Material and methods This study included 224 Korean hospital pharmacists, who responded to our survey from August to September 2017. The components having an eigenvalue greater than 1 were attained from the factor analyses for PF, OC and SOE. The effect of each factor of SOE was evaluated by regression analysis, while the mediation effect of PF was ascertained by mediation analysis.

Results Factor analysis (over 0.7 of Cronbach's α) showed that the PF of hospital pharmacists was determined by a 'professional organisation as a major referent (0.722)', 'mission in public service (0.851)' and 'autonomy (0.726)'. The OC of hospital pharmacists to a hospital organisation was decided by the fourth dimensional perspective that comprises 'affective OC (to identify with organisation effectively, 0.861)', 'continuance benefit OC (to commit increased benefits as a result of tenure, 0.759)' and 'normative OC (to commit because it is morally right, 0.741)'. The SOE was determined by 'organisational support (0.870)', 'educational support (0.918)', 'supervisory support (0.908)' and 'colleague support (0.921)'. The result of regression analysis substantiated that organisational support influences affective OC ($p<0.001$) and supervisor support effects both affective ($p<0.01$) and normative ($p<0.05$) OC. It was confirmed that PF concurrently effects affective ($p<0.001$) and normative ($p<0.001$) OC as well as the mediation effect that reinforces organisational commitment ($p<0.05$).

Conclusion The higher the PF, the stronger the OC by hospital pharmacists. Thus, respecting autonomy, reflecting the opinions and providing welfare are necessary in strengthening pharmacist's professionalism. Besides, supervisors should have an interest in the job performance, present distinct goals of hospital pharmacists and help them exert their professionalism. Furthermore, hospital pharmacists' performances should promote public service.

REFERENCES AND/OR ACKNOWLEDGEMENTS

I would like to express my gratitude to many hospital pharmacists that responded to our survey questionnaire in their busy schedule.

No conflict of interest.

1ISG-019 INSIGHT INTO PHARMACY AND THERAPEUTICS COMMITTEES' STRUCTURE AND ACTIVITIES AMONG HOSPITALS IN X: MIXED-METHODS APPROACH

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Background The X healthcare system is facing unprecedented challenges to healthcare expenditure that warrants healthcare reform and cost cutting. The pharmacy therapeutic committees (PTC) in hospitals play a pivotal role in a hospital formulary management system to ensure cost containment and to improve quality of care.

Purpose Our study investigates the current PTCs' structures, activities, variations and potential factors that might influence the decision-making of these committees within Saudi Arabian hospitals.

Material and methods The study was conducted in governmental and private hospitals in X from May to July 2018 using a mixed-methods approach consisting of a quantitative, questionnaire-based study followed by a qualitative study with a triangulation technique for data collection that involved observations as well as in-depth semi-structured interviews to generate more robust findings. Ethical approval for the study was obtained from the participating hospitals.

Results One hundred and nine members were invited from seven institutions for the questionnaire: 51.47% responded. For the qualitative interview, 25 members were required to reach data saturation. All PTCs had policies and procedures outlining the committee's activities, and an approved committee formation order. Most of the PTCs (45, 88.2%) conduct their meetings every month, and all their activities complied with CBAHI's accreditation minimum requirements. The greatest challenges reported, were time restraints on PTC activities (seven, 28%), lack of awareness of their function in committee, evidence-based evaluation and budget restraints (five, 20%), and the stock monitoring system and lack of expertise in pharmacoeconomics (three, 12%).

Conclusion Based on our study findings, PTCs in the X health sector need to invest in standardising the functions and processes of PTCs, developing training programmes to support PTCs members in specialised aspects of formulary management, setting minimum standards for committee members' selection and investing in stock monitoring IT solutions. Such changes may improve PTCs' efficiency and cost cuts to align with the vision.

REFERENCE AND/OR ACKNOWLEDGEMENTS

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1ISG-020 CHEMICAL RISK ASSESSEMENT IN A QUALITY CONTROL LABORATORY BY A TOOL USING ACTIVITY ANALYSIS

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Background Chemical risk is the result of occupational exposure to a chemical agent. This exposure can induce several effects that can cause fatal intoxications.

Purpose The purpose is to assess the risks related to the chemical reagents used in the control laboratory and to propose preventive measures to reduce these risks.

Material and methods We used a tool named OPERA 'First Chemical Risk Assessment Tool by Activity Analysis'. It allows to quantify the level of severity of the chemical risk and to guide its reduction.

The quantification of the level of severity is established by giving the information on the label or on the material safety data sheet: the nature of the risk; the nature of the safety; the conditions of use products; and the respect of safety measures.

Two scales of values have been established: the first allows the qualification of the level of severity of the risk and the second prioritises the setting up of an action.

Results Our analysis is established for 85 chemical reagents in the laboratory. Twenty-four per cent of the reagents are classified as non-hazardous, such as calcium carbonate. As for the

'dangerous' products, the analysis showed that 37% of these reagents present a high to very high risk, such as formaldehyde, 42% have a medium risk such as nitric acid and 21% pose a low to very low risk such as acetone.

Our second aim was to reduce risks, so we have proposed preventive measures such as the use of personal protective equipment (mask, gloves) and collective (hoods). The levels of risk have significantly decreased: 82% of the reagents with a very low risk and 12% have a medium risk. The products that have kept a very high severity are used rarely and in small quantities.

Conclusion Our results concord with the literature. We have demonstrated that the level of severity of reagent is manageable by acting on two risk factors: the respect of the safety measure of each chemical and the exposure of the operator to the operations carried out.

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1ISG-021 A COMPREHENSIVE REGIONAL STRATEGY ADDRESSING GUIDANCE ON SAFE HANDLING OF HAZARDOUS DRUGS

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Background Occupational exposure to hazardous drugs (HDs) is a mounting public health concern. Nevertheless, currently there are not harmonised standards for the prevention of HDs' exposure.

Purpose To implement a comprehensive regional strategy (CRS) addressing guidance on safe handling of HDs in order to minimise healthcare workers' exposure based on the harmonisation of safety standards and practices among hospitals.

Material and methods A 32-item online questionnaire about general information, preparation and administration of HDs was carried out to investigate the current situation of training and awareness among workers of 34 regional public hospitals (RPH).

A multidisciplinary working group, involving 40 health professionals (including hospital pharmacists, oncology nurses, occupational medicine professionals and warehouse logistics managers) from 14 different hospitals was formed in 2017 to formally achieve consensus on the management of HDs.

A formal education plan was implemented, providing online and face-to-face train-the-trainers courses to all health professionals involved in the preparation and administration of HDs.

Results Overall, survey results showed heterogeneous procedures concerning NIOSH table 1 drugs and deficiencies in training and in awareness regarding handling of the other HDs.

In January 2018 Resolution 51/2018 was published. This was the first formal European framework establishing mandatory practice standards on safe handling of HDs for 34 RPH.

One of the most remarkable points of Resolution 51/2018 is the creation of HDs' Committees in each hospital, which ensure compliance with the reporting standards and promoting supplementary and specific protocols if necessary.

Additionally, the aforementioned resolution includes two monographic annexes on closed-system transfer devices and personal protective equipment. Further recommendations related to drug preparation, administration and reception, have been also carried out.

So far, 413 training-trainers have completed the formal education plan and 4155 healthcare workers have finished online training courses.

In April 2018 the CRS was presented at the European Parliament during the conference named 'The problem of HDs in the healthcare sector in Europe'.

Conclusion Protection from HDs' exposure depends on adherence to safety programmes, as well as other factors.

A comprehensive approach based on the harmonisation of safety standards, the engagement in safety culture and appropriate practice techniques among hospitals could minimise worker exposure to HDs.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Hazardous Drugs Working Group.

No conflict of interest.

1ISG-022 FINANCIAL IMPACT OF THIRD-GENERATION CEPHALOSPORINES RESISTANCE IN HOSPITAL SETTINGS – AN EXAMPLE WITH CEFTRIAXONE

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Background Despite the availability of a national antibiotic stewardship programme, antibiotic resistance (AR) in local hospital settings has been increasing in recent years. The consumption of third-generation cephalosporins in national hospitals increased from 0.2 in 2006 to 0.8 in 2016 defined daily doses (DDD) per 1000 patients/day.

Purpose The goal is to estimate the financial impact of cephalosporin resistance in patients with lower respiratory tract infections (LRTI) and to calculate the savings in case of regular application of antibiograms from the hospital perspective.

Material and methods A cost-benefit analysis was applied to evaluate the benefits from the introduction of compulsory antibiograms in hospitals in case of LRTI. Information about the AR towards ceftriaxone was gathered from the National Reference Microbiology Centre. The cost of ceftriaxone and antibiotics commonly applied as alternatives (linezolid, vancomycin, teicoplanin) in the case of AR was calculated based on hospital prices. Cost per bed day and length of stay in hospitals were taken from the National Centre of Public Health and Analyses and the cost of antibiogram from the National Health Insurance Fund. Savings from the avoided hospital stay, cost of therapy and antibiogram for a cohort of 200 patients with LRTI were calculated.

Results The level of ceftriaxone resistance is 8% (Pseudomonas aeruginosa) and 14% (Klebsiella pneumonia). The price per DDD of ceftriaxone is € 1.93, its alternatives € 22.54, the number of hospital days for treatment of LRTI is 9.94, the extension of hospital stays due to AR is five, the price of one hospital bed per day is € 64.83 and the unit price of antibiogram is € 2.25. Thus, the total costs for treatment of LTRI patients are € 99,256.57 with and € 101,888.07 without