



P-161 Is enough the staff in your lab?

**C. Olmed. Illueca¹, E. Veiga², E. Ferrer³, M. Fernández⁴, A. Mauri⁵,
L. Sanche. Castro⁶, N. Ortíz⁷**

¹Hospital General Universitario de Valencia, Unidad de Medicina Reproductiva, Valencia, Spain ;

²Complejo Hospitalario Universitario de Santiago de Compostela CHUS. Servicio Gallego de Salud SERGAS. Travesía da Choupana- s/n. 15706 Santiago de

Compostela- España., Laboratorio Central/Unidad de Reproducción Humana Asistida., Santiago de Compostela, ;

³Crea. Centro médico de reproducción asistida., Laboratorio de embriología, Valencia, Spain ;

⁴Clinica Ergo, Laboratorio de embriología, Gijón- Asturias, Spain ;

⁵Procrear, laboratorio de embriología, Reus. Tarragona, Spain ;

⁶Hospital Universitario central de Asturias, Unidad de Reproducción Asistida, Oviedo, Spain ;

⁷Instituto Europeo de Fertilidad, Unidad de Reproducción asistida, Madrid, Spain

Study question: Must be all the activity made in *in vitro* fertilization (IVF) laboratories keep in mind to size its staff?

Summary answer: To create a staff calculator based on number of cycles carry on, assisted reproduction techniques, quality controls, administration management, weekend duties, labour regulations and holidays.

What is known already: In a bibliographic search about staff in human reproduction labs there is no mention about de number of embryologists recommended for every cycle done. Only that it will be according to the workload. Other guidelines establish that every embryologist could assume 150 IVF cycles/year. However, here is a downward tendency in the work that an embryologist can assume. Alikani established a maximum of 100 cycles/year for every embryologist (Alikani *et al*, 2014).

Study design, size, duration: Seven senior embryologists working in different IVF centres, three public and 4 privates, take part lead in this Multicentre study during 2019 and 2020. We made a survey to create a calculator for staff using the mean time spent in every lab by each embryologist of the centre to do any IVF procedure and measured three times each one.

Participants/materials, setting, methods: Different lab procedures and activities related with quality control, time spent to do them, and witnessing were included in the survey. For the calculations it was considered an embryologist with a full-time contract working 1744 hours / year according to current labour agreement in Spain.

The times included in the calculations for each task were those corresponding to the 95th percentile. For the calculation, the program used was Microsoft Office Excel.

Main results and the role of chance: In the IVF laboratory many gametes and embryos from different couples are manipulated daily. The maintenance of traceability could be affected by not having the right staff and lead to dramatic consequences for the patients and the centre.

Workload or overload caused by non-suitable staff number also affects the embryologist having a direct impact on his health.

The results of the survey carried out showed the time needed by embryologist to perform the different procedures necessary for an IVF treatment, being a classic IVF cycle (8.11 hours), also taking into account the time spent in managing documentation, preparing the cycle and databases. An ICSI with Time lapse needs 10.27 hours and an ICSI-PGD cycle 13.91 hours. To all off this, 1.81 hours should be added for every vitrification support needed and the time to control more than 200 critical steps, including equipment control and culture parameters.

The time spent in semen analysis (including managing documentation, cycle preparation and databases) or intrauterine insemination with a partner sperm was 2.7 hours. For donor sperm an additional hour for the management involved is required. The time required to perform and cryopreserve a testicular biopsy and seminal cryopreservation was 4 and 3.7 hours, respectively.

Limitations, reasons for caution: The study was made taking account of Spanish regulations, quality standards and recommendations and should be adapted to the foreigner's regulations. Wider implications of the findings: New advance staff calculator allows laboratories estimate minimum number of embryologist necessary for a particular public or private laboratory without compromise neither security nor success in their results. Nevertheless, we recommended a minimum of two qualified embryologists in every lab, whatever it was the workload.

Trial registration number: none