are believed to involve binding to retinoic acid receptors (RARs). Three subtypes, RAR-α, RAR-β, and RAR-γ, are known, of which RAR-γ expression is highest in human skin. Different retinoids vary in their receptor subtype affinity and may be more selective for one receptor versus another. Topical retinoids have evolved over the decades from first-generation tretinoin, which is still a commonly used treatment approach for many dermatologists. The continued investigation of these agents led to the discovery of third and fourth generation retinoids, which have advantages in potency, tolerability, photostability, and other indications. Research into receptor binding sites of retinoids has also led to discovering a fourth-generation retinoid, trifarotene, which has selectivity towards RAR. Ongoing research will undoubtedly lead to further developments and understanding of topical retinoids and their uses.

Topical retinoids are the drugs of choice for the treatment and maintenance therapy of patients with mild-to-moderate acne vulgaris. Depending on the severity of the acne, topical retinoids may be used alone or in combination with benzoyl peroxide and topical or oral antibiotics. Oral antibiotics are an important therapy for inflammatory acne unresponsive to topical therapy. Neither topical nor oral antibiotics should be used as monotherapy. Oral contraceptives and/or spironolactone are useful for many women with acne. Oral isotretinoin is the drug of choice for severe, extensive, nodular acne vulgaris but is also often used in moderate cases where scarring is evident, acne-related psychosocial distress is significant or other treatment modalities have failed.

Topical retinoids are currently approved by the US Food and Drug Administration for the treatment of acne vulgaris in nonpregnant, nonlactating patients 12 years of age and older. Their efficacy, safety, and tolerability are well documented for inflammatory and noninflammatory acne with studies repeatedly demonstrating a decrease in the number of lesions, significant improvement in acne severity, improvement in the cosmetic appearance of acne, and the prevention of acne lesions through microcomedone formation. There is some variability between prescription retinoid products regarding efficacy, safety, and tolerability; with erythema, peeling, and dryness being common, potential side effects. Due to their efficacious and safe profile, topical retinoids remain the first-line treatment for acne vulgaris.

Conclusions. This study highlights the high prevalence of scars on acne patient and its significant impact on quality of life that increases with scars severity. Therefore, quality of life impact of acne scars must be considered for therapeutic decision-making.

OVERVIEW OF UKRAINIAN PRICING REIMBURSEMENT MODEL

Popov O.S., Dobrova V.Ye.
National University of Pharmacy
Kharkiv, Ukraine
oleksii.s.popov@gmail.com

Introduction. The Ukrainian government established the Affordable Medicines Program (AMP) in 2017 to provide reimbursement for outpatient prescription medicines. While the program has clear advantages, it is crucial to evaluate the AMP

framework to identify its present trends and features. This information could be helpful in enhancing and advancing reimbursement models in the future.

Aim of the study was to study how Ukrainian reimbursement model is organized.

Materials and methods. The data for this study were elicited from public open-access resources, official documents and reports.

Results and discussion. The framework for AMP involves various stakeholders, including the Ministry of Health (MoH), the National Health Service of Ukraine (NHSU), manufacturers, and pharmacies. The INN List, based on the National List of Essential Medicines and the WHO Model List of Essential Medicines, is used as the input document for AMP. The NHSU establishes the marginal wholesale price for each reimbursed INN based on a median DDD price calculated from the median officially declared wholesale prices of a reimbursed INN in the reference countries from the external reference pricing countries list (ERPCL). The output document is the Registry of marginal wholesale prices for medicines reimbursed by the AMP, which is made publicly available on the NHSU website bi-annually. The Registry sets the upper limit of the wholesale price for each reimbursed INN, which is one of the pricing criteria used in the AMP framework. Only MPs whose DDD wholesale price does not exceed the marginal DDD wholesale price defined by the Registry may be reimbursed under this program. The NHSU reviews all applications received and defines the reimbursement amount per DDD for each reimbursed INN, which is taken as the minimal DDD wholesale price of the trade-name generic products applied. Products with DDD wholesale prices equal to the reimbursement amount per DDD may be obtained for patients in the pharmacy for free, while other products with retail prices higher than the reimbursement amount require out-of-pocket payment from the patient. The Preliminary version of the AMP List includes all products whose applications comply with the NHSU requirements, and manufacturers have the option to reduce their declared wholesale prices within a 5-day period to have their products fully reimbursed by AMP. There have been criticisms of the AMP framework. Manufacturers contested the internal reference pricing mechanism, which took the minimal DDD wholesale price among generics as the reimbursement amount limit for each INN. Some manufacturers proposed the lowest price for their products to be granted full reimbursement status, which led to complaints about price damping and potential shortages. There have also been concerns that the "reverse auction" did not always push manufacturers to reduce the prices of their products.

Conclusions. The AMP framework has a significant impact on the pharmaceutical market, and it has the potential to offer patients access to a broader range of essential medicines while efficiently managing government and patient healthcare expenditures. However, there is a need for a tool to evaluate the AMP and identify its shortcomings in a timely manner. This evaluation would enable necessary improvements to the program.