

International Committee for Monitoring Assisted Reproductive Technologies world report: Assisted Reproductive Technology 2008, 2009 and 2010[†]

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STUDY QUESTION: What were utilization, outcomes and practices in assisted reproductive technology (ART) globally in 2008, 2009 and 2010?

SUMMARY ANSWER: Global utilization and effectiveness remained relatively constant despite marked variations among countries, while the rate of single and frozen embryo transfers (FETs) increased with a concomitant slight reduction in multiple birth rates.

WHAT IS KNOWN ALREADY: ART is widely practised in all regions of the world. Monitoring utilization, an approximation of availability and access, as well as effectiveness and safety is an important component of universal access to reproductive health.

STUDY DESIGN, SIZE, DURATION: This is a retrospective, cross-sectional survey on utilization, effectiveness and safety of ART procedures performed globally from 2008 to 2010.

PARTICIPANTS, SETTING, METHODS: Between 58 and 61 countries submitted data from a total of nearly 2500 ART clinics each year. Aggregate country data were processed and analyzed based on forms and methods developed by the International Committee for Monitoring Assisted Reproductive Technologies (ICMART). Results are presented at country, regional and global level.

MAIN RESULTS AND THE ROLE OF CHANCE: For the years 2008, 2009 and 2010, >4 461 309 ART cycles were initiated, resulting in an estimated 1 144 858 babies born. The number of aspirations increased by 6.4% between 2008 and 2010, while FET cycles increased by 27.6%. Globally, ART utilization remained relatively constant at 436 cycles/million in 2008 and 474 cycles/million population in 2010, but with a wide country range of 8–4775 cycles/million population. ICSI remained constant at around 66% of non-donor aspiration cycles. The IVF/ICSI combined delivery rate (DR) per fresh aspiration was 19.8% in 2008; 19.7% in 2009 and 20.0% in 2010, with corresponding DRs for FET of 18.8, 19.7 and 20.7%. In fresh non-donor cycles, single embryo transfer increased from 25.7% in 2008 to 30.0% in 2010, while the average number of embryos transferred fell from 2.1 to 1.9, again with wide regional variation. The rates of twin deliveries following fresh non-donor transfers were, in 2008, 2009 and 2010, 21.8, 20.5 and 20.4%, respectively, with a corresponding triplet rate of 1.3, 1.0 and 1.1%. Fresh IVF and ICSI carried a perinatal mortality rate per 1000 births of 22.8 (2008), 19.2 (2009) and 21.0 (2010), compared with 15.1, 12.8 and 14.6/1000 births following FET in the same periods of observation. The proportion of women aged 40 years or older undergoing non-donor ART increased from 20.8 to 23.2% from 2008 to 2010.