Abstract

Over last decade, Assisted Reproductive Treatment (ART) has become a very used health service by more and more people around the world because of problems such as the delay in the maternity age, single-parent couples, etc. In this context, health agencies have performed innovations to improve healthcare processes of ARTs, to optimize the performance of health professionals who work in fertilization laboratories and to improve Biological Sample Management (BSM) and sample traceability in ART. However, there are important handicaps in ART processes from the point of view of quality, safety and management. On the one hand, these processes are mainly based on manual execution tasks and manual control tasks. This excess of manual tasks could lead to fatal traceability and safety errors during BSM. On the other hand, ART processes require real, interoperable and traceable communications between different software systems that have to collaborate together (health information systems, biological sample management systems, patient management systems, etc.), but, at present, it is possible to identify some limitations in this domain, that is, the domain of systems of systems (SoS). This paper aims to conduct an exhaustive study was carried out both in the research community and in the commercial field to identify and analyze SoS solutions and theoretical proposals for BSM in ART processes. We have applied the Systematic Literature Review (SLR) methodology to carry out our study and we conclude it is a very young field to identify and analyze SoS solutions and theoretical proposals for BSM in ART. After analyzing the results, this paper presents as future work an initial Model-Driven conceptual solution to improve BSM in ART.

Keywords: Systematic Literature Review, Systems of Systems, Biological Sample Management, Assisted treatment, acupuncture, the last thirty years, acupuncture, and 2017. Our study showed that the acupuncture...
Eleven systematic reviews were included and published between 2009 and 2017. Our study showed that the acupuncture treatment seems to be a useful tool to improve the clinical pregnancy rate in patients who undergo assisted reproduction therapy. The increased use of acupuncture in the management of infertility has been reflected in the expansion of the number of clinical trials and systematic reviews (SRs) studying this type of treatment, but its effectiveness has remained controversial. Some studies showed that acupuncture was significant in improving ART outcomes [7]. The specific rationales were displayed as follows. Domain 7. Was the scientific quality of the included studies assessed and documented? Integrated management systems (IMSs) involve a strategy to manage multiple systems while meeting the needs and expectations of stakeholders. There are various management standards used for the development of IMS. This study aims to more. To fill this gap in the literature, we have developed a systematic framework to prioritize barriers. We first identify and classify barriers using a literature review and modified Delphi method providing twenty-six barriers categorized under six main categories. These included Resources and Management, People, Implementation, Economic, Social & Legal and Cultural. Next, we used Analytical Hierarchical Process (AHP) to calculate weights and rankings of barriers and sub-barriers. The impact and management of thin endometrium is a common challenge for patients undergoing assisted reproduction. The objective of this Canadian Fertility and Andrology Society (CFAS) guideline is to provide evidence-based recommendations using the GRADE (Grading of Recommendations, Assessment, Development, and Evaluation) system. Management of thin endometrium in assisted reproduction: a clinical practice guideline from the Canadian Fertility and Andrology Society. Reprod Biomed Online. 2019 Jul;39(1):49-62. doi: 10.1016/j.rbmo.2019.02.013. The aim of this systematic review was to evaluate the controversial association between thrombophilia and failures of assisted reproduction technology (ART). A systematic search of the literature for studies reporting on thrombophilia in women undergoing ART up to April 2011 yielded 33 studies (23 evaluating anti-phospholipid antibodies, 5 inherited thrombophilia, and 5 both) involving 6092 patients. Overall, the methodologic quality of the studies was poor. Combined results from case-control studies showed that factor V Leiden was significantly more prevalent among women with ART.