

# Prevention in primary care - intrafamilial predictive model (MPI)

V. Herdea<sup>1,9</sup>, R. Ghionaru<sup>1,9</sup>, E. Costiug<sup>2,9</sup>, I. Brinza<sup>5,9</sup>, S.N. Rus<sup>3,9</sup>, L. Comnea<sup>1,9</sup>, E. Egri<sup>4,9</sup>, E. Ruja<sup>2,6,9</sup>, L.Chitanu<sup>5,9</sup>, C. Mirauta<sup>1,9</sup>, C. F. Pop<sup>2,6,9</sup>, L.Soldea<sup>8,9</sup>, A. Herdea<sup>7,9</sup>

<sup>1</sup>MD, Family Medicine, Bucharest, <sup>2</sup>MD, Family medicine, Cluj Napoca, <sup>3</sup>MD, Family medicine-, Bistrita, <sup>4</sup>MD, Family medecine, Sibiu, MD, Family medicine-Braila, <sup>6</sup>MD, PhD, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, <sup>7</sup>MD, Ph D student, Grigore Alexandrescu Emergency Children Hospital Bucharest, <sup>8</sup>MD, diabet, nutrition and metabolism specialist, Bucharest, Romanian, <sup>9</sup>Association for Pediatric Education in Family Medicine (AREPMF), **Corresponding author:** Alexandru Herdea e mail: alexherdea@yahoo.com

## Background and Aims

According to WHO 2018, all around the world- 41 million children are obese.

### ○ Romania:

- 24.5% of children aged 5 to 19 years obese (2016, NIS)
- 7.4% HBP child and adolescents between 3-17 years
- 48.5% of Romanian population between 18-80 y are hypertensive

## Aims

Introduction of **Intrafamilial Predictive Model** like Preventive interventional mechanism applicable from childhood, could reduce the incidence of major chronic diseases in future adult.

## Method

For a period of 6 months October 2017-April 2018, there were observed:

- 35 children aged 6-18 years old
- sex ratio (Female:Male) 2:1
- Urban / Rural 30/5
- BMI 85<sup>th</sup>-95<sup>th</sup> percentile
- coming from families struggling with chronic diseases, high blood pressure (HBP), dyslipidemia, diabetes, static vertebral disorders, neuropsychiatric disorders.

Clinical parameters were recorded: Weight, Height, Blood pressure (BP), abdominal perimeter (PA), bodymass index (BMI). All children were examined for min 3 times: visit 0/visit 1/visit 2.

Based on family history and major risk factors (MRF) presence, a personalized **intrafamilial predictive model (MPI)** has been prepared.

Professional lifestyle changing recommendations for the child and family, has been applied(daily journal method: BP monitoring, nutrition, hidratation, physical activity, time with family),



ECHIPA AREPMF



## Results

At the end of the 6 months:

- Average 10% weight looss in children
- Reduction of Systolic BP values average 15 mmHg- girls and 10 mmHg- boys
- Daily sports activity - average 60 min vs 0 initially
- Vaccine coverage for age (> 90% vs 80%)
- Professional orientation for children with static vertebral disorders
- 30 min every day - spending quality time with family (sport, dinner)

## Discussions

**Intrafamilial predictive model allows:**

1. Family care & monitoring
2. Family pathology proper evaluation
3. Maping family risk (respecting patient confidentiality and the right for private life)
4. Intrafamilial predictive model ( risk awareness, measures, personalized early preventive intervention)
5. Family counseling for healthy life style
6. Assess clinical outcomes
7. Reducing the risk for chronical disseases burden in adulthood
8. Changing microsystem (personal and familial level)- raising life quality
9. Changing macrosistem (community)- reducing socio-economical burden of non communicable disseases
10. A healthy person can invest in their own education, personal development, achievement of personal and social group goals

## Conclusion

1. Obesity, HBP and behavioral disorders were MRF in the studied patients.
2. MPI allows the early identification of MRF that works from childhood an important role in the etiology of chronic diseases development in adulthood
3. MPI allows preventive interventions- implementation of cost-effective personalized programm, based on education for health: nutrition, sport, menthal health, proffesional orientation

**Keywords:** malnutrition, obesity, chronic diseases

Copyright © 2018 Valeria Herdea valeriaherdea@yahoo.com

## Bibliography

1. Perspectives on hypertension's prevalence, treatment and control in a high cardiovascular risk group Maria Dorobantu, Oana-Florentina Tautu, Doina Dimulescu [...] Mihaela Udrescu, Valeria Herdea, Roxana Darabont, Journal of Hypertension 10/2017; 36(3):1

2.Hypertension in Romanian Children and Adolescents A Cross-Sectional Survey, Cinteza, Balgradean, MAEDICA – a Journal of Clinical Medicine 2013; 8(1): 5-10

3.The fourt Repport on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents - U.S. Department of health and human services. NIH Publication No. 05-5267