Results: A total of eight pharmacies and 22 GPs were recruited to test the system. The study is in progress, and the results will be presented at the upcoming conference.

Conclusion: A pilot study is currently running with the purpose of gaining experience in using digital communication between pharmacists and GPs about prescriptions or patient medications. The results will guide future decisions on implementing a national digital communication system.

Use of comics as a tool to educate junior high school students in the Ashanti Region; Ghana about antimicrobial resistance and its impact on knowledge

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Introduction: Antimicrobial resistance presents a growing concern worldwide. A core focus of the WHO Global Action Plan on AMR is; improved awareness and understanding of antimicrobial resistance (AMR). “the children are the future”. Public health campaigns geared towards the youth at a prime stage in their lives can influence perceptions, attitudes, and behaviour towards AMR. Early childhood education is known to impact significantly awareness and understanding of relevant public health issues. Recent studies have shown visual media to improve knowledge and awareness of various key issues including AMR.

Method: Comics for education on AMR were designed by the lead researcher and administered to 30 randomly selected students between the ages of 11 – 15 years from 2 Junior High Schools (JHS) (15 per school). A structured self-administered questionnaire was given to the students to assess for awareness and knowledge of AMR before and after going through the comics.

Results: Only data from participants completing all questions in the questionnaires were used in the final analysis. Baseline responses before the study showed that 5% (1/22) of participants said AMR is caused when a person takes antibiotics without speaking to a health professional first. 13.6% (3/22) of participants said the misuse of antibiotics causes AMR. 50% (11/22) of participants said the overuse of antibiotics increases the incidence of AMR and 7/22 (31.8%) of participants said that they had no idea what AMR was about.

Post-study data showed an 82% (18/22), 91% (20/22), and 82% (18/22) increase in responses respectively from participants and 0% (0/22) of participants responded that they had no idea about AMR.

Conclusion: The comics proved to be an excellent tool for improving awareness, among the JHS Students. There is a need to enrich existing courses about antibiotic use in the curricula of primary schools with more emphasis on AMR. Increasing the scale of this dissemination using comics in Ghana among other high schools could increase AMR awareness and reduce its progression.

Determining the impact of pharmacists on treatment adherence in patients with Coronary heart disease in Ukraine

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Background: Coronary heart disease (CHD) is the leading cause of cardiovascular mortality in Ukraine. The incidence of CHD has increased under the influence of war-related factors. Data from the EUROASPIRE IV and V studies indicate low adherence to treatment in accordance with ESC clinical guidelines. To address this issue, integrating pharmacists into primary and secondary healthcare has been proposed. It is essential to study the perspectives of all stakeholders in the treatment process regarding the role of pharmacists in improving adherence to CHD treatment in patients with comorbid conditions.

Purpose. To assess the impact of pharmacists on adherence to CHD treatment in patients with comorbid conditions in Ukraine.

Method: An online survey (n = 999) was conducted using Google Forms, targeting all participants in the treatment process (CHD patients with comorbid conditions, pharmacists, and physicians) from unoccupied territories of Ukraine. The questionnaire included sections on socio-demographic characteristics, treatment adherence, perception of drug properties, and the influence of drug characteristics on selection. Adherence to treatment was assessed using the Morisky-4 scale. The study complied with the Declaration of Helsinki. Statistical analysis was performed using STATISTICA 13 and IBM SPSS Statistics.

Results: Pharmacists' involvement significantly improved adherence to pharmacotherapy, demonstrating a 22-fold increase in treatment adherence among patients who received consultations from both physicians and pharmacists (OR = 22.67, p = 0.000).

All three respondent groups (patients, pharmacists, and physicians) reported that clinical effectiveness was a key factor in drug selection. A significant relationship was found between treatment adherence and the reimbursement program:

Physicians and pharmacists: $\chi^2 = 5.653$, $p = 0.017$
Patients: $\chi^2 = 0.234$, $p = 0.02$
Despite these findings, respondents preferred effective drugs that were not included in the reimbursement program. Patients showed a strong preference for brand-name drugs ($\chi^2 = 0.445$, $p = 0.000$). However, low socioeconomic status was associated with treatment discontinuation once symptoms improved (CI 95% [38.6±0.07], $p < 0.0001$; $\chi^2 = 0.468$, $p = 0.000$).

Conclusion: Low adherence to pharmacotherapy at the secondary care level was confirmed, consistent with findings from the EUROASPIRE IV and V studies. Clinical effectiveness plays a crucial role in adherence to pharmacotherapy among CHD patients with comorbid conditions.
Pharmacists' involvement in CHD secondary prevention was found to be 22 times more effective (OR = 22.67, $p = 0.000$) compared to medical care without pharmacist participation.

Recommendations: Integration of pharmacists into primary and secondary healthcare.

Redistribution of prescriptions/recommendations from brand-name to generic drugs to improve affordability and adherence.

The impact of optimizing pharmacotherapy of coronary heart disease with comorbid conditions on adherence to treatment according to the EUROASPIRE V observational study in Ukraine

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Pharmacotherapy for coronary heart disease (CHD) often involves the simultaneous use of three to ten drugs. It has been established that adherence to treatment significantly influences clinical outcomes. The results of the EUROASPIRE V observational study revealed a low level of treatment adherence among patients with CHD and comorbid conditions across European countries, highlighting the impact of socioeconomic, psychological, and other factors, particularly in Ukraine.

A retrospective analysis of drug prescriptions in CHD patients—assessing drug content, quantity, and interactions (considering the CYP450 system)—is essential for evaluating the impact of polypharmacy on treatment adherence. Purpose. To determine the prevalence of polypharmacy in the pharmacotherapy of CHD with comorbid conditions and its subsequent impact on treatment adherence in the Ukrainian cohort of the EUROASPIRE V study.

Materials and Methods: This study analyzed medical records of CHD patients with comorbid conditions who participated in the EUROASPIRE V observational study in Ukraine. Data were collected over two visits to secondary care physicians across six regional centers in Ukraine.

A total of 445 prescriptions were examined to assess their pharmaceutical composition, metabolism via the CYP450 isoenzyme 3A4 system, and alignment with ESC clinical recommendations regarding target doses. Adherence to treatment was evaluated using the MARS-5 method.

Statistical analysis included: Wilcoxon paired t-test for assessing prescription tablet distribution, adherence levels, and discrepancies between the two visits; Mann-Whitney test to compare adherence levels between adherent and non-adherent groups; Chi-square test (χ^2) to determine the impact of medicines interactions on treatment adherence.

Results: A significant impact of polypharmacy on adherence was identified [U = 4.895; Z = -2.793 (unadjusted); Z = -2.844 (adjusted); $p = 0.0052$ (unadjusted), $p = 0.0045$ (adjusted)], supporting the need for fixed-dose combinations.

A consistent number of drug incompatibilities was observed between the two visits (Z = 1.71; $p = 0.086$), indicating insufficient coordination among doctors, patients, and pharmacists.

Men (55%) showed higher adherence compared to women (45%) ($\chi^2 = 5.734$; dof = 1; $p \approx 0.0167$).

Conclusions: Polypharmacy prevalence was 76.47% (CI 95%: 76.47 ± 0.03; $p < 0.0001$), reflecting the use of complex treatment regimens for CHD with comorbid conditions.

The impact of drug interactions via CYP450 isoenzyme 3A4 was significantly associated with treatment adherence ($\chi^2 = 3.97$; dof = 1; $p = 0.0462$).

The findings highlight the need for fixed-dose drug combinations and improved coordination among healthcare providers to enhance adherence.

Enhancing experiential learning in pharmacy internships: A qualitative analysis of patient consultation training

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Background: Pharmacy internship programs play a critical role in bridging theoretical knowledge with clinical practice. Patient consultation is a key competency, yet interns often