



The Premier Cardiovascular Information System

OVERVIEW

REALIZE THE FULL POTENTIAL OF YOUR DATA

Excelling in registry compliance and performance analysis, heartbase provides a proven Cardiovascular Information System essential to hospitals and physicians committed to advancing patient care and outcomes. heartbase is the vendor of choice to fully integrate all clinical and service line data associated with the American College of Cardiology, The Society of Thoracic Surgeons, The Joint Commission/Center for Medicare and Medicaid Core Measures, Get With The Guidelines, federal, state, regional and insurance regulatory agencies.

heartbase offers clinical outcomes data management and analysis solutions integral to expediting registry reporting, tracking patient information from admit to discharge, evaluating medical practices, managing operating costs and producing quantifiable data for benchmarking and research. Merging superior personalized customer service, customized data management and value-added reporting, heartbase enables facilities to address critical quality of care and performance improvement issues.

RESULTS

- Straight-forward registry compliance
- "Owned" Clinical Data
 - Consistent, Accurate, Evidence Based Data
- Up-to-date patient records without redundant data collection
- Optimize workflow for process efficiency
 - Customized screens, schemas and reports
- Decrease Reliance on IT for routine tasks
- Control cost/Generate revenue
 - Reduce FTE expense and Maximize reimbursements
- Analyze clinical data effectively and efficiently
 - Benchmark: Point of Care, MD, Site, Network Levels
 - Monitor and Report performance and quality indicators
 - Implement best practice initiatives
 - Support clinical trials and research
- Maximize interoperability between disparate hospital systems
- Promote interdepartmental collaboration
- Demonstrate Meaningful Use
- Achieve National Recognition—Center of Excellence Distinctions

DISTINGUISHING HEARTBASE FEATURES

- Integrated single database repository
- Similar data points auto-populated across all registries
 - Eliminate redundant and inaccurate data
- Simplified data entry and retrieval
- Time saving validation tools
- Expandable service line model
- Standard and customized reporting
- Auto-Backup
- Interface Interoperability
- Superior customer support and training

HEARTBASE - AT THE FOREFRONT

Exceeding national registry standards, heartbase modules incorporate stringent HIPAA and Leapfrog standards and are accredited by the following registries:

- The American College of Cardiology
- The Society of Thoracic Surgeons
- The Joint Commission/CMS—Core Measures
- Get With The Guidelines—Pending
- State regulatory agencies

Introduced in 1992, heartbase™ continues to be at the forefront of data management and data base design. Installed nationwide in more than 100 prestigious institutions, heartbase™ actively collaborates with clients and members of the healthcare community in delivering a state of the art CVIS solution.

HEARTBASE - NATIONAL LEVEL

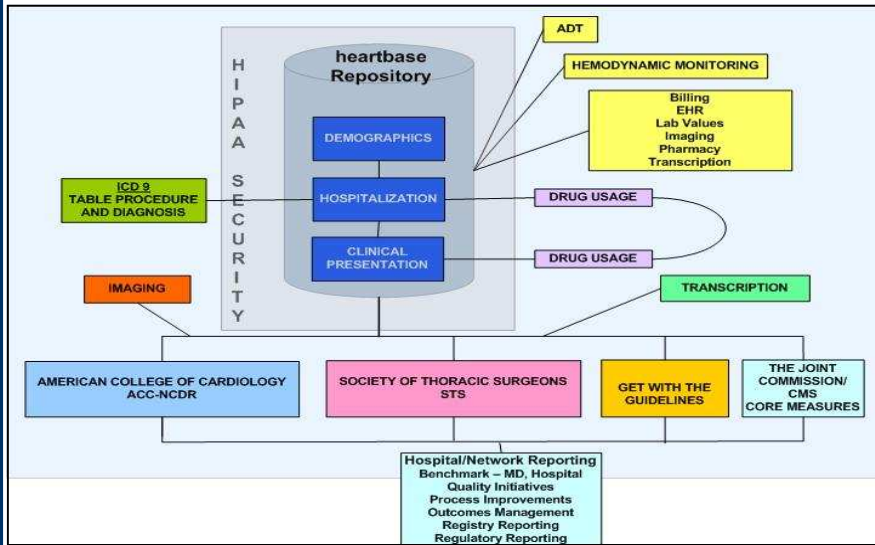
Nick Gawrit, President, is serving on the following national clinical and technological standards committees:

- Certification Commission for Health Information Technology (CCHIT®) - Cardiovascular Medicine Work Group
- Integrating Healthcare Enterprise (IHE) - IT Infrastructure Planning and Technical Committee and the Cardiology Planning and Technical Committee

"Wish you could have seen the looks in the room. Astonished that we have such a product (heartbase) with such previously unrealized potential! Our current Admin is truly the best we have had for understanding efficiency and the global aspects of our system. We have spent way too long isolating each entity around its own needs." Director Innovations & Research

CLIENT RECOGNITION—CENTER OF EXCELLENCE AWARDS

- Forbes – America's Safest Hospitals
- Healthcare Accreditation Colloquium's Heart Failure Institute
- Healthcare IT News – "100 Most Wired Hospitals and Health Systems"
- HealthGrades "Distinguished Hospitals for Clinical Excellence"
- The Blue Cross Blue Shield "Distinction Center for Cardiac Care"
- The Joint Commission Gold Seal
- The Thompson 100 Top Hospitals - Cardiovascular Benchmarks for Success
- The Thomson Reuters 100 Top Hospitals (R): National Benchmarks Study
 - Teaching
 - Large, Middle, Small Community Hospitals
- US News and World Report – America's Best Hospitals



DATA MODEL

- INTEGRATED
- INTUITIVE NAVIGATION
- PATIENT CENTRIC
- PROCEDURE DRIVEN
- OUTCOME ORIENTED
- EXPANDABLE
- CUSTOMIZABLE

COMPREHENSIVE REPORTING

Delivering powerful analytics and fully utilizing site owned, clinical, evidence based data, heartbase™ provides result-oriented reporting that addresses national registry submissions, process improvement initiatives, long and short term planning and clinical research. Offering a comprehensive range of standard and custom reporting options, standard reports include lists, summaries, registry retrievals, benchmarks, dashboards, MD Report cards and targeted reporting on complications, LOS, medications and mortality. Drilling down data for specific inquiries, the Query Tool enables the user to create customized reports, saving report syntaxes in the user library and re-running for periodic analysis. Utilizing **IBM-SPSS®**-a premier statistical package for report generation and customized report writing, reports may also be displayed in multiple output formats such as IBM-SPSS®, SAS™, MiniTab,™ and Microsoft Excel™.

"The heartbase staff has extensive expertise in customizing interface mapping protocols which maximize system-wide interoperability and produce significant results in collecting required and non-required registry data from hemodynamic monitoring and ADT systems. Delivering powerful analytics in a user friendly, adaptable format, heartbase™ provides a comprehensive suite of standard and customized reporting incorporating this extrapolated data."

CV Data Administrator

PATIENT CENTRIC/PROCEDURE ORIENTED

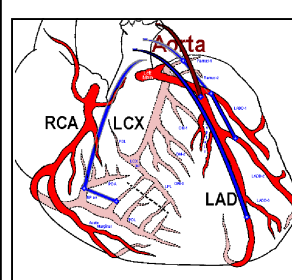
A relational database, heartbase™ fuses all patient clinical data, registries and modules into a central database. Patient baseline information is entered once, creating a patient folder which adapts through registry version updates, additional hospitalizations and procedural encounters. Offering pure integration, heartbase™ shares current and historical patient data throughout all registries, ensuring that patient data is up-to-date and accurate in contrast with other vendors which copy and merge non-integrated information which limits the use of longitudinal data.

In addition to versatile data collection tools offered by heartbase™, such as scanning and PC Tablets, data interchange may be further streamlined with the inclusion of Admission/Discharge/Transfer (ADT), hemodynamic monitoring, EHR/EMR, lab, financial, medication, inventory and imaging system interfaces. Specializing in custom protocol design, ADT and hemodynamic interfaces may yield approximately 75% of the data required to participate in the ACC-Cath/PCI Registry. In addition to the 7000+ fields in the database, schema and screens may be further customized with the addition of site specific fields to reflect workflow and research projects. Accurate and simplified audits and harvests are submitted with the aid of hb Data View and Pass/Fail reporting tools which provide immediate verification and directly link the user to correct missing information.

SUPERIOR CUSTOMER SERVICE

heartbase is relationship driven and prides itself on its comprehensive and personalized support program. "Routine" technical support, version upgrades, maintenance and training in database operation and standard report writing are included with purchase. Nightly autobackup software performs the Verify/Upload/Delete/Reload function, replacing DBA tasks and reducing IS support. WebEx and Citrix/VPN connections allow heartbase technicians to access a client's workstation and server to troubleshoot, conduct on-line training and apply upgrades, screen and schema customization, and interfaces and patches.

SURGICAL OP-NOTES



Op Notes combine STS Adult Cardiac Surgery data with a site/physician customized narrative and heart diagram to create a new generation of automated operative notes while streamlining the process of physician dictation and data collection for open heart procedures.

heartbase Modules

American College of Cardiology—ACC—NCDR™

ACC-NCDR-Cath PCI Registry™ - heartbase Cath Diagnostic and PCI System v4.3 certified - Pending 4.4 Specs - 2010

ACC-NCDR-ICD Registry™ - heartbase Implantable Cardioverter Defibrillator Module v1.08— Recertification in progress

ACC-NCDR-CARE Registry™ v1.09

ACC-NCDR-ACTION-GWTG Registry™ (In Certification Process)

Society of Thoracic Surgeons™

STS-Adult Cardiac Surgery Database - heartbase Open Heart Surgery System - v2.61

STS-General Thoracic Surgery Database - heartbase Thoracic Surgery Module v2.081

STS-Congenital Surgery Database - heartbase Congenital Pediatric Surgery Module v3.0

The Joint Commission—TJC—Core Measures™

Acute Myocardial Infarction(MI)

Pneumonia(PNE)

Children's Asthma Care (CAC)

Heart Failure /Clinical Hospitalization(HF)

Pregnancy(PR) - Perinatal Care 2010

Surgical Care Improvement Program(SCIP/SIP)

Hospital Outpatient Department Quality Measures

Venous Thromboembolism (VTE)

Stroke (STK)

Get With The Guidelines™

heartbase Coronary Artery Disease (GWTG CAD) Module—Incorporated into ACC-NCDR ACTION-GWTG

heartbase Heart Failure—(GWTG HF) Module—Pending Certification

heartbase Stroke (GWTG Stroke) Module—Pending Certification

Additional Modules

Acute Drug Reaction	Medication Errors
Clinical Follow-Up	Non-Invasive Testing
Electrophysiology	Surgical Op-Notes—Customized Narrative Reporting
Heart Transplant	Vascular Procedures
Advanced HIPAA Security	State Specific Registries
Inventory System	Portable Prognostic Risk Scoring Tool
Lab System	

"heartbase service is outstanding and it is clear you strive to meet the needs of your customers! I would rate your consultant work as exceptional!!!! Your background and understanding of clinical relevance is beyond that of the competitors. Many thanks for the fantastic support team in getting our issue or concerns dealt with in such a prompt manner!" *Performance Excellence Department*

Interfaces*-Automate and Autopopulate

Hemodynamic Monitoring Systems	Camtronics (Quinton) - Amicas (formerly Emageon) GE-MacLab (Marquette/CardioDynamics) Mennon Medical McKesson Philips -Witt-Biomedical Siemens
Admission/Discharge/ Transfer ADT Systems	Cerner Meditech McKesson (HBOC) Phillips Siemens
Lab Systems	Cardio Lab
Financial Systems	Lawson McKesson Siemens TSI
Imaging	ScImage
Transcription Systems	3M—Soft Med
Quality/Performance Reporting to Outside Agencies	
Pharmacy	
Patient Satisfaction	

Additional Services

Screen, Schema and Field Customization
Workflow Consulting
Project Management
Advanced Training and Report Writing
Research and Project Design
Quality Initiative Consulting
Data Conversion
User Group Conferences

Versatile Data Capture

Traditional Keyed Forms
Scanning
Point of Service—In Lab
Internet
Tablet PC
Laptop—Wireless
Interface

Minimum System Requirements

* HL7 and XML File Format

	Single-User Environment: Workstation only, No Server		Multi-User Environment: Server *		Multi-User Environment: Workstation	
	Minimum	Recommended	Minimum	Recommended	Minimum	Recommended
Operating System	Windows 2000 (Service Pack 2+), XP, Vista, Windows 7	Windows XP	Windows 2000 (Service Pack 2+), or 2003	Windows 2003	Windows 2000 (Service Pack 2+), XP, Vista or Windows 7	Windows XP
Hard Disk Space	40 GB	80 GB	50 GB**	100 GB	1 GB	10 GB
RAM	512 MB (Windows 2000 or XP), 1GB (Vista or Windows 7)	1 GB (Windows 2000 or XP), 2 GB (Vista or Windows 7)	512 MB	1 GB	512 MB (Windows 2000 or XP), 1 GB (Vista or Windows 7)	1 GB (Windows 2000 or XP), 2 GB (Vista or Windows 7)
Network	Not Applicable	Not Applicable	100 Mbps TCP/IP Ethernet connection	1 Gbps TCP/IP Ethernet connection	100 Mbps TCP/IP Ethernet connection	1 Gbps TCP/IP Ethernet connection
Screen Resolution	800 x 600 or higher	1024 x 768 or higher	800 x 600 or higher	1024 x 768 or higher	800 x 600 or higher	1024 x 768 or higher

Citrix, VPN or other site-provided remote connection for heartbase to access clients server

* VMware virtual servers supported

**heartbase can be run with less disk space - recommend environment where disks can be resized if necessary (such as a virtual server)

"Strengths of HB...easy/rapid/cost-effective customization, great customer service, fluid and friendly reporting (not stuck with only canned reports), company's dedication and specialization with this product (it's not just another adjunctive service that gets lost in the magnitude of the overall corporation), interfacing ease, relationships with Optiform and IBM-SPSS (the latter which allows you to truly harness and mine the wealth of data that you are collecting)."

MPH, Manager of Data and Quality Assurance Program

THE HEARTBASE MISSION

heartbase is committed to improving patient care, safety and outcomes by providing a fully integrated patient centric cardiovascular information system which specializes in cardiac clinical outcome data collection, warehousing, analysis and interface connectivity.

Please contact heartbase to schedule a product demo or to receive additional information.

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