



Is there a relation between environmental exposure to teratogenic substances during pregnancy and congenital anomalies in the newborn? A Pilot study in Portugal

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METHODS

STUDY DESIGN

- Case control.

CASE

- Identified in the maternity unit;
- Live births with at least one CA delivered at participating hospital.

CONTROL

- Two normal births following each case;
- Residents outside the study area and gestation with stillbirth or foetal deaths are excluded.

BACKGROUND

Maternal occupation as a proxy of environmental exposure has been consistently associated with specific congenital anomalies (CA) in the foetus and newborn.

Geographical location of the mother such as place of residence and of work have not been used as proxy for environmental exposures during pregnancy.

We designed a pilot study to investigate the association between maternal place of residence and workplace during pregnancy and CA.

DATA COLLECTION

- Questionnaire applied by a health professional, face to face interview;
- Adapted from RENAC/EUROCAT form:
 - Demographic characteristics of newborn and prenatal information;
 - Mother's place of residence, workplace and leisure during pregnancy
 - Maternal and paternal characteristics, obstetric history and consumption habits;
 - Description of CA.

PRELIMINARY RESULTS

The pilot study started in January 2016 in Barreiro-Montijo Hospital (Figure 1).

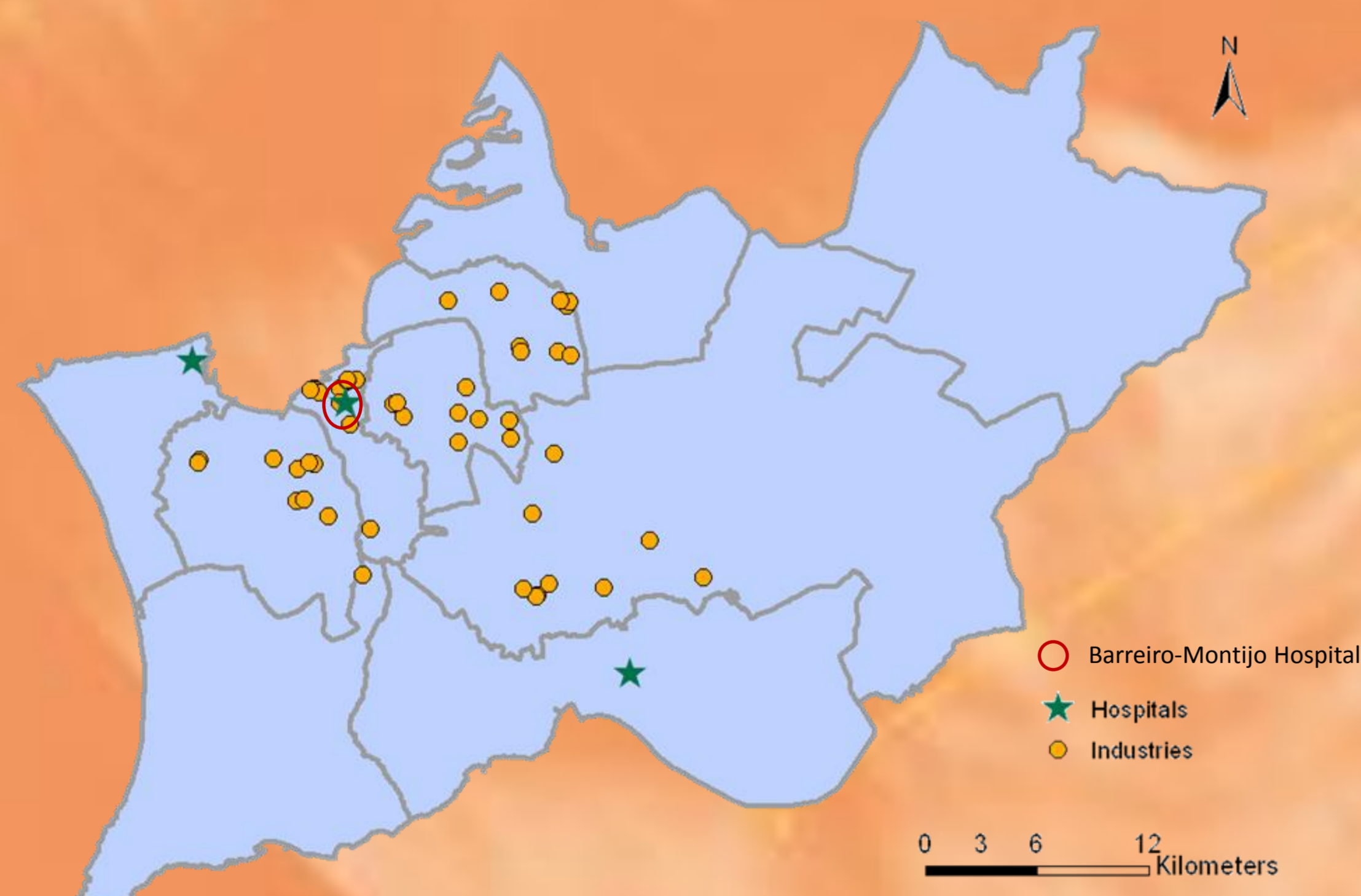


Figure 1: Location of pilot study, other potential participating hospitals in the region and of industries with potential air emission pollutants.

- ✓ To increase the participation, leaflet and posters were created and distributed before field-work;
- ✓ A manual to conduct the interviews was prepared and training sessions with local teams were done;
- ✓ The final questionnaire is consisted by 40 items and takes approximately 15-20 min to be applied;
- ✓ So far, according to participants all questions are easy to understand;
- ✓ Until June 2016, a total of 8 cases (16 controls) were included in the study with no refuses, which corresponds to a 100% participation rate.

FUTURE DEVELOPMENTS

- Continue to implement pilot study until December 2016;
- Increase the number of participating hospitals.



Study protocol and questionnaire submitted and approved by the Barreiro-Montijo Hospital ethics commission and by the National Data Protection Commission.