Pediatric Congenital Heart Disease (CHD) Sector Deep Dive & Market Landscape Mapping

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Osprey Intel LLC

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Study Overview

- **Topic**: Pediatric Congenital Heart Disease
- **Scenario**: VC or large multinational considering opportunities to develop (or fund) technologies to treat CHD in pediatric patients
- **Analysis**: Landscape of various types of CHD in pediatrics (different diseases, # patients), current standard of care for each type of CHD, technologies in development to treat each type of disease

Analytical Structure for Sector Deep Dives and Market Landscape Mapping

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EACH SECTOR ANALYSIS FOLLOWS A STANDARDIZED, INSIGHT-ORIENTED APPROACH:

1. Market Sizing & Forecasts
    - Define TAM/SAM/SOM: TAM = global pediatric CHD incidence & lifetime interventions; SAM = device-treatable cases in US/EU/Israel; SOM = subsegments (e.g., valves, occluders, stents, shunts, monitoring)
    - Growth & Pricing: 5–10 yr CAGR by device class (e.g., surgical vs. transcatheter), pediatric ASPs vs. adult adaptations; regional penetration vs. specialist center density.
    - Triangulation: Cross-source market sizing using BCC Research, IBISWorld, Technavio with epidemiology baselines (CDC/WHO/NIH).
2. Technology & IP Landscape
    - Breakthroughs: Growth-accommodating valves/conduits, bioresorbable stents/patches, tissue-engineered grafts, miniaturized catheter systems, patient-specific 3D tools.
    - R&D clusters: Leading pediatric cardiac innovation hubs and consortia; diffusion via publication networks.
    - Sources: ScienceDirect, Scopus, Web of Science; patent scan (USPTO/EPO/WIPO) to assess novelty/FTO.
3. Competitive Landscape
    - Segment 10–20 companies into direct pediatric players, adult-to-pediatric adapters, and emerging startups (incl. remote monitoring).
    - Comparatives: 2×2s (Innovation vs. Clinical Validation; Growth-Accommodation vs. Re-intervention Burden), feature matrices, and top-10 SWOTs.

- Sources: PitchBook, Orbis, PrivCo, D&B Hoovers, verified against FDA PMA/HDE/510(k) and CE status.

4. Investor & Deal Activity

- Investor map: Active VCs/strategics in pediatric & structural heart; stage focus, check sizes, co-investor proximity.
- Deal benchmarks: Recent rounds, valuation ranges, exit multiples and timelines tied to evidence milestones.
- Sources: PitchBook, Preqin, Refinitiv, WSJ Pro VC/PE.

5. Regulatory & Policy Context

- US: FDA HDE/HUD, PMA/510(k) pathways; Pediatric Device Consortia; payer-relevant endpoints.
- EU/Israel: MDR pediatric provisions, CE processes, registries/ethics frameworks affecting trial design and access.
- Sources: EIU Viewpoint, World Factbook, IMF IFS for country context and capacity.

6. Strategic Positioning & White Space

- Gaps: Growth-capable implants to reduce re-operations; miniaturized transcatheter solutions for smaller infants; longitudinal remote monitoring tailored to CHD pathways.
- Broadview angles: Lead/co-lead where re-intervention burden is high and evidence plans align with reimbursement; syndicate with cardio-device specialists.
- Sources: McKinsey Quarterly, HBR, ImpactAlpha + analyst synthesis to frame value-creation theses.

PEDIATRIC CONGENITAL HEART DISEASE (CHD

1. **Market Sizing & Forecasts**
    - BCC Research; IBISWorld; Technavio; MarketLine Advantage (supplement with CDC/WHO/NIH for epidemiology)
    - **Notes:** Build TAM/SAM/SOM from incidence × intervention rates × device ASPs; split by device class (surgical vs. transcatheter) and region (US/EU/Israel); triangulate across market reports per Osprey method
2. **Technology/Patent Landscape**
    - Sources: ScienceDirect; Scopus; Web of Science; **PubMed**; **ClinicalTrials.gov**; USPTO/EPO/WIPO.
    - Notes: Track breakthroughs (growth-accommodating valves, bioresorbables, tissue-engineered grafts, miniaturized cath systems); map innovation vectors and active trials; assess novelty and FTOs.
3. **Company Financials / Business Models**
    - Sources: SEC.gov, PitchBook; Orbis; PrivCo; S&P Capital IQ; D&B Hoovers
    - Notes: Indication fit, regulatory stage, revenue model, runway/M&A history
4. **VC & PE Investment Trends**
    - Sources: PitchBook, Preqin, WSJ Pro VC/PE
    - Notes: Map active investors in pediatric/structural heart, track round sizes/valuations and syndicates; extract exit analogs to calibrate device value-creation timelines.
5. **Regulatory & Pediatric Pathways**
    - Sources: FDA (PMA/510(k)/HDE databases), EMA/EUDAMED; Pediatric Device Consortia; EIU Viewpoint; World Factbook; IMF IFS
    - Notes: Document pediatric routes (HDE/HUD), MDR pediatric provisions, labeling requirements, and reimbursement context
6. **News, PR & Thought Leadership**
    - Sources: FT.com, WSJ.com, McKinsey Quarterly, Bloomberg.com, Factiva
    - Notes: Review trial readouts, regulatory shifts, and strategic moves; harvest quotes/data points for exec summaries and “why now” framing

DATA STRATEGY OVERVIEW:

- To ensure robust and defensible market sizing, we triangulate estimates using IBISWorld, Technavio, and BCC Research, all of which are fully supported within the Osprey data ecosystem.
- For technical and patent trend analysis in both desalination and biomaterials, ScienceDirect and Web of Science provide comprehensive access to peer-reviewed research and citation networks.
- When benchmarking exit multiples and evaluating potential investment outcomes, PitchBook and Preqin offer the most reliable and granular data on private market transactions.
- For tracking regulatory shifts and sustainability-oriented capital flows, EIU Viewpoint, the Financial Times, and WSJ Pro VC/PE deliver highly relevant policy and investor intelligence.

PRELIMINARY FORMAT OPTIONS & PROPOSAL FOR DELIVERABLE ALIGNMENT

Proposal: For this engagement, we recommend starting with a blended format for the Pediatric Congenital Heart Disease (CHD) Sector Deep Dive & Market Landscape Mapping, then revisiting the other two case potential projects (Vulnerable Plaque in Coronary Arteries and Robotic Technologies to Address Ischemic Stroke) based on Broadview Ventures' preferences in structure, tone, and decision utility.

Deliverables:

1. **Executive Brief (2–3 pages)**
    - Content: Opportunity Landscape of various types of CHD in pediatrics (different diseases, # patients), current standard of care for each type of CHD, technologies in development to treat each type of disease
2. **Core Deck (15–25 pages)**
    - Content: Osprey Sector Deep Dive & Market Landscape Mapping standard report (Market sizing, competitive map, investor/exit benchmarks, platform-fit commentary)