

waist-hip ratio (WHR), were associated with increased risks of PCa. To further explore this relationship and given the accumulating evidence between BMI and smoking in cancer risk, we conducted further analyses taking into account smoking status within the EPICAP study.

**Methods** EPICAP is a French population-based case-control study that enrolled 819 incident cases of PCa diagnosed in 2012 and 2013, aged less than 75 years old and residing in the département of Hérault, France. Controls were 879 age-matched individuals living in the same geographic area. Face to face interviews, using a standardized computerized questionnaire, gathered information about socio-demographic characteristics, personal medical history, lifestyle factors, physical activity, residential and occupational history. Anthropometric indicators have also been collected through the questionnaire (self-report of height at 18 years old and weight every decades) or anthropometric measures at time of interview (height, weight, waist and hip circumferences). Logistic regression models were used to assess odds ratios (ORs) for the associations between anthropometric indicators (BMI, WC, WHR) and PCa risk. Analyses were adjusted for age, family history of PCa and ethnicity. Stratified analyses were conducted by PCa aggressiveness according to the Gleason score. Seeking for relevant interaction between smoking status and BMI trajectories and given that smoking is a major risk factor for many types of cancer, known to decrease obesity, we performed stratified analyses according to smoking status.

**Results** Overall, 28.6% were never smokers, 54.9% former smokers, and 16.5% current smokers, similarly distributed between cases and controls ( $p=0.21$ ). Among never smokers, we observed a slight but not significant increased risk of overall PCa for men with a BMI above 25 kg/m<sup>2</sup>; (OR 1.52 [0.97–2.38]) as well as for men with a WC greater to 94 cm (OR 1.42 [0.93–2.16]) or a WHR greater or equal to 0.95 (OR 1.40 [0.92–2.13]). Among current smokers, we observed no association between BMI, WC or WHR and PCa risk (OR 1.15 [0.62–2.13], OR 1.24 [0.68–2.30], OR 1.06 [0.58–1.93], respectively). However interaction was not significant.

**Conclusion** Our results showed that associations between anthropometric indicators were more pronounced among never smokers, in agreement with the assumption that smoking may attenuate the association between obesity and cancer.

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#### THE ICEBERG-EFFECT OF SPECIFIC MATERNAL MORBIDITIES IN IRELAND: QUANTIFYING THEIR MAGNITUDE

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**Background** Death is the last point on the spectrum of adverse pregnancy events. Nevertheless, it is essential to know the full extent to which women's health is affected during or shortly after pregnancy, and to identify their main causes of illness. In developed countries, most maternal deaths are currently avoidable and severe maternal morbidities (SMMs) have been recognised as important indicators of the broader issues affecting maternal health. Therefore, this study aims to quantify the magnitude of specific maternal morbidities in Ireland.

**Methods** The frequency of specific maternal mortalities and morbidities was obtained from: Maternal Death Enquiry

(MDE), Hospital In-Patient Enquiry Scheme (HIPE), NPEC National Audit of SMM, and Growing Up in Ireland. The incidence, crude mortality and case-fatality ratios were calculated for each main maternal condition between 2009 and 2017 (i.e. Haemorrhage, Hypertension, Thromboembolism/Venous thromboembolism (VTE) and Sepsis).

The iceberg-effect metaphor was used representing the different epidemiologic levels of the various maternal health conditions studied. At the bottom, a healthy pregnancy, topped by manageable maternity complications, followed by severe maternal morbidities and at the peak, maternal mortality.

As the major morbidity affecting women following pregnancy in Ireland, the incidence rate (per 1000 maternities) of Major Obstetric Haemorrhage (MOH) was calculated. Poisson regression was calculated to obtain rate ratios studying the trend of this morbidity throughout the years.

**Results** Currently, there are more maternal morbidities ( $n=619881$ ) than maternities in Ireland ( $n=604510$ ), an event noticed from 2012 onwards.

At the 'tip of the iceberg', thromboembolism (TE) recorded the highest mortality ratio (0.23 among 22 maternal fatalities) followed by MOH (mortality ratio=0.18).

Among the SMMs studied, the case fatality ratio for eclampsia is 25 and for pulmonary embolism this is 26, highest values recorded.

MOH remains the SMM with highest incidence in Ireland (crude rate 28.85). The incidence of MOH increased from 2.34 per 1,000 maternities in 2011 to 3.14 in 2017, an increase of 45% (rate ratio=1.45, 95% CI=1.18–1.77,  $p$ -value<0.001).

Sepsis with a case-fatality ratio of 122 recorded the highest value among the group of (non-severe) morbidities studied, as one in 122 cases of this condition might result in death.

**Conclusion** Although TE and MOH were the main causes of maternal death, pulmonary embolism, eclampsia and sepsis emerged as important issues affecting maternal health.

The study of such issues offers the possibility of carrying preventive actions, prioritise and implement timely intervention to tackle critical pregnancy and maternal health issues. Valuable lessons can be learned about the requirements, care and interventions necessary to ensure a better and more efficient response to the specific needs of these women.

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#### MEASURING THE IMPACT OF THE GOVAN SOCIAL AND HEALTH INTEGRATION PARTNERSHIP (SHIP) PROJECT ON EMERGENCY ADMISSIONS TO HOSPITAL AND GP INTERACTIONS: A CONTROLLED INTERRUPTED TIME SERIES ANALYSIS

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**Background** The Govan SHIP project was implemented in Govan Health Centre, a deprived area in the south of Glasgow, involving GPs and social workers sitting within multidisciplinary teams to identify and support vulnerable patients at risk of attending A&E and GP surgeries. This study aimed to measure the impact of SHIP on A&E presentations and GP interactions.

**Methods** Rate of A&E presentations per 1000 population in 3 participating GP practices in Glasgow City was compared