project baby bear

Precision Medicine to Save Lives and Resources

"I have never seen a diagnostic tool that's made such huge impact in intensive care medicine in all my years of practice."

—Mario Rojas, MD
NICU Medical Director
Valley Children's Hospital

In five California children's hospitals, Project Baby Bear performed rapid whole genome sequencing (rWGS) to save babies lives and healthcare costs. Led by Rady Children's Hospital-San Diego, the program aided babies in intensive care who are covered by Medi-Cal.

Genome sequencing searched for the underlying cause of rare genetic disease, providing invaluable information to the medical team. Of the 116 infants sequenced, 43% received a rapid diagnosis, allowing for precise and specific treatment in 35% of cases.

Babies in Project Baby Bear have avoided more than 225 hospital days, numerous invasive procedures and many diagnostic tests because of rWGS. The program offers evidence of the medical and economic benefits of rWGS, the most advanced, comprehensive diagnostic method available.

PILOT SITES	# OF CASES	# OF DIAGNOSIS	DAYS TO RESULTS*
CHILDREN'S HOSPITAL ORANGE COUNTY (CHOC)	14	7	2.5
RADY CHILDREN'S HOSPITAL–SAN DIEGO	32	10	2
UC DAVIS CHILDREN'S HOSPITAL (SACRAMENTO)	27	11	2
UCSF BENIOFF CHILDREN'S HOSPITAL, OAKLAND	16	7	3
VALLEY CHILDREN'S HOSPITAL (MADERA)	27	15	3
TOTAL PROJECT BABY BEAR CASES *(As of Aug. 31, 2019)*	116	50	3

**MEDIAN TURNAROUND TIME TO DELIVERY OF PROVISIONAL RESULTS (DAYS)*

Valley Children's Hospital Case

- A 2.5-month-old baby boy with unexplained seizures, failure to thrive and digestive issues
- A rare connective tissue disorder was revealed through genomic sequencing
- Rady Children's Institute for Genomic Medicine returned results within 3 days
- Although there is no cure, doctors used the diagnosis to guide the baby's care including performing two procedures to aid with nutrition and food digestion
- Parents reported feeling empowered by the diagnosis to make informed decisions about their son's treatment

CHOC Children's Case

- Newborn baby girl arrived with life-threatening irregular heartbeat
- In 2 days, she received an ultra-rapid diagnosis of Timothy Syndrome
- The baby was at high-risk of sudden death given her very rare and very lethal cardiac condition
- Based on the genomic results, doctors changed her medication and implanted a pacemaker
- The change in treatment restored her heartbeat to normal. She is growing and thriving