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 (X2 (2) =17.73, p<0.001) and previous family history of cancers (X2 (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 (X2 (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.

18 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.

19 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

and physicians' compliance with the alerts was assessed by measuring the appropriateness of the level 1 interruptive overrides.

Results A total of 42,883 CDA alerts were fired in the adult ICUs: 7.5% of alerts were severity level 1 (indicates a major severity alert), 20.70% were level 2 (indicates a moderate severity alert); and 71.8% were level 3 (indicates a minor severity alert). A total of 3200 overridden major severity alters (level 1) were included for evaluation of physician compliance. An overall appropriateness rate for overridden alerts was 49.9% and the significance varied by alert category (drug allergy: 66.7%; drug- drug interactions: 59.7%; drug disease: 55.4%; drug dose screening: 29%).

Conclusion Almost more than 80% of the CDS alerts were warned of potential significance in patient harm and others had little clinical impact. However, almost 50.1% were inappropriately overridden and further efforts modification should be focused to improve the CDS alert system, and an uninformative alert must turn off. A future investigation is important to assess why physicians have a low adherence rate for following the recommendations of CDS alerts.

20 INCIDENCE OF VENTILATOR-ASSOCIATED PNEUMONIA (VAP) IN A TERTIARY- CARE CENTER: COMPARISON BETWEEN THE PRE- AND POST-VAP PREVENTION BUNDLE

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Background Ventilator-associated pneumonia (VAP) is a nosocomial infection that develops 48 hours after the initiation of mechanical ventilatory support. Current evidence-based guidelines demonstrate that VAP prevention is feasible through the simultaneous implementation of certain VAP prevention bundle interventions. In this study we aimed to investigate the effect of VAP prevention before and after implementation.

Methods This was a single-center cohort study that took place at the Pediatric Intensive Care Unit (PICU) of King Abdulaziz Medical City (KAMC), Jeddah, Saudi Arabia, from March 2015 to March 2018, and assessed the rate of VAP before and after implementation of the bundle.

Results The study included 141 children, of whom 95 were included in the pre-bundle group and 36 in the bundle group. VAP developed in 35% of the pre-bundle group compared with 31% of the bundle group, with incidence rates of 18 and 12 per 1000 ventilator-days, respectively. Multivariate logistic regression found that high positive end-expiratory pressure (PEEP), high fever (more than 38 °C), and high white blood cell count were significant indicators of VAP in our patient population.

Conclusion This study found that the VAP bundle did not significantly reduce VAP rate in the PICU. Further large prospective multicenter studies with longer duration of intervention are needed to investigate the benefits of VAP prevention bundle use.

21 ANTIMICROBIAL APPROPRIATENESS EVALUATION BASED ON A PROSPECTIVE AUDIT AND FEEDBACK SERVICE LED BY THE ANTIMICROBIAL STEWARDSHIP PROGRAM AT KING ABDULAZIZ MEDICAL CITY – WESTERN REGION

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Background The Antimicrobial Stewardship Program (ASP) at King Abdulaziz Medical City - Western Region (KAMC-WR), initiated in November 2016, aims to improve the use of antimicrobials at our facility. It is internationally recognized that one of the cornerstones of ASP is prospective audit and feedback (PAF). In an effort to improve antimicrobial use in areas at high risk for antimicrobial resistance, the ASP initiated a PAF service in February 2018 at the pediatric intensive care unit (ICU), pediatric cardiac ICU, adult ICU, and adult hematology-oncology ward. This retrospective study describes PAF interventions and antimicrobial appropriateness based on PAF.

Methods An automatically generated daily antimicrobial report built by the ASP and ISD team is used by the PAF to assess patients not under infectious disease (ID) consultation on prespecified antimicrobials for appropriateness of indication, dose, route, and frequency. The PAF service is run by the PICU or ASP/ID clinical pharmacist, ID fellow, and ID consultant. The PAF teams meet with the respective departments for discussion and communication of recommendations twice weekly for pediatric patients and daily for adults. A customized PAF electronic note is filled for each order. The audited antimicrobials are imipenem, meropenem, colistin, tigecycline, linezolid, vancomycin IV, anidulafungin, caspofungin, and voriconazole. An electronic report of the PAF note is generated regularly by the ISD team to assess PAF. Simple descriptive statistics were used for the analysis.

Results A total of 747 PAF consultations were documented from February 2018 to February 2019, 92% of which were in adults (686 of 747). 35% of all consultations were inappropriate. Of the 259 inappropriate medication orders, most were in adults (97%) with pneumonia (40%) and sepsis (27%). 68% of inappropriate orders were empiric, and the rest had no clear indication or were therapeutic. The most common inappropriate element of adult orders was choice of antimicrobial, followed by dose, frequency, and then route (83%, 6%, 4%, and 1%, respectively). All inappropriate pediatric orders were inappropriate choices. For adults, meropenem and vancomycin consisted of 67% of inappropriate choices of antimicrobial (140 of 208). Of all antimicrobials, tigecycline had the highest rate of inappropriate choice (10 of 21).

Conclusion This study shows that antimicrobial use guidelines for meropenem, vancomycin, and tigecycline need to be re-evaluated and reinforced through continuous PAF and the creation of clinical practice guidelines with electronic order sets for pneumonia and sepsis. The results of this workflow embedded electronic assessment will help the ASP at KAMC-WR tailor future interventions that promote safe and effective antimicrobial use.