA 14

- Il ruolo dello Study Coordinator o Data Manager.
- “The emergence of resistance to ceftolozane/tazobactam is becoming a not-negligible issue, with potential cross-resistance involving other novel beta-lactams such as ceftazidime/avibactam. Resistance is most commonly owing to amino acid substitutions, insertions or deletions in Pseudomonas-derived cephalosporinase (PDC), the chromosomally Antibiotics 2022, 11, 1263 6 of 28 encoded class C β -lactamase of *P. aeruginosa*, usually named as “the pseudomonal Ampicillinase C (AmpC)”.”
- Inserire un testo a piacere in una diapositiva Power Point ed evidenziare il testo con un ovale vuoto rosso inserendo un’animazione a piacere all’ovale.

Il Presidente della Commissione
F.to Prof. Ivan Gentile