What is already known on this topic

Maternal age at conception and history of fetal loss are risk factors for fetal death; these factors are highly correlated

What this study adds

Maternal age at conception is a strong and independent risk factor for fetal death, irrespective of previous reproductive outcome, as is a history of fetal loss

The chance of a successful pregnancy in women aged 40 years or more is poor

Patients could be counselled more fully about their chance of a successful pregnancy if their age and reproductive history were taken into account

indicate that tendencies to postpone pregnancy increase the overall incidence of fetal loss and possibly the costs of health care. On the individual level, information about the increased risk of spontaneous abortion with high maternal age should be part of medical counselling so that it can be taken into consideration in decisions about reproduction.

This study was approved by the Danish Data Protection Board.

Contributors: MM conceived the study idea. A-MNA, JW, and MM developed the design and analytic strategy. JW and PC performed the data linkages and statistical analyses. A-MNA, JW, MM, and JO jointly wrote the paper. A-MNA will act as guarantor for the paper.

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- 1 Fretts RC, Schmittiel J, McLean FH, Usher RH, Goldman MB. Increased maternal age and the risk of foetal death. *N Engl J Med* 1995;333:953-7.
- 2 Pettit DB. The epidemiology of foetal death. *Clin Obstet Gynecol* 1987;30:253-58.
- 3 Berkowitz GS, Skovron ML, Lapinski PH, Berkowitz RL. Delayed childbearing and the outcome of pregnancy. *N Engl J Med* 1990;322:659-64.

- 4 Harlap S, Shiono PH, Ramcharan S. A life table of spontaneous abortions and the effect of age, parity and other variables. In: Porter IH, Hook EB, eds. *Human embryonic and foetal death*. New York: Academic Press, 1980.
- 5 Risch HA, Weiss NS, Clarke AE, Miller AB. Risk factors for spontaneous abortion and its recurrence. *Am J Epidemiol* 1988;128:420-30.
- 6 Coste J, Job-Spira N, Fernandez H. Risk factors for spontaneous abortion: a case-control study in France. *Hum Reprod* 1991;6:1332-7.
- 7 Kline J, Stein Z. Spontaneous abortion. In: Bracken M, ed. *Perinatal epidemiology*. New York: Oxford University Press, 1984.
- 8 Christiansen OB. Epidemiological, immunogenetic and immunotherapeutic aspects of unexplained recurrent miscarriage. *Dan Med Bull* 1997;44:396-424.
- 9 Warburton D, Fraser FC. Spontaneous abortion risks in man: data from reproductive histories collected in a medical genetic unit. *Am J Hum Genet* 1964;16:1-24.
- 10 Naylor AE, Warburton D. Sequential analysis of spontaneous abortion. II: collaborative study data show that gravidity determines a very substantial rise in risk. *Fertil Steril* 1979;31:282-6.
- 11 Wilcox AJ, Gladen BC. Spontaneous abortion: the role of heterogeneous risk and selective fertility. *Early Hum Dev* 1982;7:165-78.
- 12 Alberman E. Maternal age and spontaneous abortion. In: Bennett MJ and Edmonds DK, eds. *Spontaneous and recurrent abortion*. Oxford: Blackwell Scientific, 1987.
- 13 Westergaard T, Wohlfahrt J, Aaby P, Melbye M. Population based study of rates of multiple pregnancies in Denmark 1980-94. *BMJ* 1997;314:775-9.
- 14 Kline J, Stein Z, Susser M. *Conception to birth*. New York: Oxford University Press, 1989:43-68.
- 15 Hassold T, Chiu D. Maternal age specific rates of numerical chromosome abnormalities with special reference to trisomy. *Hum Genet* 1985;70:11-7.
- 16 Cano F, Simon C, Remohi J, Pellicer A. Effect of ageing on the female reproductive system: evidence for a role of uterine senescence in the decline in female fecundity. *Fertil Steril* 1995;64:584-9.
- 17 Hakim RB, Gray RH, Zacur H. Infertility and early pregnancy loss. *Am J Obstet Gynecol* 1995;172:1510-7.
- 18 Regan L, Braude PR, Trembath PL. Influence of past reproductive performance on risk of spontaneous abortion. *BMJ* 1989;299:541-5.
- 19 Heidam LZ, Olsen JO. Self-reported data on spontaneous abortions compared with data obtained by computer linkage with the hospital registry. *Scand J Soc Med* 1985;13:159-63.
- 20 Mäkinen J, Raitala M, Vanha-Käämpä O. A link between the epidemic of ectopic pregnancy and the 'baby-boom'-cohort. *Am J Epidemiol* 1998;148:369-74.
- 21 Egger M, Low N, Smith GD, Lindblom B, Herrmann B. Screening for chlamydial infections in the risk of ectopic pregnancy in a county in Sweden: ecological analysis. *BMJ* 1998;316:1776-80.
- 22 Soerensen JL, Thranov IR, Hoff GE. Presence of genital chlamydia trachomatis in abortion seeker. Correlates with young age and nulliparity but not with previous genital infection. [In Danish.] *Ugeskr Laeger* 1992;154:3053-6.
- 23 Soegaard P, Moeller BR, Thorsen P, Nissen LR, Pedersen S, Kargo JC, et al. Prevalence of Chlamydia trachomatis among conscripts. A comparative study of urine samples and urethral swabs [In Danish.]. *Ugeskr Laeger* 1996;158:759-63.
- 24 Raymond EG, Cnattingius S, Kiely JL. Effects of maternal age, parity and smoking on the risk of stillbirth. *Br J Obstet Gynaecol* 1994;101:301-6.

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To whom it concerns

Smoking kills they say.
Maybe they are right.
But life kills also.

But how come in the cancer hospice, the smoking room is full.
Of life.
Of laughter. Of craic.
At one level the smoking is of no consequence.
The non-smoking room is always empty.
And dark.
And lonely.
No one there.
I don't know what that says about us!!
Maybe through the need to smoke, or addiction, or whatever,
people bond.
In the smokers room people talk also about life and death, their
illnesses and other important matters.

But also they laugh and joke and have great craic.
There must be a smokers heaven.
I am now the owner of one cigarette (unlit), one box of matches
and one empty cigarette pack.

That's my passport to company, to need, to love to vulnerability,
to the child in me.
To know its ok to be afraid.
I'm happy to be a non-smoking smoker.

God bless us one and all.

Written by Jean Murphy, patient in Our Lady's Hospice, Harold's
Cross, Dublin, February 1999

My sister, Jean Murphy, died from breast cancer on 12 May 1999.
Her disease was very aggressive; the diagnosis and mastectomy
were only a few months earlier, in September 1998. She spent a
couple of weeks at the beginning of 1999 in the hospice. She
never smoked, but what struck her was that no one ever occupied
the no smoking areas. The one small room that was put aside for
smokers was constantly the hub of activity. As someone who is
totally opposed to smoking, especially in a non-smoking hospital,
I find Jean's poem ironic.

J Bernard Walsh consultant physician, Dublin