

# GENERAL DESCRIPTION AND CHARACTERISTICS OF THE POPULATION MATERIAL AND THE DESIGN OF THE STUDY, THE SPECIFICS OF THE PROGRAMS USED IN ITS IMPLEMENTATION

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| ABSTRACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | KEYWORDS                                                                                                                                                   |
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| <p>Despite significant advances in emergency obstetrics and gynecology, urgent nongravid metrorrhagia (UNGM) remains one of the most understudied acute problems, particularly its epidemiological and emergency preventive aspects. Epidemiological and emergency diagnostics are required in virtually all urgent (comorbid) clinical situations. This is crucial for the early development of optimized algorithms for preclinical diagnosis and prevention, as well as for the targeted determination of emergency medical care strategies and subsequent emergency investigations for UNGM. Key words: bronchial asthma, chronic obstructive pulmonary disease, bronchial obstruction, epidemiology, prevention, treatment.</p> <p>The global prevalence of UUU remains unknown. The literature presents only statistical, rather than epidemiological, data, which demonstrates that the overall clinical situation with UUU across various regions of the world is unfavorable: 1 million women annually seek emergency medical care due to certain forms of UUU. For example, with the most common types—heavy menstrual bleeding (HMB) or abnormal uterine bleeding (AUB), the risk of emergency hospitalization more than doubles. In other countries, every second woman with UUU does not seek medical care, and they live with a high risk of developing an "obstetric continuum" (increased mortality due to existing comorbidities) and/or this condition increases the frequency of surgical interventions. More than 50% of women of reproductive age experience abnormal uterine bleeding at least once in their lives.</p> | <p>Urgent nongravid metrorrhagia (UNM), types of heavy menstrual bleeding (HMB), abnormal uterine bleeding (AUB), epidemiology, prevention, treatment.</p> |

**Introduction****ОБЩЕЕ ОПИСАНИЕ И ХАРАКТЕРИСТИКА ПОПУЛЯЦИОННОГО МАТЕРИАЛА И ДИЗАЙН ПРОВЕДЁННОГО ИССЛЕДОВАНИЯ, СПЕЦИФИКА ПРИМЕНЁННЫХ ПРОГРАММ В ЕЁ РЕАЛИЗАЦИИ****АННОТАЦИЯ:**

Несмотря на большие успехи в неотложном акушерстве и гинекологии urgentные негравидарные метrorрагии (УНгрМ) остаются одними из наиболее менее изученных острых проблем, особенно эпидемиологические и неотложные профилактические аспекты. Эпидемиологическая и неотложная диагностика требуется практически во всех неотложных (коморбидных) клинических ситуациях. Это крайне необходимо для ранней разработки оптимизированных алгоритмов донозологической диагностики и профилактики, а также “прицельного” определения стратегии экстренной медицинской помощи и набора дальнейших неотложных исследований при УНгрМ.

В мире распространенность УНгрМ до сих пор до конца неизвестна. В литературе представлены лишь статистические, а не эпидемиологические данные, которые показали, что клиническая ситуация в отношении УНгрМ в целом по различным регионам мира неблагоприятная: 1 млн женщин в год обращаются за скорой медицинской помощью в связи с отдельными формами УНгрМ, например, при наиболее ее распространенных типах-обильных менструальных (ОМК) или аномальных маточных кровотечениях (АМК) риск экстренной госпитализации повышаются более чем в 2 раза. С другой стороны каждая вторая женщина с УНгрМ не обращается за медицинской помощью, и они живут с высоким риском развития «акушерского континуума» (увеличение смертности в связи с существующей коморбидной патологией) и/или эта патология увеличивает частоту оперативных вмешательств. У более чем 50% женщин репродуктивного возраста встречаются хотя бы один раз в жизни аномальные маточные кровотечения.

**Ключевые слова:** urgentные негравидарные метrorрагии (УНгрМ), типах-обильных менструальных (ОМК), аномальных маточных кровотечениях (АМК) эпидемиология, профилактика, лечение.

**INTRODUCTION**

Obstetrics and gynecology in the 21st century are developing successfully, leading to significant advances in reducing maternal and perinatal mortality, as well as pregnancy complications. Among the challenges in clinical obstetrics and gynecology, the transition to preventive medicine stands out due to its particular clinical and practical significance. This is relevant for addressing not only chronic but also acute gynecological problems, such as the implementation of a differentiated approach to early diagnosis, prevention, and emergency care for urgent non-gravid metrorrhagia across women of various ages [8; 13].

The studies by Milman N. et al. (2017), Suchdev P.S. et al. (2017) and Coad J. et al. (2014) also showed and proved that IDA and latent iron deficiency (LID) in women of reproductive age (WRA) are closely associated with iron deficiency states. This scientific fact, that is, the high prevalence of IDA and latent

iron deficiency (LID) in women of reproductive age (WRA), should attract special attention, since, firstly, their early diagnosis and prevention are extremely important, and secondly, iron deficiency anemia is the most common hematological complication in IDA. Therefore, their detection and early correction are an important component of IDA [7; 10; 2].

In addition, anemia associated with AMC, according to data obtained by Smith C. et al. (2019), Peace I. M. et al. (2021), Elmore C. et al. (2022), and Kumar A. et al. (2022), may result from concomitant comorbidities, deficiencies of copper, lithium, thiamine, riboflavin, vitamins B12, B9, molybdenum, manganese, protein, vitamins C, calcium, magnesium, cobalt, vitamin K, B6, B5, D, E, omega-6 fatty acids, and chronic inflammation [1; 3; 9; 5; 6].

The prevalence of AMC anemia depends on many factors: socioeconomic conditions, nutrition, bleeding of various localizations, etc.

According to Cameschella C. (2019), Vos T. et al. (2017), and WHO (2011), the main causes of IDA in women of reproductive age are abnormal uterine bleeding (AUB), pregnancy, childbirth (repeated), and lactation. AUB development is also possible in this same population, as well as in blood donors who have been donating blood continuously for many years, and in patients with chronic kidney disease undergoing hemodialysis [4; 12; 11].

**The aim of the study** is to develop innovative technologies for early diagnosis, emergency care and prevention of urgent non-gravid metrorrhagia in the Fergana Valley.

**The object of the study** was a population of 1400 women with urgent non-gravid metrorrhagia who were treated in hospital at the Andijan branch of the Republican Scientific Center for Emergency Medical Care in the period from 2010 to 2025.

**The subject of the study** was the questionnaire, biochemical, instrumental, laboratory and clinical-obstetric-gynecological parameters in women with urgent non-gravid metrorrhagia with the assessment of the nature and quantity of bloody discharge, hemodynamic parameters and the state of vital functions, the color of the skin and mucous membranes, the presence of cachexia, ascites, rash, signs of liver damage, the duration and intensity of bleeding, the timing of the last normal menstrual period, the presence of a possible pregnancy, the presence of uterine fibroids, adenomyosis, malignant diseases of the genital organs, organic and functional causes of AMC and/or AMC.

## Research Methods

A comprehensive methodology was used during the dissertation research, including epidemiological, clinical, obstetric-gynecological, instrumental, biochemical, and statistical methods. This approach, using the PALM-COEIN classification system, the "Algorithm for the Diagnosis of Abnormal Bleeding," and the WHO criteria, ensured a reliable assessment of the epidemiological conditions and situations related to urgent non-gravid metrorrhagia.

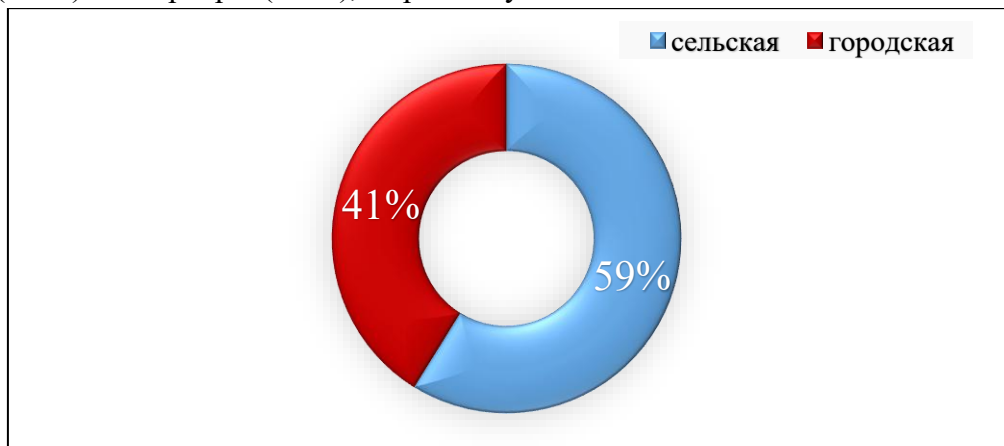
## Results

The study was conducted from 2020 to 2022 in the gynecology and intensive care departments of the Andijan branch of the Republican Scientific Center for Emergency Medical Care (RSC EMC). A retrospective epidemiological analysis of inpatient records from 2010 to 2025 was conducted, followed over 15 years by obstetricians-gynecologists and intensive care specialists in the Andijan emergency medical facility.

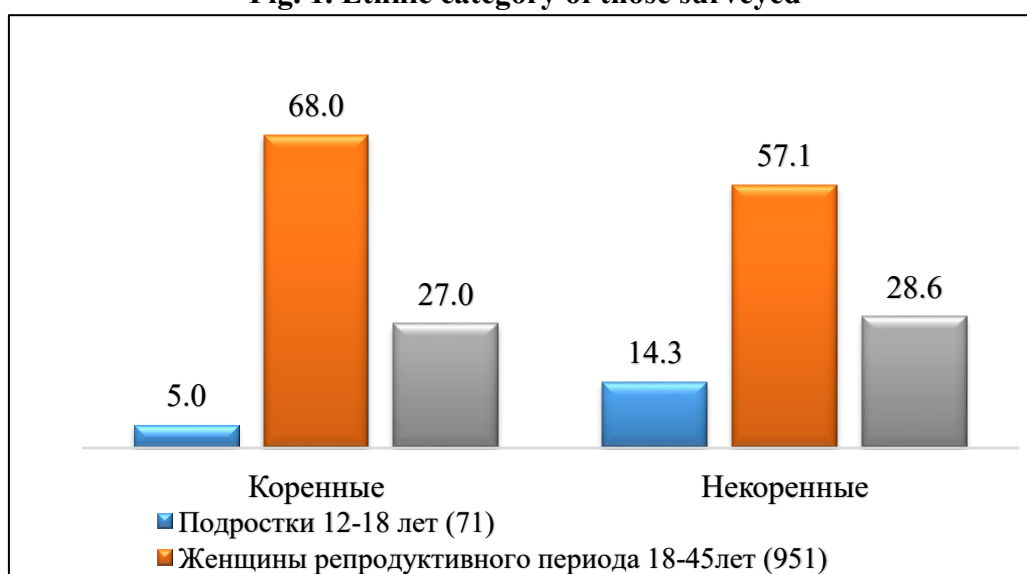
The study is prospective, multi-stage, observational in 15 years in four cross-sections - 2010-2014, 2015-2020, 2021-2025 and 2010-2025, stratified on a representative sample of the organized population - adolescent girls (12-17 years old), women of reproductive age (18-45 years old), women of perimenopausal period (46-55 years old), in rural and urban ethnic categories in 6 socio-professional categories (students, housewives, managers, employees, pensioners, employees) and among individuals with different levels (secondary/secondary-specialized, higher education, medical education) of education (Table 1, Fig. 1, 2 and 2).

The total number of respondents is characterized by the following population and demographic characteristics (Table 1 and Figs. 1, 2):

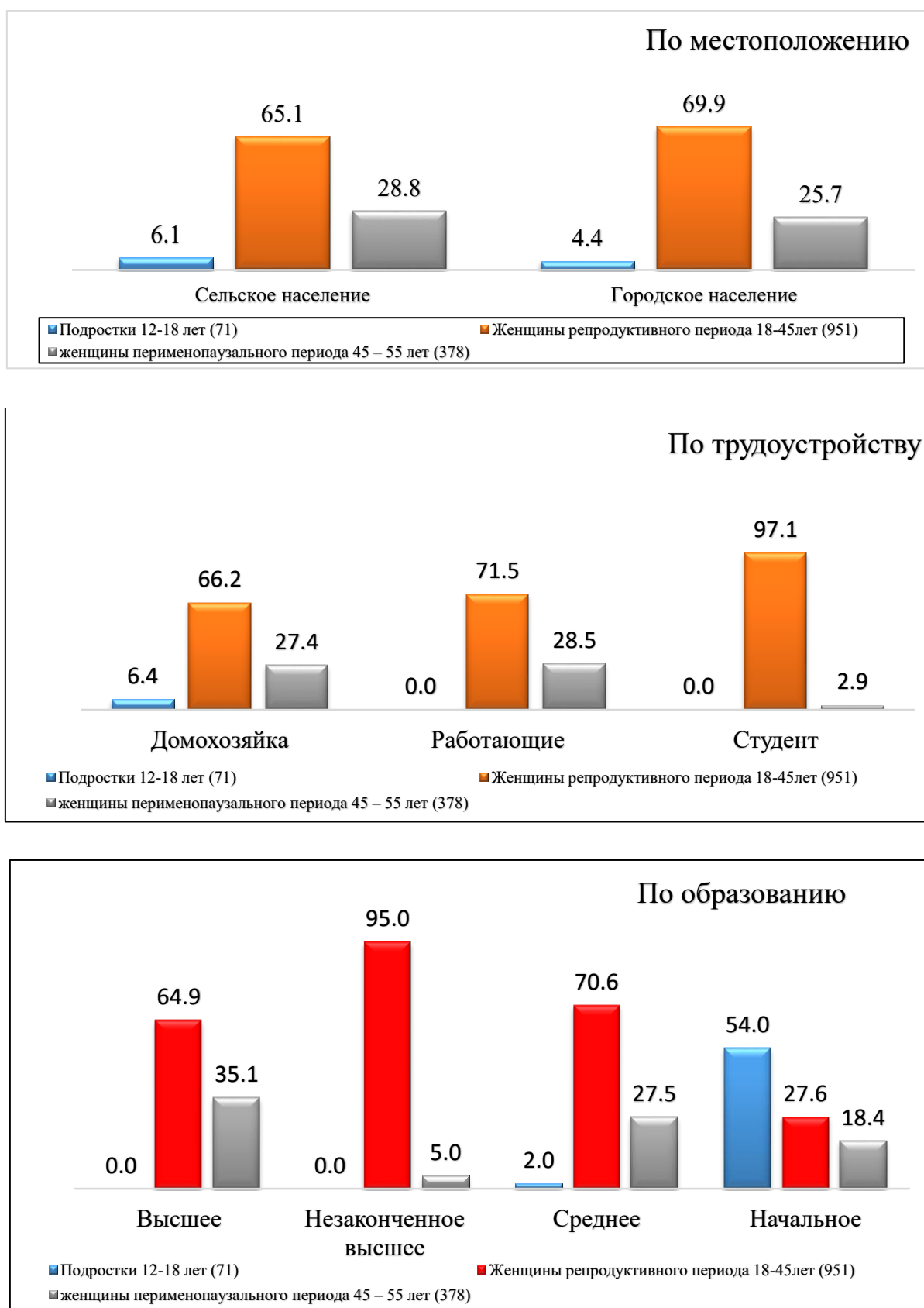
- 1) the number of respondents aged 12-17, women aged 18-45 and 46-55 was 71 (5.1%), 951 (67.9%) and 378 (27.0%), respectively;
- 2) the rural and urban populations were 824 (58.9%) and 576 (41.1%), respectively;
- 3) the respondents were students - 34 (2.4%), housewives - 1106 (79.0%), managers - 40 (2.9%), workers in the field/specialists - 196 (14.0%), pensioners - 0 (0.0%) and employees - 24 (1.7%);
- 4) those surveyed with secondary education, higher education and medical education amounted to 1216 people (86.9%), 77 people (5.5%) and 5 people (0.4%), respectively.



**Fig. 1. Ethnic category of those surveyed**



**Fig. 2. Demographic characteristics of the surveyed**



**Fig. 3. Socio-professional and educational status of the surveyed**

**Table 1 Population and demographic characteristics of the surveyed**

| № | Parameter                               | Total number of examined |      |
|---|-----------------------------------------|--------------------------|------|
|   |                                         | n                        | %    |
| 1 | Teenage girls (12–17 years old)         | 71                       | 5,1  |
| 2 | Women of reproductive age (18–45 years) | 951                      | 67,9 |
| 3 | Perimenopausal women (46–55 years)      | 378                      | 27,0 |
| 4 | Ethnic category:                        |                          |      |
|   | rural                                   | 824                      | 58,9 |
|   | city                                    | 576                      | 41,1 |
| 5 | Social and professional category:       |                          |      |
|   | - students                              | 34                       | 2,4  |
|   | - housewives                            | 1106                     | 79,0 |
|   | - leaders                               | 40                       | 2,9  |
|   | - workers in the field / specialists    | 196                      | 14,0 |
|   | - pensioners                            | 0                        | 0,0  |
|   | - employees                             | 24                       | 1,7  |
| 6 | Education level:                        |                          |      |
|   | - secondary / secondary specialized     | 1216                     | 86,9 |
|   | - higher education                      | 77                       | 5,5  |
|   | - having a medical education            | 5                        | 0,4  |

Thus, the specificity of the epidemiological methodological approaches developed and applied in the work created a scientific basis for the subsequent logical analysis of the research results and substantiation of the main contents of the dissertation.

## Conclusion

In the overwhelming majority of cases (up to 100%), comorbidities in urgent non-gravid metrorrhagia include coronary diseases, non-coronary cardiovascular diseases, underlying respiratory diseases, urinary tract diseases, anemia, coagulopathic syndromes, endocrine disorders, other chronic non-communicable diseases, urothelial cystitis, urothelial cystitis, and urothelial cystitis. The incidence of comorbid pathologies increases with women's age.

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