mental health care: psychiatry, social, and behavioural care. So far, the organisation of care for MDOs differs greatly across countries and research on security needs remains inconclusive. In particular, access to appropriate care for MDOs is hindered by society and MDOs' security needs, which conflicts with community-based, recovery-oriented standards for regular mental-health care.

Belgium is currently reforming its care organisation for MDOs with the goal of delivering community, recovery-oriented care within the most appropriate security setting. MDOs placement should ensure the lowest secure settings regarding needs of security. However, MDOs placement is regulated by a legal decision, which is not based on formal guidelines. In these conditions, it is unknown whether MDOs' placement in regular or forensic care settings according to security needs is appropriate.

Aim Therefore, we assessed how well placement matches MDOs' and society security needs.

Methods As part of a broader reform evaluation process, routinely collected data on MDOs' care placement in 2017 were retrieved. Placement settings covered the whole country and four out of five security levels: regular mental-health care and forensic low, medium, and high security settings. All MDOs that were placed during 2017 were included. Data included sociodemographics, clinical, and legal status of MDOs, the sending and receiving services, and an evaluation of severity of symptoms and security needs carried out with the HoNOS-Secure. The primary outcome was the appropriateness of placement to security levels according to security need assessment controlled for MDOs' individual characteristics (multinomial logistic regression). Secondary outcomes included an assessment of the care pathway through the sending and receiving services, and descriptive statistics of the population in the several security level settings.

Population health relevance Appropriateness of care placement for MDOs is needed to improve care access, quality, and social rehabilitation. Placement assessment is required to support authorities and professionals for the development of care facilities. In addition, more evidence on the relevance of personalised and community-based care models for MDOs' is needed.

P65 | **ASSOCIATION OF FOOD OUTLET DENSITY AND OBESITY: A CROSS-SECTIONAL STUDY OF URBAN AREAS IN MEXICO**

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Background Obesity is an important and highly prevalent risk factor for non-communicable diseases in both developed and developing countries. Obesity prevalence is influenced by a complex, multifaceted system of determinants among which the food retailing and advertising environment is pivotal. Current food environments are often characterised by pervasive exposure to unprecedented availability and marketing of energy-rich and nutrient-poor foods. Mexico has one of the highest obesity rates in the world: 70% of the population is overweight or obese. The country has experienced a dietary and food retail transition involving increased high-calorie-dense food and drink availability.

The aims of this study were 1) to analyse the associations between total food outlet density and BMI; 2) to examine the association of the retail food environment index (RFEI) and obesity; and 3) to study the association of the density of individual food outlets and obesity in Mexican adults in urban areas.

Methods The National Institute of Statistics and Geography in Mexico provided geographical and food outlet data; BMI, calculated from anthropometric measurements, and socio-economic characteristics of a nationally-representative sample of adults aged 18+, came from participants in the National Health and Nutrition Survey in Mexico (ENSANUT) 2012. I calculated densities of supermarkets, restaurants, chain and non-chain convenience stores, and fruit and vegetable stores in total and by individual type per 1000 people per census tract area, using ArcGIS. I calculated RFEI, the ratio of 'unhealthy' to 'healthy' food outlets. Using multilevel linear regression, I analysed the relationship between density of food outlet types and obesity using complex survey design in STATA14. All analyses were adjusted for sex, age, socioeconomic status and physical activity.

Results Both non-chain convenience store density [$\beta=3.10$, 95% CI 0.97 to 5.23, $p=0.004$] and non-chain combined with chain-type convenience store density [$\beta=2.71$, 95% CI 0.63 to 4.80, $p=0.011$] were significantly associated with obesity. Total food outlet density showed no significant association with obesity. However, the RFEI was associated with higher levels of obesity [$\beta=0.040$, 95% CI 0.00049 to 0.02, $p=0.040$].

Conclusion Convenience stores, which offer a greater availability of energy dense foods with low nutrient content, pose a risk to higher levels of obesity. A balance of healthier food outlets versus non-healthy food outlets could decrease the risk of obesity in urban areas of Mexico.

Correction: These abstracts have been updated since they first published. Abstract P64 (doi:10.1136/jech-2018-SSMabstracts.187) title and complete text have been corrected. Also, abstract RF9 (doi:10.1136/jech-2018-SSMabstracts.98) last four authors have been added.