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ASSESSMENT OF ADHERENCE TO INTERNATIONAL ANTIBIOTIC PRESCRIPTION GUIDELINES IN DENTAL CLINICS IN PRIMARY HEALTHCARE CENTERS IN NATIONAL GUARD, WESTERN REGION, SAUDI ARABIA

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Background Antibiotics have played a major role in the treatment of infectious diseases since 1928; however, the overuse of antibiotics has contributed to the development of antibiotic-resistant pathogens. According to the Centers for Disease Control and Prevention (CDC), at least 30% of prescribed antibiotics are unnecessary in the USA. Following the CDC checklist, practitioners should avoid non-evidence-based historical prescriptions and ensure that prescriptions are not written on the basis of patient expectations, convenience, or pressure from colleagues. In certain cases, such as when a patient present with extra-oral swelling, trismus, or the need for a surgical intervention, an appropriate regimen of antibiotics is indicated; otherwise, systemic antibiotics should not be the routine treatment of choice. This study aims to determine and assess adherence to CDC guidelines for antibiotic prescriptions in dental clinics at National Guard Primary Healthcare Centers, Western Region, Saudi Arabia.

Methods The study was carried out at National Guard Primary Healthcare Centers in Western Region, Saudi Arabia. Records of all patients with antibiotic prescriptions during their dental visits from January 2017 to June 2018 were sampled through simple random sampling; medically compromised patients were excluded. Dentists' adherence to the guidelines was assessed. MS Excel was used for data entry, and SPSS version 23 was used to analyze the data, using the chi-squared test for significance.

Results A total of 385 clinical records were reviewed, of which 30% of the antibiotics were ordered without proper documentation of the diagnosis. Only 11.2% of the prescriptions adhered to the guidelines, while the other 88.8% did not follow the guidelines, including improper documentation. There was a significant difference between the prescriptions that did and did not follow the guidelines. On the other hand, the relation between the dentist's level of education and adherence to the antibiotic prescription guidelines was not significant.

Conclusion There is inadequate adherence to the international guidelines among dental practitioners in dental clinics in primary healthcare centers in the National Guard. This irrational antibiotic prescribing accounts for the risk of antibiotic resistance, so there is a need to address antibiotic prescribing practices by increasing awareness among dental practitioners in these clinics.

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PATIENT-BASED RETROSPECTIVE DOSE AUDIT FOR COMMON RADIOGRAPHIC EXAMINATIONS

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Background Retrospective dosimetric auditing is a useful investigational approach for continuous quality assurance in diagnostic radiography. It may serve as a baseline reference for future research in which both dose and image quality are examined. In radiation protection, comparing diagnostic reference levels (DRLs) with patient doses observed in clinical practice enables the optimization process (i.e., providing a clinically acceptable image quality and keeping the dose as low as reasonably achievable). The purpose of this study was to audit radiation doses of adult patients who underwent common diagnostic x-ray examinations and compare dose area product (DAP) values with the established international DRLs (IDRLs).

Methods Retrospective cross-sectional records of 193 patients who underwent 387 radiographic examinations during October through December 2018 were obtained. Patient-related and DAP data were recorded for the six most common examinations with two digital systems of the same manufacturer at King Abdulaziz Medical City in Jeddah (KAMC-JD). The mean and 75th percentile of DAPs was established and compared with IDRLs. The percentage mean and 75th percentile DAP differences were used to describe changes between KAMC-JD values and IDRLs.

Results Relative to chest and cervical spine x-rays, wider dispersion and increased variability in DAP values were observed and evidenced by a larger standard deviation for lumbar spine (AP $\sigma=170.29$; lateral $\sigma=409.92$), thoracic spine (AP $\sigma=43.22$; lateral $\sigma=440.44$), abdomen ($\sigma=131.62$), and pelvis ($\sigma=254.59$). Overall, the DAP 75th percentiles for KAMC-JD were below IDRLs for chest, cervical spine, abdomen, and pelvis. Lateral lumbar, and AP and lateral thoracic spine DAP 75th percentile exceeded all IDRLs by up to 42.56%, 1.68%, and 512.17%, respectively. When the type of detector is considered, KAMC-JD mean DAPs exceeded the UK 2012 DRLs for the following examinations: AP and lumbar spine (42.83%, 110.8%), AP pelvis (8.06%), AP and lateral cervical (62.86%, 10.71%), and AP and lateral thoracic (36.27%, 355.78%).

Conclusion KAMC-JD DAP data were below the international recommendations except for lumbar spine, which exceeded the recommendations. Reassessment after optimizing the lumbar spine DRL is recommended. This study highlights the need for developing local DRLs in Saudi Arabia at the institutional, regional, and national level.

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DO PATIENTS UNDERSTAND WHAT THEY CONSENT FOR? ANALYSIS OF DISCORDANCE IN PATIENT–PHYSICIAN UNDERSTANDING OF THE CHEMOTHERAPY PLAN

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Background The journey towards better patient safety starts with effective patient–physician communication. This is true for cancer patients, in whom treatments are complex and patients' understanding might be compromised. Multiple factors can result in discordance in patient–physician agreement including patients' and physicians' personal factors, complexity of the disease, and the setting of care. The present work investigates the discordance between patients and their doctors in understanding the chemotherapy plan in Princess Norah Oncology Center, Jeddah.

Methods This was an interview-based cross-sectional study. A total of 151 patients were interviewed along with their oncologists within 24 hours of a patient–physician encounter. The survey included both physicians' and patients' demographics, goal and duration of therapy, method of assessing the response, and chemotherapy side effects. SPSS was used for analysis to compare patients' understanding with physicians' responses.

Results Patients achieved more than 50% agreement with their physicians in four major domains: type of malignancy (81%), goal of therapy (68%), follow-up (68%), and frequency of cycles (55%). However, more than 50% of patients showed disagreement with the physicians' responses for duration of therapy (68%) and chemotherapy toxicities (78%). In addition, patients were expecting shorter treatment duration (55%), and 22% of patients were not able to recall any of the chemotherapy toxicities that were discussed in the informed consent. Statistically significant association was found between patient–physician agreement and patient's educational level ($X^2(2) = 17.73$, $p < 0.001$) and previous family history of cancers ($X^2(1) = 15.88$, $p < 0.001$). A binary logistic regression model was developed to assess the extent to which these two variables, as well as age of patients and their treating physicians, affected patient–physician discordance ($X^2(5) = 32.64$, $p < 0.001$). It showed that patients with college or advanced degree were more likely to have full agreement with their physicians (odds ratio [OR] 10.2, 95% CI 1.127–92.448). Also, patients with positive family history for a malignancy were more likely to agree with their treating physicians on all aspects of their management plan (OR 5.295, 95% CI 1.1744–16.080).

Conclusion The majority of patients showed suboptimal understanding of aspects of their chemotherapy plan. Patient understanding tends to be ten times better with higher educational background and five times better with positive family history of cancers. We recommend a self-filled evaluation form of understanding of chemotherapy plans to be added as a part of the informed consent process to objectively assess of how much a patient understands.

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EXAMINING WOMEN'S PERCEPTIONS OF MATERNITY CARE IN PUBLIC AND PRIVATE SECTORS OF NATIONAL GUARD HOSPITALS IN SAUDI ARABIA: A QUALITATIVE STUDY

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Background High-quality maternity care dramatically reduces infant and maternal morbidity and mortality. Patient satisfaction is an important indicator of the quality of care because it demonstrates the difference between what the patient expects and the current level of care received. Vision 2030 represents a blueprint for Saudi Arabia's future that is focused on improving the quality of healthcare through privatization. In support of that vision, Saudi women gained back the majority of their rights including autonomy to make their own healthcare decisions. While some research has elucidated women's satisfaction with their maternity care within the public sector,

none has examined it within the private sector or compared it across sectors. With transformation towards Vision 2030 underway, this study is designed to measure and compare women's satisfaction with their labor and delivery care in the public and private sectors of two National Guard hospitals in Jeddah and Riyadh.

Methods A convenience sample of 80 women across the public and private sectors of National Guard hospitals in Jeddah and Riyadh were recruited. Participants consented to the study and completed 20-minute, face-to-face, semi-structured interviews. All interviews were recorded, transcribed, and coded. Codes were analyzed using grounded theory to build a conceptual framework regarding women's satisfaction with their labor and delivery care across sectors and locations. Frameworks were compared to draw distinctions in perceptions across sectors and locations.

Results Preliminary results reveal that women within the public sector feel less satisfied with their care compared with women in the private sector because of lack of privacy and nurses' less-careful attention to their concerns. Women within the private sector did not face those issues and also expressed great doctor–patient relationships.

Conclusion Women within the private sectors of National Guard hospitals feel more satisfied with care, particularly when it comes to privacy and the care provided by nurses. As Saudi Arabia transitions to privatization, careful attention should be paid to how women within the public sector are transitioned during the privatization efforts. Specifically, attention should be given to the privacy that women receive during labor and delivery, as well as how women are cared for by nursing staff. How to maintain the level of the care provided in the private sector of hospitals while expanding care to meet the needs of all women given finite resources is a direction for future research.

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ASSESSING PHYSICIANS' COMPLIANCE WITH MEDICATION-RELATED CLINICAL DECISION SUPPORT ALERTS IN THE INTENSIVE CARE UNIT

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Background The clinical decision supports system (CDSS) is the centerpiece of the electronic health record (EHR) incentive program to enhance patient care and prevent medication errors. Recent studies suggested that medication-related CDS alerts were commonly inappropriately overridden and rate of adherence was usually low. The rate of medication errors for patients admitted to the intensive care unit (ICU) is higher than that for other patients and inappropriately overridden alerts may affect patient care. The aim of this study was to evaluate the embedded CDS alerts and assess physicians' compliance with medication-related CDS alerts in the ICU, by measuring the appropriateness of interruptive overrides of major severity alerts.

Methods This retrospective study was done by chart review of adults admitted to ICUs between January 2017 and December 2017 at a tertiary-care institution. The numbers and types of medication-related CDS alerts in adult ICUs were determined