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Pharmacoeconomic role of clinical pharmacists: Impact of dose rounding of cancer therapy on cost avoidance

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Background: A significant and progressive cost rising in medical oncology due to the incorporation of novel and highly expensive drugs into clinical practice have been seen in the past ten years. Dose rounding is an option might be used in oncology settings to avoid extra cost. The purpose of this project is to determine the theoretical cost saving related to a dose rounding process for biological and chemotherapy agents in adult oncology settings and to determine the opinion of oncologists about dose rounding.

Materials and methods: Data was obtained prospectively during April 2011. All chemotherapy and targeted therapy orders prescribed in adult oncology outpatient clinics as well as in-patient wards have been collected. It was considered rounding to an amount within 15% for targeted therapy and 10% for cytotoxic drugs. Chemotherapy dosing was calculated according to body surface area. Prescriptions that include cancer therapy in doses that might be rounded according to study criteria were identified.

Results: Two hundred and thirty three orders of chemotherapy and targeted therapy were processed by Adult Oncology Satellite Pharmacy during the period of data collection. Forty percent of the collected prescriptions fulfilled the criteria. The potential cost savings from dose rounding per year was \$192,800. Data was extrapolated from the determined monthly cost savings. The highest cost saving was for breast cancer orders \$80,820 (42%), followed by colorectal cancer \$47,965 (25%), while in non-Hodgkin's lymphoma cost savings was \$ 45,107 (23%) and for other types of cancer that include non small cell lung cancer, prostate and ovarian cancer, in addition to head and neck cost savings was \$18,867 (10%).

Conclusions: The experience confirms the significant cost savings of cancer therapy by applying dose rounding to chemotherapy and biologic drugs prescriptions. While clinical impact of the suggested percentage needs to be evaluated.

Biography

Nagwa Ibrahim is a clinical pharmacist specialized in oncology at Prince Sultan Military Medical City, and adjunct clinical assistant professor at King Saud University & Princes Nora University, Riyadh Saudi Arabia. She received her Bachelor degree in pharmaceutical science from King Saud University, Saudi Arabia and her Doctor of Pharmacy degree from Duquesne University, USA. She has outstanding records of scientific and academic accomplishments with numerous publications in prestigious journals and various active participations in national and international conferences and societies.

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