

## PROSPERO International prospective register of systematic reviews

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### What is the relationship between inter-pregnancy interval and maternal and perinatal outcomes among women who delayed childbearing to 30 years or older?

*Mani Asgharpour, Wendy V. Norman, Dorothy Shaw, Laura Shummers, Jennifer Hutcheon, Sofia Villarreal*

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#### Review question(s)

What is the relationship between inter-pregnancy interval and adverse perinatal health outcomes in women who delayed childbearing to 30 years or older?

What is the relationship between inter-pregnancy interval and adverse maternal health outcomes in women who delayed childbearing to 30 years or older?

What is the relationship between inter-pregnancy interval and pregnancy complications in women who delayed childbearing to 30 years or older?

#### Searches

We will search the following electronic bibliographic databases: MEDLINE, EMBASE, CINAHL. We will also check the reference lists of relevant articles to find additional studies. The search strategy will include only terms relating to or describing birth interval.

There will be no language restrictions. Studies published until the date the searches are run will be sought. The searches will be re-run just before the final analyses and further studies retrieved for inclusion.

#### Types of study to be included

There are no restrictions on the types of study design.

#### Condition or domain being studied

Pregnancy. Perinatal and maternity outcomes.

#### Participants/ population

Inclusion: Women who delayed their first or subsequent pregnancies to age 30 and older.

Exclusion: Women who had their last pregnancy before the age of 30.

#### Intervention(s), exposure(s)

Inter-pregnancy interval (time interval between delivery of first birth and conception of second birth).

#### Comparator(s)/ control

Different inter-pregnancy intervals.

#### Context

We are looking for studies which were conducted in high resource countries. We will use the world bank definition of "High Income OECD Countries" as one of our inclusion criteria (available at: [http://data.worldbank.org/about/country-and-lending-groups#High\\_income](http://data.worldbank.org/about/country-and-lending-groups#High_income)).

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## **Outcome(s)**

### **Primary outcomes**

Perinatal health outcomes (Preterm birth, Low birth weight, Small for gestational age, Stillbirth, NICU admission, neonatal and infant mortality).

We will restrict health outcomes to the first year of life.

### **Secondary outcomes**

Maternal health outcomes (cesarean delivery, maternal ICU admission or severe morbidity, maternal mortality), Pregnancy complications (dystocia, preeclampsia, uterine rupture, gestational diabetes).

## **Data extraction, (selection and coding)**

Titles and/or abstracts of studies retrieved using the search strategy will be screened independently by two review team members (Mani Asgharpour and Sofia Villarreal) to identify studies that potentially meet the inclusion criteria outlined above. The full text of these potentially eligible studies will be retrieved and independently assessed for eligibility by the same two review team members. Any disagreement between them over the eligibility of particular studies will be resolved through discussion with Dr. Wendy V. Norman and Laura Schummers. In case of inability to agree Dr. Jennifer Hutcheon will provide final adjudication.

The following is the list of the data to be extracted: study population and participant characteristics (age groups, socioeconomic status), measure of birth spacing used, inter-pregnancy interval categories, what the reference category was for a given study, what the RRs and CIs were for each category, what outcomes they looked at, information for assessment of the risk of bias, and what confounding factors they adjusted for.

## **Risk of bias (quality) assessment**

For RCTs, the Cochrane's Collaboration tool for assessing risk of bias in randomized trials will be used. This tool includes six domains to assess bias (i.e. selection bias, performance bias, detection bias, attrition bias and reporting bias) which are assigned as either 'low risk of bias', 'unclear risk of bias' or 'high risk of bias'. This information will be presented as a risk of bias summary figure using the Review Manager software (RevMan, version 5.3). To assess the study quality of prospective and cross-sectional studies, a modified version of the Newcastle-Ottawa Scale (NOS) for cohort studies will be used. This tool assigns stars to indicate higher quality based on three broad criteria, specific to the study design (i.e. selection of study groups, comparability and outcome assessment).

## **Strategy for data synthesis**

We will decide whether or not to do a meta-analysis based on whether the individual studies differed considerably in definitions used for inter-pregnancy intervals, age groups studied, or outcomes measured. We will report odds ratios or relative risks for perinatal and maternal outcomes as well as pregnancy complications.

## **Analysis of subgroups or subsets**

We will conduct subgroup analyses by socioeconomic status and history of infertility, if such data are available.

## **Contact details for further information**

Weihong Chen

Weihong Chen

CART-BC Women's Hospital

E204C – 4500 Oak Street

Vancouver, BC, Canada

V6H 3N1

Weihong.chen@ubc.ca

**Organisational affiliation of the review**

Contraception Access Research Team, University of British Columbia Department of Family Practice

<http://cart-grac.ubc.ca/>

**Review team**

Dr Mani Asgharpour, University of British Columbia  
Dr Wendy V. Norman, University of British Columbia  
Dr Dorothy Shaw, BC Women's Hospital and Health Centre  
Ms Laura Shummers, Harvard University  
Dr Jennifer Hutcheon, University of British Columbia  
Ms Sofia Villarreal, University of British Columbia

**Anticipated or actual start date**

10 March 2015

**Anticipated completion date**

31 March 2016

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**Conflicts of interest**

None known

**Language**

English

**Country**

Canada

**Subject index terms status**

Subject indexing assigned by CRD

**Subject index terms**

Birth Intervals; Female; Humans; Parturition; Pregnancy; Reproductive Behavior

**Stage of review**

Ongoing

**Date of registration in PROSPERO**

01 June 2015

**Date of publication of this revision**

22 February 2016

**DOI**

10.15124/CRD42015019057

**Stage of review at time of this submission**

Preliminary searches

Piloting of the study selection process

**Started**

Yes

Yes

**Completed**

Yes

Yes

Formal screening of search results against eligibility criteria	Yes	Yes
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

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**PROSPERO**

**International prospective register of systematic reviews**

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