

## Detection and Management of Thyroid Dysfunction During Pregnancy for Improving Maternal and Offspring Outcomes



Pictured above are the following: Dulce Maria Calderon Vicente, Jose Maria Pastor Cañada, Angel Perez Sola, Sandra Serrano Martinez, Enrique Prada De Medio

Imagine, you or your partner are excitedly expecting a new member of the family, a beautiful baby. As with any pregnancy, there are many tests, scans and doctor's appointments to ensure the health of the mother and baby. One such test is thyroid function testing. Now imagine the concern, follow-up and potential adverse outcomes should the test result be abnormal. This is one of the many examples whereby ensuring appropriate reference ranges are crucial for optimal patient care and experiences.

One exemplary integrated clinical care team from the Hospital Virgen de la Luz in Spain recognized an opportunity within their institution to optimize thyroid function testing in pregnant women by developing and implementing new outcome-based reference ranges for thyroid stimulating hormone (TSH). With involvement across disciplines, including the clinical laboratory, gynecology and endocrinology this team

successfully implemented new TSH reference ranges into clinical practice with impressive and significant outcomes for mothers and babies.

Importantly, 12.8% of pregnant women had their thyroid status more accurately classified. Specifically, 9.2% of expecting mothers were more accurately classified as euthyroid, when previously, using the former reference range, would have been classified as hyperthyroid. Consequently, each of these patients had more streamlined care, as these mothers no longer required unnecessary follow-up visits with the endocrinology department.

For every avoided visit to the specialist, 176 € are saved, leading to total annual mitigated costs in the first year at this institution of 12.849 €. Similarly, 3.6% of women avoided a false diagnosis of hypothyroidism, facilitating similar clinical and financial benefits for not being diagnosed as hypothyroid.

Beyond the clinical benefits and cost savings, there are important benefits for the experience of the mothers. For any expecting parent, being told that they might have a thyroid challenge when they are euthyroid, creates unnecessary maternal anxiety and potential harm. Thus, mitigating those risks and the hassle of further follow-up appointments maximizes their overall experience and positively impacts care.

For their valued outcomes through strategic application of new reference ranges, this integrated clinical care team from Hospital Virgen de la Luz was recently recognized by the UNIVANTS of Healthcare Excellence award program, recognition of achievement. Congratulations to Enrique Prada De Medio, *Head of Clinical Analysis Services at Hospital Virgen de la Luz*, Vanessa Martinez Madrid, *Faculty of Clinical Analysis Services at Hospital Virgen de la Luz*, Sandra Serrano Martinez, *Faculty of Clinical Analysis Services at Hospital Virgen de la Luz*, Andres Moya Plaza, *Head of Gynecology and Obstetrics at Hospital Virgen de la Luz*, Dulce Maria Calderon Vicente, *Head of Endocrinology at Hospital Virgen de la Luz*.

To learn more about this integrated clinical care team and others visit [www.univantshce.com](http://www.univantshce.com).

### **THREE KEY TAKEAWAYS**

1. Thyroid dysfunction during pregnancy (both hyper- and hypothyroidism) can be associated with an increased risk of adverse outcomes for mothers and offspring.
2. For optimized assessment of thyroid dysfunction, method of measurement and regional factors (such as iodine intake) should be considered.
3. Integrating with stakeholders within and outside of the clinical laboratory to implement new references is a significant success factor for ensuring improved outcomes.