

# THE EFFECTS OF REGULAR QC ON EMBRYO TRANSFER RATES PER MD: A 10 YEAR EXPERIENCE

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## STUDY QUESTION

At our clinic analysis of pregnancy rate per MD is analysed tri-annually and deviations from the average are assessed. Any MD below 10% from the average is retrained. This study assesses if there is any evidence that the continual QC process causes range between MD results to narrow over time.

## SUMMARY ANSWER

There is a clear pattern towards a narrowing in the range of results for the original partners in the clinic but as new partners have joined it takes some time for them to align with the other partners. Fellows demonstrate stable results over their 2 year fellowship.

## WHAT IS KNOWN ALREADY

Previous studies have shown differing results in terms of the impact of the physician on the pregnancy rate (van Weering 2005, Hearn-Stokes 2000, Desparoir 2011) however these studies analysed the direct impact of the MD on the pregnancy rate not the ability to narrow the range of pregnancy rates between physicians or the impact of adding new partners with different previous experience to the team.

## STUDY DESIGN, SIZE, DURATION

A retrospective data analysis was conducted for 12649 embryo transfers (ET) between 2004 and 2014. The progress of the original 5 MD partners was analysed along with the changes as 7 new MD partners joined the practise between 2006 and 2010. Furthermore the results of REI fellows was analysed independently.

## PARTICIPANTS / MATERIALS, SETTING, METHODS

The range of pregnancy rates per year for the five original MD was analysed. Additionally 7 MD joined the team; one in 2006, 2007, 2008, 2009 and three in 2010. One was an experienced ET practitioner, one had very little experience and the other five joined from their fellowship.

## MAIN RESULTS AND THE ROLE OF CHANCE

The results demonstrate a reduction in the range between the highest and lowest performing original MD for the study period (17, 17, 32, 22, 11, 14, 13, 10, 12, 7, 10) however when the 7 additional MD are added to the analysis the narrowing between practitioners demonstrates more of a plateau suggesting that there is a time element required to reduce the differences.

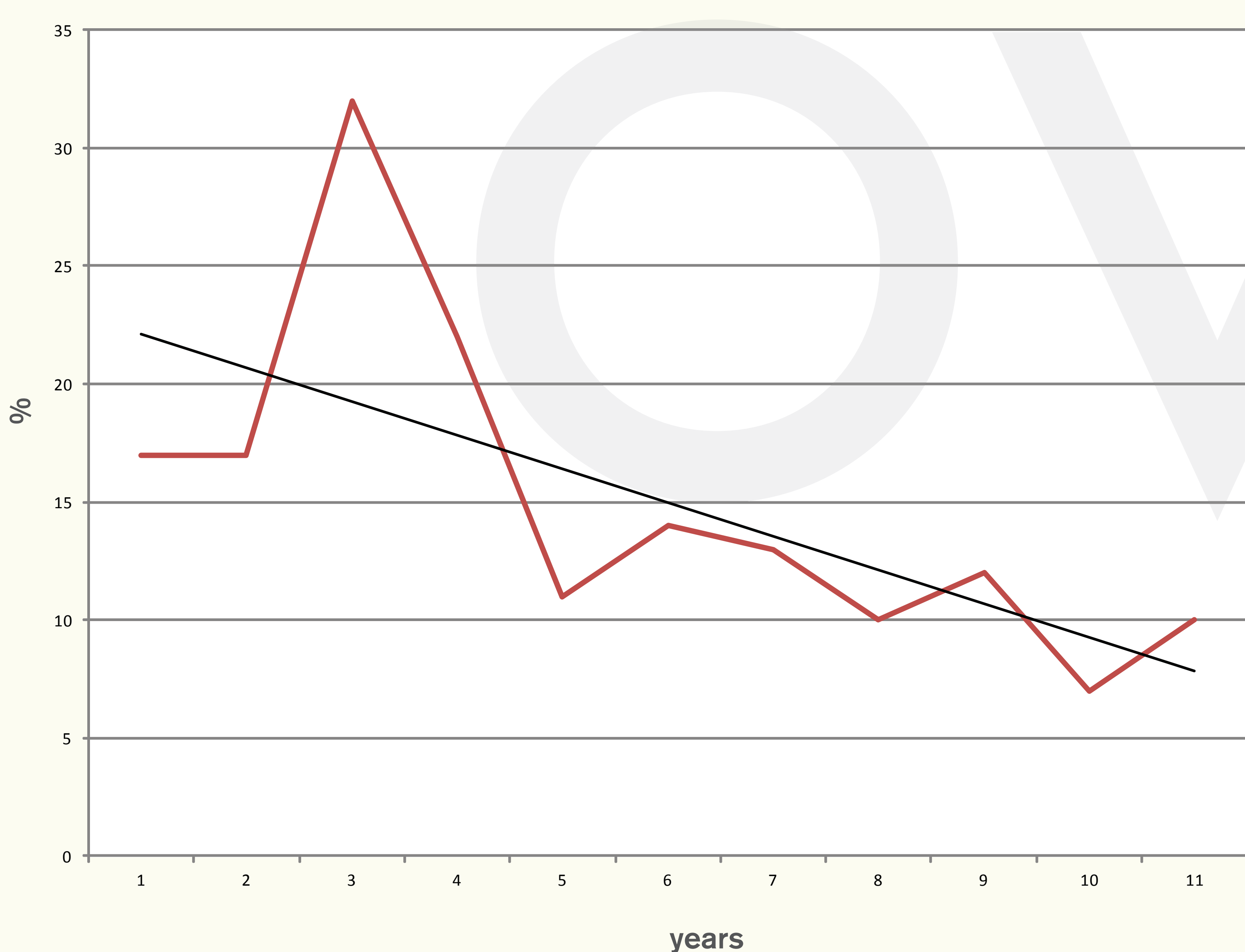
Of special interest is the impact in 2010 of a law change in Quebec forcing the use of eSET: the new, less experienced MD had more difficulty adapting this change and their range increased from 13 (2009) to 25 (2010) returning to 12 (2011), where as the more experienced original MD showed no impact on their range of difference (14, 13, 10).

### DIFFERENCE IN RANGE

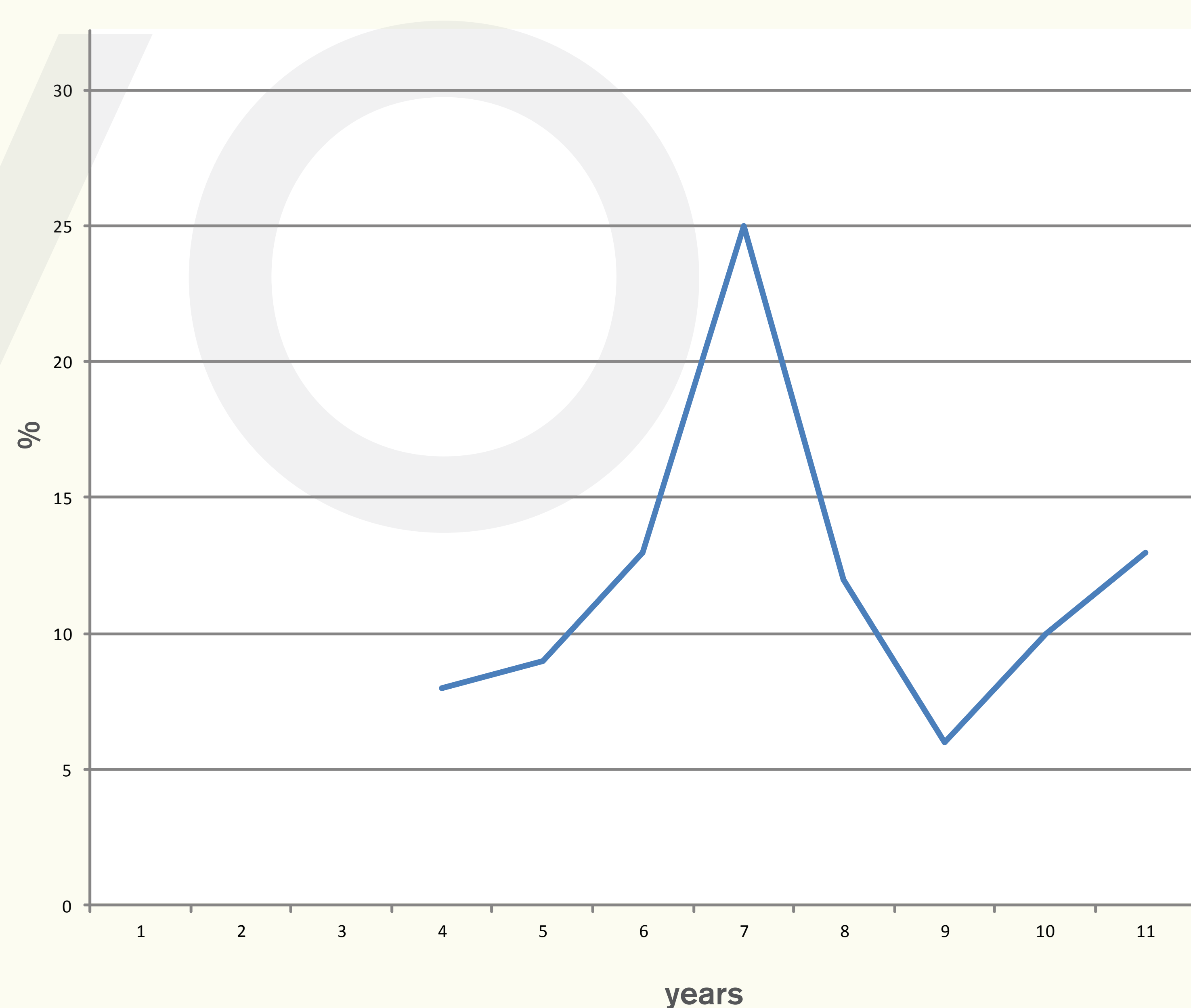
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
5 MD	17	17	32	22	11	14	13	10	12	7	10
7 NEW				8	9	13	25	12	6	10	13

### RANGE DIFFERENTIAL BETWEEN THE HIGHEST AND LOWEST PREGNANCY RATE PER MD

5 MD



7 NEW



## LIMITATIONS, REASONS FOR CAUTION

These data involve 12649 cycles over a ten year period and appear to demonstrate that regular QC can reduce the range in PR between MD however to confirm this it would be necessary to continue analysis and assess how long the additional MD take to reduce their range.

## WIDER IMPLICATIONS OF THE FINDINGS

The ET is an important element of the IVF cycle and it is important to ensure that this element is optimised. By performing regular QC of the results by MD at ET and sharing this data with the entire medical team permits members to optimise their technique and maximise the potential for each cycle. This requires an open-minded non-judgemental mindset from all members of the medical team.

## STUDY FUNDING / COMPETING INTEREST(S)

No funding was obtained for this study and there is no conflict of interest for any of the authors

## TRIAL REGISTRATION NUMBER

No trial registration number