

Abstract

Within the clinical environment diverse side effects have been identified as being associated with either direct usage or overuse of antibiotics. This happenstance is more collated with the proliferation of *C.difficile* a pathogen allied to colitis infection as well as antibiotic associated diarrhea. Despite that these issues are prevalent within the emergency unit settings in our hospitals, it would be instrumental to assert that there are some measures which have been identified to contain the abuse and overuse of antibiotics; some of the most recent is the use of probiotics which is a new approach of managing antibiotics as well as increasing the patients overall immunity.

How many antibiotics are prescribed in the emergency room?

Introduction

Antibiotics happen to be among the widely prescribed medications all over the world. The significance of prescribing antibiotics cannot be ignored. Due to diverse medical issues that are evident within emergency rooms various antibiotic classes are used. These classes differ in prescription even the way they are ingested in the patient's body. Likewise the prescription is determined by various factors which could either be correlated or not. It ought to be noted that these antibiotics are dispensed in a way that they provide the utmost therapeutic reaction. In this way numerous side effects are reduced, note that antibiotic side effects could adversely affect the patient's drug tolerance capability. The basic usage of antibiotics is to eradicate or kill diverse bacterial infections. However, antibiotics are not effective in fighting viral infections, such as flue or cold including fungal infections such as ringworms as well as vaginal yeasts infections. Nevertheless, the antibiotic classes which are widely used include but not least to; Penicillins which has such class members as penicillin, amoxicillin, ampicillin, amoxicillin-clavulanate, nafcillin, oxacillin, piperacillin-tazobactam,; Carbapenems with correlated class which include meropenem, doripenem, ertapenem, as well as imipenem-cilastatin; Lincosamide associated members include clindamycin, and lincomycin; Cephalosporins is also used and has such members as cephalexin, cefuroxime, cefaclor, ceftibuten, cefixime, cefdinir, and ceftriaxone. These antibiotics are regularly prescribed within emergency rooms as a measure to treat and control numerous infections generated by bacteria (van Nood, et al, 2012). In essence, such infections may range from tuberculosis, meningitis as well as streptococcal infection of wounds. The reason these antibiotics are commonly prescribed and over used can be etched to the fact that they have a wider propensity to target such minute microorganisms as fungi, parasites as well as bacteria. Within the emergency rooms antibiotics which are classified as bactericidal are widely prescribed since they are known to kill bacteria, this kind of antibiotic works by interfering with the basic construction of the bacterium's cell membrane or more its cell content. The other form of antibiotic entails the use of bacteriostatic; this is widely employed to thwart any bacterial multiplication (McFarland, 1998). Due to the emerging challenges presented by growing need to use antibiotics, as noted in the US, broad spectrum antibiotics have become the most widely prescribed within the emergency room settings. The approach is correlated to the wider aspect of controlling the proliferation of drug resistant bacterial strains. Others forms of antibiotics prescribed entail narrow spectrum which are just effective against just a few classes of bacteria. Likewise, there are antibiotics such as Sulfonamides which has such type of allied components as trimethoprim-sulfamethoxazole, sulfadiazine, and erythromycin-sulfisoxazole, typically prescribed since they have a strong capability to work against anaerobic bacteria. Examining the nature of antibiotic classes prescribed in all emergency room settings, it is evident that the drugs exist in tow broader categories, aerobic antibacterial as well as anaerobic antibiotics. All in all, these antibiotics are either given before hand or after as to prevent infections and this are more widespread before any surgical operations. In essence, antibiotics are prescribed to deal with mild to severe a bacterial infection that is why the very nature of prescription requires thorough understanding of the patient's condition before any prescription is approved.

The adverse outcomes from taking antibiotics

Within the emergency room antibiotic prescription, diverse studies have shown that the usage of antibiotics in one way or the other has adverse effects if not adequately followed or where the patient misuses the prescribed antibiotic. The principal outcome of taking antibiotics have been identified as development of ant resistant bacteria strains such as *clostridium difficile* particularly in inpatient patients within the emergency units. Hence, antibiotic effects have been observed to range from mild to severe as well as debilitating adverse consequences. Nevertheless, antibiotic side effects as noted among patients are exceedingly variable in regard to patient to patient and this is as well replicated from antibiotic to antibiotic. However, there are numerous side effects which may be as a result of each antibiotic class;

| Antibiotic Class | Class Members | Common Side Effects | Clinical Comments |
|------------------|---|---|--|
| Carbapenems | ertapenem, doripenem, meropenem, imipenem-cilastatin | nausea/vomiting, diarrhea, headache, rash, eosinophilia (elevated white blood cells) as well as liver toxicity, | Hypersensitivity reactions reported with meropenem, imipenem in patients with penicillin allergy |
| Penicillins | Nafcillin, penicillin, amoxicillin-clavulanate, oxacillin, piperacillin-tazobactam, | rash, abdominal pain, nausea/vomiting, diarrhea, drug fever, hypersensitivity reactions | if bloody stools, fever occur and this may include anaphylaxis, severe skin reaction, contact health care provider without delay; ampicillin may well cause pseudo membranous colitis |
| Tetracyclines | Minocycline, tetracycline, and doxycycline | abdominal pain, nausea, vomiting, anorexia, diarrhea, liver toxicity as well as tooth discoloration in children | wear protective clothing, use sunscreen as well as Avoid protracted sunlight contact |
| Macrolides | Clarithromycin, erythromycin and azithromycin | taste alterations, diarrhea, nausea, vomiting, anorexia, and abdominal pain. | do not crush, break, chew, open enteric-coated or delayed-release pill; high speed of gastrointestinal side effects |
| Quinolones | ofloxacin (Floxin), ciprofloxacin (Cipro), (Levaquin), levofloxacin, and moxifloxacin (Avelox), | insomnia, headache, nausea and vomiting, lethargy, photosensitivity (which can at times be severe) | Avoid lengthened sunlight contact; use sunscreen, wear protecting clothing; moxifloxacin connected with advanced rates of side effects such as tendon rupture (rare) more widespread in age > 60+, with corticosteroid use, in kidney, heart, lung transplant recipients |

Despite the above mentioned side effects, studies have shown that majority of these bacteria flourish on sugar, and other effects may entail feeling sick as well as having fungal infections touching on mouth, vagina as well as digestive tract. However, some of the side effects are classified as rare and include:

- Development of kidney stones (*especially when using sulphonamides*).
- Anomalous blood clotting (*more obvious when under cephalosporin's*).
- Sensitivity to sun (*if on tetracyclines medication*).
- Blood disarrays (*when taking trimethoprim*).
- Deafness (*evident when taking erythromycin as well as the amino glycosides*).

A number of patients, in particular elderly ones, may experience irritated bowels (a type of colitis) which can lead to relentless diarrhea. On the other hand, Clindamycin, which is an antibiotic widely used for the mainly severe infections, generally has as well these side effects. Nevertheless, although much less widespread, penicillin's, erythromycin as well as cephalosporin may do too (Louie and Miller, 2011). Diverse studies have established that antibiotics can as well interfere with other forms of treatment, and is thus advisable not to combine antibiotics with other kind of drugs since they may severely undermine the efficacy of any other medicine. It is thus important to understand that they have other severe effects which could lead to long-term healthy issues to the users. If a patient is experiencing an incommensurable or grave antibiotic side effect, they ought to contact their health care giver. The results may consist of staying on the similar antibiotic in addition to managing the identified side effect, regulating the dose, or more changing to a dissimilar antibiotic. As a rule, antibiotic management should not be closed without a health care giver's authorization (Dendukuri and Brophy, 2007). Discontinuing the antibiotic could let the infection to exacerbate and this may lead to increased antibiotic resistance. Even where the infections tend to appear to have been wiped prior to all of the prescription is gone; the complete course of antibiotic management must always be finished except told otherwise by a physician. An antibiotic hypersensitivity or sensitivity reaction can take place with any preparation, furthermore allergic reactions are one of the most widespread antibiotic side effects steering patients to emergency room admittance. Health care providers must at all times be informed of every preceding allergic effect to any prescription, including antibiotics. It would be as well essential to note that even placid allergic effects may just outcome with a skin rash. Likewise, additional relentless allergic reactions, such as anaphylaxis, can as well lead to shortness of breath, including wheezing, hives, in addition to swelling of the lips, face, or tongue. Anaphylaxis is a medicinal emergency that necessitates instantaneous medical attention.

The most widespread side effects of antibiotics are known to affect the digestive system. They have been established to crop up in around 1 every 10 patients. Many of the side effects of antibiotics that impinge on the digestive system consist of: being sick; feeling sick; diarrhoea; bloating and indigestion; abdominal pain as well as loss of appetite. Some of these side effects are typically placid and ought to pass once the patient complete the prescribed route of treatment. Basically, another aspect allied with the usage of antibiotics is allied to the problems that have emerged due to the use of antibiotics which can be simply defined as overuse. A number of studies have established that despite the direct side effects emerging due to typical usage of antibiotics, for a number of years diverse antibiotics have been misused in the logic that they are simply perceived as being very simple and risk free (McDonald, et al, 2005). Nevertheless, the worst poorly uses of these antibiotics among the patients have been established as being to treat virus infections like the common cold or as well influenza. It ought to be noted that viruses cannot in anyway be affected by antibiotics, but bacteria are. All in all, they are recommended day after day for the erroneous reasons. A number of scholars are of the opinion that they are prescribed in emergency rooms as a result of the 'whiny wheel' disorder. Though, the antibiotic may not actually do harm to the patient at that moment. However, when prescribed for the wrong diagnosis, it weakens the body's immune system and eventually the body becomes less and less competent to battle ordinary invasions of patients health. Shoddier yet, when the patient gets that bacterial infection, the body is resistant to antibiotic effects. In addition to that, this makes the treatment to be very complicated, demanding the application of very potent along with potentially precarious antibiotics to afford effectual treatment. These powerful antibiotic drugs can as well cause a number of obnoxious side effects, which may include yeast overgrowth in addition to gastrointestinal problem. As well as the risk of uncalled for side effects, improper use of antibiotics can advance the increase of antibiotic-resistant bacteria moreover leave the patient to be exposed to terminal infections later on. On the other hand, when an individual is identified with a bacterial contamination, antibiotics are essentially the most reliable treatment of choice in addition to being without doubt the most effectual treatment accessible. Nevertheless, as noted above, it would be instrumental to take very effectual steps to keep away from or at least trim down those side effects as well as do it naturally (Doron, et al, 2008). Thus, there are three efficient natural preferences to sustain your system whilst under antibiotics medication and consist of probiotic enhancements, herbal tea as well as milk thistle. Though antibiotics are heavily prescribed, unluckily antibiotics do not only exterminate the bacteria infecting the body, but it as well destroys the valuable bacteria or probiotics that support the digestive structure. These are the normal healthy bacteria that dwell in the digestive swathe. Nevertheless, consumption of probiotic supplements in addition to fermented foods which include yogurt as well as kefir can considerably trim down yeast infections in addition to averting side affects disturbing the GI Tract. To check some of this side effects, numerous studies illustrates that a little as plain as a mug of herbal tea can basically sooth the queasiness occasionally experienced whilst on antibiotics medication, a excellent preference is ginger tea. Furthermore recurrent grievance of diarrhea can come about even as the patient is taking antibiotics medication. Raspberry leaf tea has been found bring valuable reprieve of this intricate grievance. One of the imperceptible distresses of antibiotics is the taxing affect it has on the patient livers (Walker, et al, 2013). It ought to be noted that the liver is accountable for breaking down the various types of medications we consume, including antibiotics. That is why they have to be broken down moreover sent into our bodies so as to be capable to execute jobs, elementary this is quite complicated since it tends to be hard on the liver, yet the liver is the principal filter the bodies have. Similarly, the herb milk thistle is highly connected with protecting antioxidant consequence for the liver. So perceptibly the best manner to stay strong is to evade infections, while having ample of rest in addition to feeding healthily. Thus, these adverse side effects can have devastating impact on the life of the patient if not adequately handled. On the other hand, it would be instrumental to follow the prescribed measures so as to avoid misuse of the given antibiotics. From the various studies, it has been established that many of the identified side effects resulting from antibiotic usage can be contained if properly followed. In this regard, antibiotics if properly used are healthy though at sometimes they may evolve to be dangerous when overused.

Implementing giving probiotics in conjunction with the antibiotics

To control the side effects associated with the misuse of antibiotics including the adverse effects of caused by such pathogen as *C.difficile* which is associated with colitis as well as antibiotic associated diarrhea (AAD), the use of probiotics become essential. The implementation of such a program would be anchored within the perimeters of controlling the overuse of antibiotics within the wider setting of emergency unit and as well as controlling the prescription patterns. Numerous studies have shown that using probiotics along the antibiotics has more advantages than using the prescribed antibiotics independently. In regard to the issue of containing the over uses of antibiotics and controlling the explosion of colitis due to antimicrobial resistant, probiotics have been highly recommended. This can as well be allied to the fact that probity's carries lactic acid bacteria which consists of bifidobacterium as well as lactobacillus. In most instances these supplements are commonly taken as oral

supplements though they can as well be added to different food varieties (Wistrom, et al, 2001). Recent studies have shown that implementing unique probiotics prescription along with the conventional antibiotics has more benefits which include but not least to: probiotics have the capacity to boost the bio-availability of such constituents as proteins as well as fats specifically in the diet and more breaking them within the digestive system and this is beneficial to the patient since they require energy during and after the illness; on the other hand as concerns colitis, they have proved to be essential components of preventing antibiotic associated diarrhea as well as all other forms of diarrhea; despite that they are indispensable in decreasing instances of intestinal inflammation as well as hypersensitivity reactions particularly in children, among others (Hempel, et al, 2012).

Thus after identifying the side effects allied to overuse of antibiotics, probiotics can be equally employed as a line of treatment to handle such cases as acute diarrhea which may develop as a result of advanced infection or resistant to the prescribed antibiotics. In this case some of the broad probiotics which can be preferred include interflora which are known to consist of *saccharomyces boulardii* and can be taken along with foods such as yoghurt. Since all categories of antibiotics are suspected to cause diarrhea, specifically those defined as broad spectrum such as cephalosporins as well as fluoroquinolones and to a certain extent both penicillins along with clindamycin happen to be the typical suspects allied to AAD. Nevertheless, when designing the suitable outline to employ when prescribing probiotics, it would be important to note that *C.difficile* diarrhea is heavily regarded as a nosocomial ailment in addition it is among the most regular causes of diarrhea among all inpatients within the emergency units in hospitals. When considering the best probiotics, another essential factor to consider is that its occurrence among the hospitalized patients is considerably high compared to outpatients. And since *C.difficile* is habitually secluded in all hospital wards in addition to door, furniture, floors as well as handles, days after the patients are taken away from such areas, it has been noted that majority of the patients who have been identified as having overused the antibiotics are those with cases of hospitalization due to a higher prevalence of *C.difficile* colonization which is a definite basis for infection. As a result many of the patients become infected and the outcome is diarrhea with a higher but positive evidence of colitis. As noted in various investigations, extended usage of multiple antibiotics particularly broad spectrum by patients with poor intestinal absorption or greater biliary secretion, are known to stimulate a shift in the composition as well as the function allied to intestinal flora and as a consequence results in a broader instance of AAD.

Examining such a situation it becomes essential to develop effectual outline of prescribing both probiotics along with antibiotics (Surawicz, et al, 2013). Combining probiotics with antibiotics would greatly reduce any instances of colitis or antibiotic associated diarrhea. More so, the usage of probiotics would ascertain that the patient is no longer subjected to diarrhea as a result of using any variety of antibiotics. Likewise, the usage of probiotics, despite helping in stopping diarrhea equally allows the patient to have very few sick days at any given time.

How this will reduce patient returns with adverse outcomes and increase patient satisfaction?

To control the increase of antimicrobial resistance, emergency units ought to put into action programs intended to optimize the overall antimicrobial use, sustained by infection-control approaches. That is why hospital-based antimicrobial control schemes, equally referred to as ASP or (antimicrobial stewardship programs) are first and foremost anchored on education attached with a workable front-end approach such as limiting the availability of preferred antimicrobial agents or more a selected back-end approach which may involve evaluating broad-spectrum pragmatic therapy in addition to reorganizing or terminating therapy, as specified, on the root of culture as well as susceptibility testing outcomes as well as clinical reactions. As noted above providing probiotics in conjunction with the antibiotics would be essential in containing diverse side effects associated with either proper use or abuse of antibiotics within the emergency units as well as by patients; combining probiotics with antibiotics plays an important role in that the patient is given supplements which would ascertain if the intended antibiotics would be of necessity if prescribed. On the other hand the combination of the two prescriptions would help in cutting the rate of return patients with adverse effects as a result of using wrong antibiotics or more overuse of the prescribe dose. As observed through numerous surveys, probiotics are essential in that they act as base for the first line treatment preference and reduce heavy reliance on antibiotics. It would be instrumental to assert that when a patient is treated effectively and no effects are expected, satisfaction is definitely assured. This may explain why this approach is essential in handling diagnosis as well as prescription activities in emergency units in hospitals (Bartlett, 2009). Practically, this may explain the dynamics employed in managing diverse aspects allied to antibiotics prescriptions as well as the parameters employed to reduce antibiotics side effects. Hence, the scope of institutional attempts to control antimicrobial use ought to focus on patient outcomes, likewise, it ought to consist of multidisciplinary support, more so, it must as well employ an amalgamation of interventions adapted to the requirements, resources, as well as information technology communications of the emergency unit care settings. From various studies have shown that a number of patients may opt out of the treatment due to diarrhea, and to manage antibiotic associated diarrhea, the patient is required to use such useful yeast as *lactobacillus rhamnosus*

which is a kind of a bacteria, it is widely known that the use of antibiotics can be harmful at times since antibiotics can kill both useful and harmful bacteria. That is why the use of probiotics have been cited as of immense value to the patient since it helps in handling pathogens especially clostridium difficile, for it is the most widespread cause of diarrhea linked to antibiotic usage. The usage of probiotics is essential but is not advisable to use them concurrently with the antibiotics; it is advisable to use them after a specific duration as to attain maximum benefits. As regards clostridium difficile it would be important to consume a probiotic with at least 1.32 live lactobacillus GG divided in two doses to be taken within a period of two weeks. Though, probiotics are said to be safe it is as well important to follow the prescribed procedure.

Fundamentally, as concerns clostridium difficile, probiotics are important since they have the propensity to boost the patient's immune system and this shows the patient will have a lower chance of return to the hospital. Likewise, cutting the possibilities of having diarrhea as result of consuming the prescribed antibiotics, thus, though the body has numerous bacteria that can either be useful or hazardous, it is equally possible to maintain a healthy body. According to recent studies it is assumed that bacteria do have a higher instance of negative connotation, but when the patient is subjected to the proper healthy patterns it is doable to introduce the healthy bacteria in the body. And this explains why probiotics are evolving to be essential constituents preferred in boosting the patient's immune system. It ought to be noted that probiotics are an essential bacteria and acts more like any other bacteria but are not as essential as other elements as vitamins and minerals. Various clinical interventions have been employed in emergency units to control the increase of antimicrobial resistance (Gorbach, et al, 1987). Some of these antimicrobial are associated with diarrhea which is a result of over use of antibiotics resulting in antibiotic resistant infection. As a result infection-control schemes, such as use of probiotics, separating patient contacts, as well as the cohorting of patients, executing environmental cultures, in addition to removing infected devices such as bronchoscopes as well as faucet aerators, are time and again established to decrease horizontal metamorphosis and transfer of antimicrobial resistance in emergency unit and as well as among the patients. To contain this menace associated with antibiotic associated diarrhea has been identified to be a product of clostridium difficile, and the infection with this pathogen has been found to be the principal cause of colitis; moreover, it has become a widespread impediment allied to antibiotic therapy and is highly prevalent in emergency units affecting the inpatients and specifically the elderly. In this case, examining the role of probiotics, recent human studies found that they are paramount in augmenting the narrow as well as the broad use of antibiotics particularly in the management of antibiotics in controlling diverse infections such as C.difficile including antibiotic associated diarrhea (AAD). In fact, successful infection-control practices as well as discharge of hygiene barriers are the principal foundation of any attempt to control the multiplication of antimicrobial resistance. Hence, as a harmonizing approach to lessening the surfacing of antimicrobial resistance depends on institutional programs that optimize antibiotic utilization. In addition to ascertaining that antimicrobial resistance is not sustained, these antimicrobial control programs correlated to infection control on average consists of two supplementary objectives that is: to make certain that the pragmatic antimicrobials prescribed are appropriate as well as being satisfactory and to guarantee that the prescribed or available antimicrobials are not in any way wasted by both doctors and patients.

The evaluation of the implementation

The materialization of antibiotic-resistant life forms is a foremost predicament facing emergency units in global hospitals. It ought to be noted that emergency medicine physicians are over and over again the primary healthcare practitioners to interrelate with patients as in attendance to the healthcare scheme. As such, they fundamentally serve as the preliminary line of protection adjacent to taking care of infectious ailments. for the reason that their fundamental front-line responsibility, emergency medicine physicians have a duty to be up-to-date on antibiotic resistance profiles, proper supervision paradigms, as well as latest treatment alternatives for infectious disease in addition to handling and prevention of diverse development along with multiplication of antibiotic-resistant bacterium. In essence, antibiotic resistance is an unavoidable corollary of revealing bacterial pathogens to diverse antimicrobial treatments. As a result, bacteria turn out to be resistant through the swapping over of genetic substance; in particular, the utilization of antibiotics operates as an incentive for medicine resistance, furthermore these bacterial strains reproduce and multiply speedily. Studies have revealed that unsystematic prescribing outlines have actively participated to the surfacing of countless antibiotic-resistant organisms within the emergency units in hospitals. The implications of such actions consist of not only enlarged healthcare expenditure plus utilization, but as well (and more imperative) a swell in patient morbidity. For instance, in the United States, it is estimated that more than 100 million antibiotic recommendations are prescribed annually. This is something like 30 remedies for every 100 patients. An assessment of prescribing patterns proves that the most widespread antibiotic recommendations provided in the emergency care setting are for acute respiratory tract infections for which antibiotics are not compulsory. As regards ambulatory setting, these bacterial infections, which consist of

acute pharyngitis, sinusitis, bronchitis, as well as upper respiratory tract infections, as well recognized as the common cold, are in addition the most recurrent situations for which patients opt to seek medicinal consideration. To have a proper evaluation of how antibiotics are administered it would be essential to establish profound measures of ascertaining who is to be given which kind of antibiotics. The process of evaluation would entail employing diverse measures intended to check how the patients use the prescribed antibiotics, likewise the process would involve the qualified doctors and pharmacists who would be profiling the manner in which the patients are responding to the prescriptions (Young, et al, 1985). It would be noted that proper use of antibiotics would greatly reduce the instances of side effects associated with either misuse or over use of the diverse antibiotics prescribed in the emergency units. Thus, to have a proper evaluation program it would involve the overall participation of all healthcare providers involved diagnosis, prescription even those involved in administering the antibiotics to patients with diverse bacterial infections. As a result, this would ascertain each patient is monitored and the rate of antibiotic checked and the appropriate information regarding his or her response to either the antibiotic or probiotic compiled. Proper profiling would guarantee that the patient is adequately monitored, likewise this would mean that the prescriptions are carried out within a specified time frame, by doing so this would help involved healthcare provider to establish the rate as well as the best course of treatment is suitable where the patient has been found to be developing resistance to any antibiotic prescribed. Since managing serious bacterial infections is more of balancing between provision of timely as well as appropriate broad spectrum pragmatic treatment for individual patients, more so, which have been established consistently to enhance outcomes as well as reducing unnecessary use of antibiotics as well as antimicrobial agents suspected to ignite antibacterial resistance among patients. This would entail incorporating the antibiotic selection as regards the evaluation procedures. Selecting the suitable antibiotic for every given infection is reliant on a number of factors. These consist of recognizing the contaminating pathogen through the use of culture or supplementary means such as; via "bacteriologic statistics" to give you an idea in relation to the most probable organism given the individual patient's presentation, for example, MRSA in skin as well as soft-tissue diseases; determining vulnerability; as well as patient aspects such as immune category, age, inherent or metabolic troubles, for instance, renal, diabetes, pregnancy, as well as liver function, in addition to the location of the infectivity. There are a number of classes of antibiotics commonly used day by day by ED clinicians for proper treatment of various bacterial infections. Amongst the better acknowledged medications, latest antibiotics have as well become obtainable. Telithromycin, for instance, was endorsed in April 2004 for management of an assortment of infections, counting community-acquired sinusitis, pneumonia, as well as acute bronchitis. While in the wake of February 2007, the clues for this antibiotics usage were lessened to take account of community-acquired pneumonia infection as a result of *S pneumoniae* together with multidrug-resistant cut offs, *Mycoplasma pneumoniae*, *Haemophilus influenzae*, along with *Moraxella catarrhalis*. Another new medication, tigecycline, was permitted in early 2005 for application in skin as well as soft-tissue in addition to intricate intra-abdominal contagions (Bartlett, 2006). The wider scope of evaluation must be anchored within the region of prescription, administering as well as clinical follow up of all patients within the emergency units under antibiotic medication. The approach would ascertain that each patient is monitored and all changes recorded, as a result, any positive or negative changes would be accounted for. It ought to be noted that for years the use or the prescriptions for antibiotics have over and again been abused, to counter such instances it becomes essential to develop parameters of addressing the issue and that is why profiling the patients using the antibiotics including their response to the medication becomes essential

Analysis

Numerous studies have established that antibiotic drugs are efficient when prescribed as mixture therapy for skin as well as soft-tissue infections in addition to intricate intra-abdominal infections including methicillin-susceptible *S aureus*, *Enterococcus* species, *Escherichia coli*, *Bacteroides fragilis*, *Klebsiella* species, MRSA, *Streptococcus pyogenes*, and *Pseudomonas aeruginosa*. As pertains to evaluating the efficiency and prescription of these drugs, it is to be noted that antibiotic resistance which has evolved to be a problem in emergency units can be contained at the department level through a amalgamation of suitable antibiotic choice, prescribing patterns, as well as the use of antibiotic resistance outlines, supervision protocols, in addition to an understanding of latest antibiotic treatment preferences. For instance, using the latest approaches in interactive expertise, it would be easier to make prescription decisions; moreover the implemented integrated system would by design provide you with pointer concerning the available alternatives, consisting of laboratory tests, findings, as well as treatments. Eventually, this response would be drawn from three principal sources that is: (i) drug-prescribing data; (ii) up to date published suggestions, evidence-based statistics, as well as national procedures; and (iii) the knowledge of the expert emergency unit associates. Likewise, urbane case-based interactive apparatus in the emergency unit would help to both test the emergency unit doctors diagnostic as well as management skills; this would considerably help in honing their knowledge in relation to the most recent recommendations for the

suitable use of antibiotic treatment in the emergency room. Nevertheless, many of overuse effects as a result of antibiotics including AAD cases are basically mild as well as self-limited. A good number patient recovers absolutely with accommodating measures such as the use of probiotic as well as antibiotic withdrawal. However, relapses are not likely in this set of patients. But in instances of well-established colitis that is in all probability interconnected with *C. difficile* infection, explicit antimicrobial treatment is needed. Nearly all patients tend counter positively to treatment as well recover with no sequelae, except that recurrences are typically widespread. The percentages of repetition in this faction of patients diverge but can be as high as 75% following the first repetition. In this instance, it ought to be noted that overuse of antibiotics may have devastating effects where cases of diarrhea are prolonged and no proper medication or supplements are provided. Diverse studies appear to infer that most of the hospitalized patients with emergency units are in most instances subjected to antibiotics misuse resulting in either resistance or as well cases of colitis due to the high rate of *C. difficile* colonization and this is quite dangerous (Wolfson,2005). On the other hand, where proper prescriptions patterns have been well articulated along with proper route for probiotics such instances are decreased. All in all, as observed in the study, it can be construed that the implementation and evaluation processes identified could be employed to contain the entire situation and ascertain the patient is secure and equally satisfied.

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