

# PRENATAL NUTRITIONAL SUPPLEMENT SOLUTION

The United States spends \$4.3 trillion dollars (18.3% of GDP) on healthcare. Despite these figures, the rates of maternal mortality and morbidity classify the United States as the most dangerous country in the developing world in which to give birth (ranking 55th behind Russia, Rwanda, Mexico and the Dominican Republic). Every year, approximately 860 women die from pregnancy-related causes, and more than 50,000 suffer severe maternal morbidity (e.g. pre-eclampsia and hypertension).

Preterm (11% of live births in the US) and low weight births carry a heavy burden. One million children die each year from preterm birth complications, and among those who survive, many face chronic healthcare problems (visual and hearing deficits, pediatric cancer, asthma, diabetes, celiac disease, autism and learning delays). The medical and treatment costs for these preterm births exceeds \$500B annually.

A growing body of scientific research correlates the absence of adequate prenatal nutritional supplementation with increased risk of maternal morbidity and mortality, as well as preterm and low weight birth.

## MANAGING PRENATAL NUTRITIONAL SUPPLEMENTS

Emerging healthcare protocols, when coupled with technology, provide an opportunity to support these vulnerable populations. The Federation of International Gynecologists and Obstetricians Nutrition Checklist, for example, provides a validated tool that identifies key micronutrients (folic acid, vitamin D, and iron) that have been shown to positively affect both maternal and infant health outcomes. In theory, expectant mothers would “simply” take a multivitamin containing these ingredients; adoption and adherence to prenatal vitamins, however, has proven difficult, particularly in populations facing health disparities (e.g. rural, minority and economically disadvantaged).

By incorporating Curadite’s intelligent, IoT-enabled medication management platform, women receive state-of-the-art adherence support. Curadite’s solution deploys prenatal vitamins in an intelligent package, which incorporates cloud-based alerts and a targeted messaging system. As patients access their vitamins, the healthcare teams are able to track and manage adherence activities. By utilizing specific data points, the system can be customized to send messages (e.g. reminders, encouragement, endorsement and education--see diagram below).

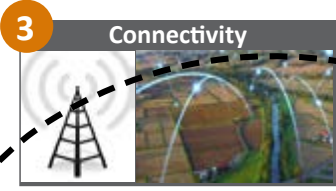
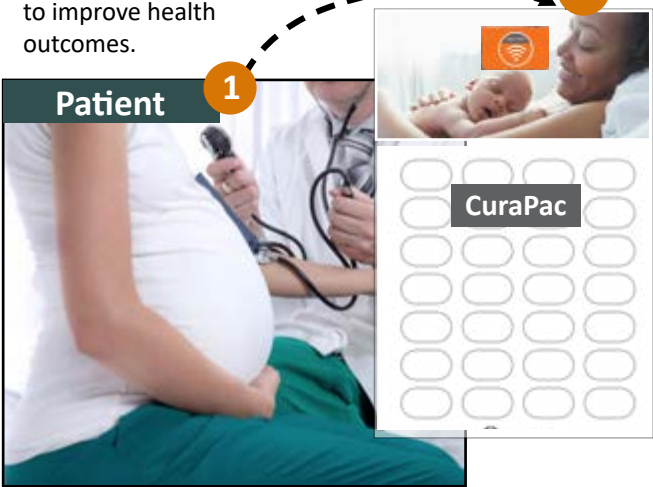
**Step 1:** Care team establishes pregnancy benchmarks for the expectant mother

**Step 2:** Mother receives 14 or 28-day CuraPac, which contains pre-packaged nutritional supplements

**Step 3:** Daily utilization data is forwarded to the cloud

**Step 4:** Care team reviews progress and makes any adjustments to the mother’s regimen

**Step 5:** Mother receives updates, education, encouragement and incentives to improve health outcomes.



## Prenatal Nutritional Supplement Solution



IoT-enabled platform to help women manage perinatal nutritional health

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Founded 2016, C-Corporation

### Pregnancy Healthcare Statistics

Every year, an estimated 15 million babies are born preterm (before 37 completed weeks of gestation), and the number continues to rise.

Preterm birth complications are the leading cause of death among children under 5 years of age, responsible for approximately 1 million deaths.

Three-quarters of these deaths likely could be prevented with current, cost-effective interventions.

“(The) combined infant and maternity medical costs for an infant with a diagnosis of prematurity/low-birth-weight were four times as high (\$49,140) as those for an uncomplicated newborn (\$13,024).”

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