UK HealthCare

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Network

CONNECTING THE HEART OF KENTUCKY:

STRENGTHENING CARE AND ADVANCING KENTUCKY THROUGH COLLABORATION AND PARTNERSHIPS

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November 10, 2026

Connecting the Heart of Kentucky

FACULTY DISCLOSURE

- I have no relevant financial relationships with ineligible companies to disclose.

EXPECTED OUTCOME & EDUCATIONAL NEED/ PRACTICE GAP

- **Expected outcome:** Participants will be able to describe how UK HealthCare's strategic plan and partnerships expand access to specialty care, improve outcomes and strengthen the healthcare workforce across Kentucky.

- **Educational Need:** Kentucky's heart disease mortality rate exceeds the national average, and many communities lack access to specialty care close to home. Healthcare professionals need models for how an academic health system can work with community partners, address workforce shortages and use tools such as AI to identify risk earlier.

- **Practice Gap:** Care is often fragmented between community and academic settings. High-risk patients are identified late, and few systems use coordinated service lines or AI-supported risk detection in routine workflows. Workforce and capacity limits widen these gaps.

OBJECTIVES

- After completing this educational activity, participants will have an understanding of:
  - UK HealthCare's Strategic Plan and mission to serve Kentucky
  - How partnerships and collaborations benefit patients and healthcare systems



UK HEALTHCARE **BY THE NUMBERS**

1,784
LICENSED **BEDS**

6 HOSPITALS

73,500+
DISCHARGES PER YEAR

NCI Comprehensive Cancer Center
A Cancer Center Designated by the National Cancer Institute

KENTUCKY'S FIRST AND ONLY NCI-DESIGNATED COMPREHENSIVE CANCER CENTER

LEVEL IV NICU

LEVEL 1 ADULT & PEDIATRIC TRAUMA CENTER

Magnet Recognition
Designated
American Nurses Credentialing Center

3 MILLION+
AMBULATORY VISITS

Includes data from UK King's Daughters and UK St. Claire

Updated 9-8-26

CC27-0121

ADDRESSING THE NEEDS OF THE COMMONWEALTH

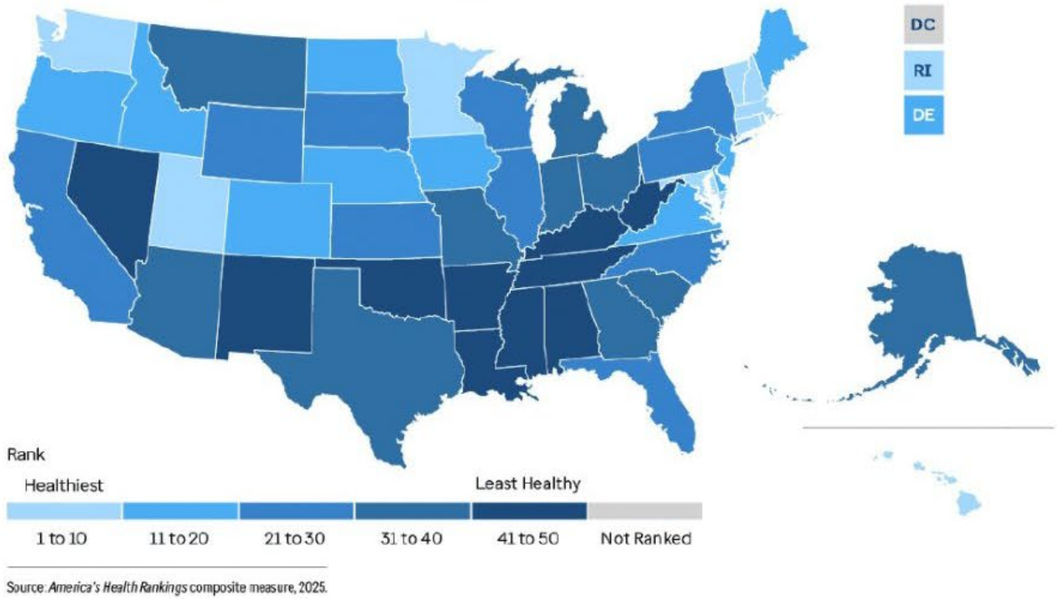
NATIONAL HEALTH RANKINGS

AMERICA'S HEALTH RANKINGS	COMMONWEALTH FUND STATE SCORECARD 2025
43rd	37th



Kentucky

Independent national assessments consistently rank Kentucky among the lowest-performing states for health outcomes, access and preventable disease.



Source: *America's Health Rankings* composite measure, 2025.

HEALTH OUTCOMES

47th Premature Death
48th Cardiovascular Deaths
48th Cancer Deaths
47th Drug Deaths
36th Infant Mortality

RISK FACTORS

45th Obesity
49th Smoking
50th Physical Activity

ACCESS and PREVENTABLE CARE

50th Preventable Hospitalizations
44th Adults with Diabetes
40th Primary Care Coverage

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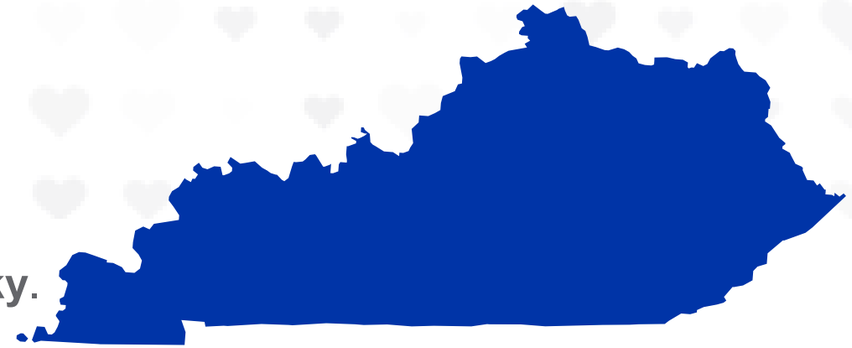
*"We are focused squarely and strategically on the **holistic health needs** of the state.*

*Doing that successfully **is the single most important** way we can advance this state."*

— Eli Capilouto, President

UK HealthCare

OUR MISSION



UK HealthCare is **committed serving the entire Commonwealth of Kentucky**.

This includes **commitment to the pillars of academic health care** – research, education, and clinical care – **dedication to improving the health of the people of Kentucky** by providing advanced healthcare, serving as an information resource, and **strengthening local health care by partnering** with community hospitals and physicians.

ADVANCING KENTUCKY

ADVANCED CARE

Advance subspecialty care for Kentucky and beyond while maintaining a focus on quality, access and value

TAKING CARE OF OUR PEOPLE & OUR PARTNERS

Comprehensive care strategy for our employees, the immediate neighborhood, and our partners across the Commonwealth

DISTINCTION

An academic health system with aligned clinical care, research and education of seven health-related colleges

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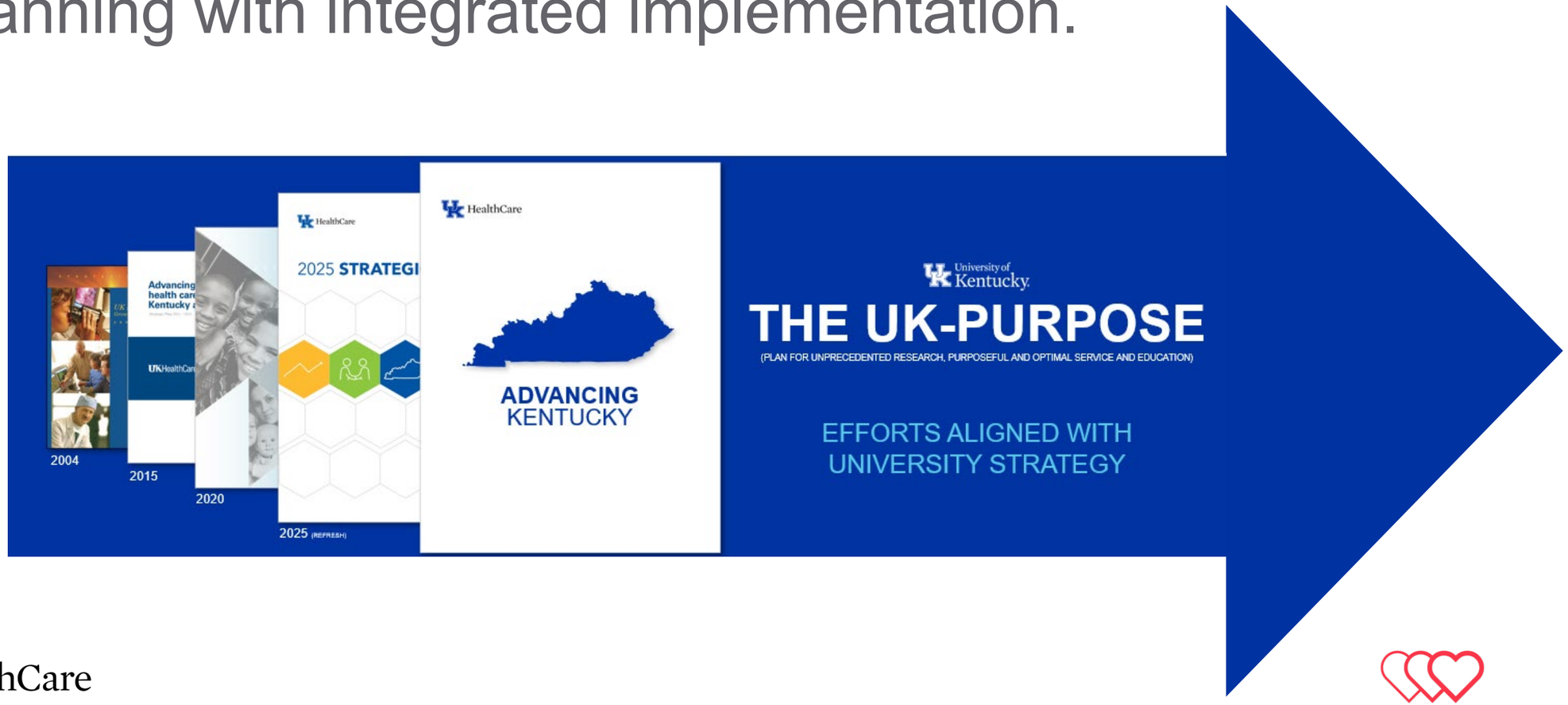
Evolving our Strategy

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OUR STRATEGY

- A changing healthcare environment requires dynamic planning with integrated implementation.



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Advanced Care

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SERVICE LINES ACROSS UK HEALTHCARE

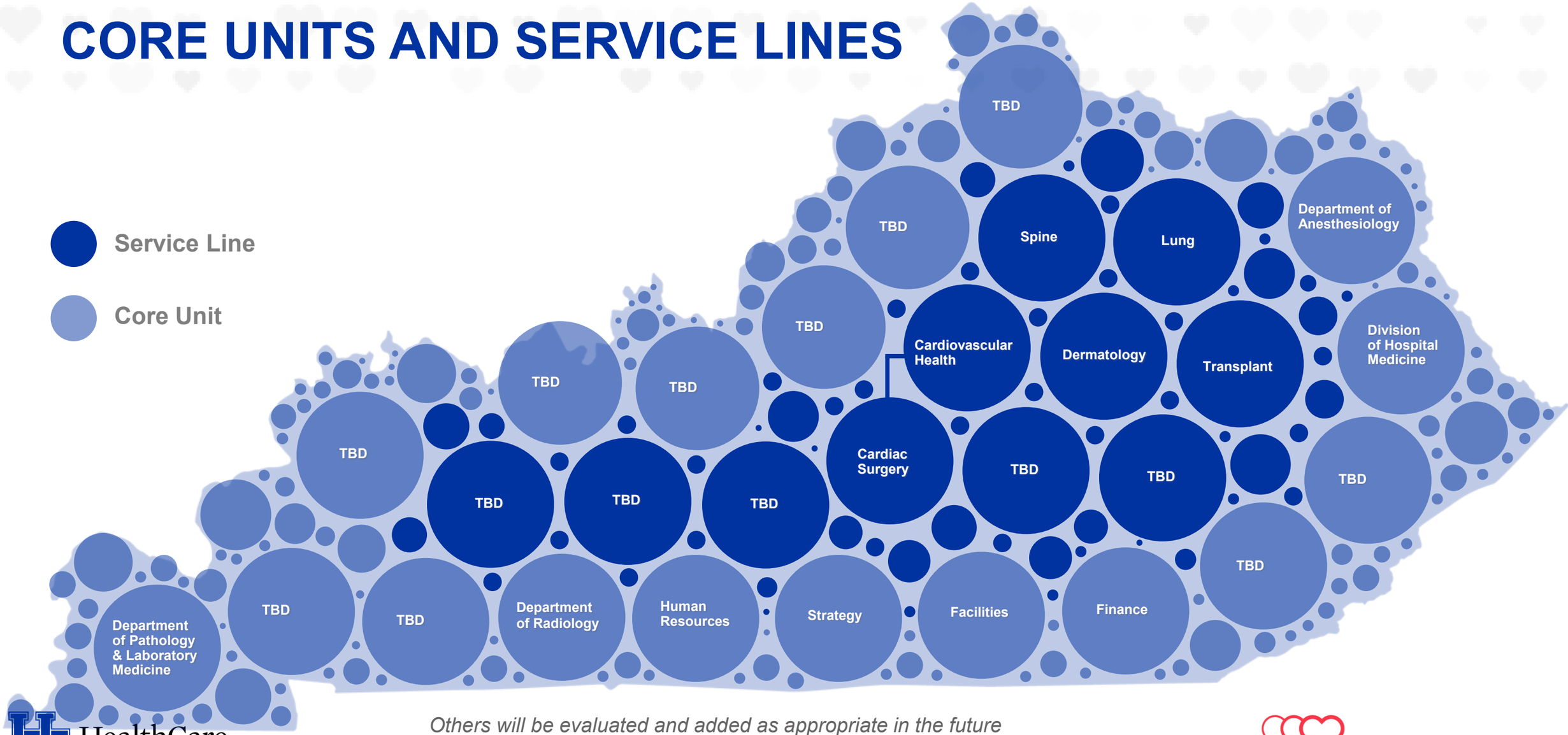
- Our overall objective is to establish a service line **committed to improving the health and outcomes of all Kentuckians** both now and in the future.
  - A patient-centric approach
  - Emphasize coordinated patient care across disciplines
  - Draw on a transdisciplinary team approach
  - Focus on quality/safety, patient experience and cost efficiency
  - Align resource and infrastructure support
  - Champion the recruitment and retention of exceptional providers and staff



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CORE UNITS AND SERVICE LINES



Others will be evaluated and added as appropriate in the future

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BETTER CARDIOVASCULAR CARE FOR KENTUCKY

- The Gill Heart & Vascular Institute is improving cardiovascular care across Kentucky through a phased approach that expands access to expertise, strengthens community partnerships, and addresses factors that drive poor health outcomes.

Expand access

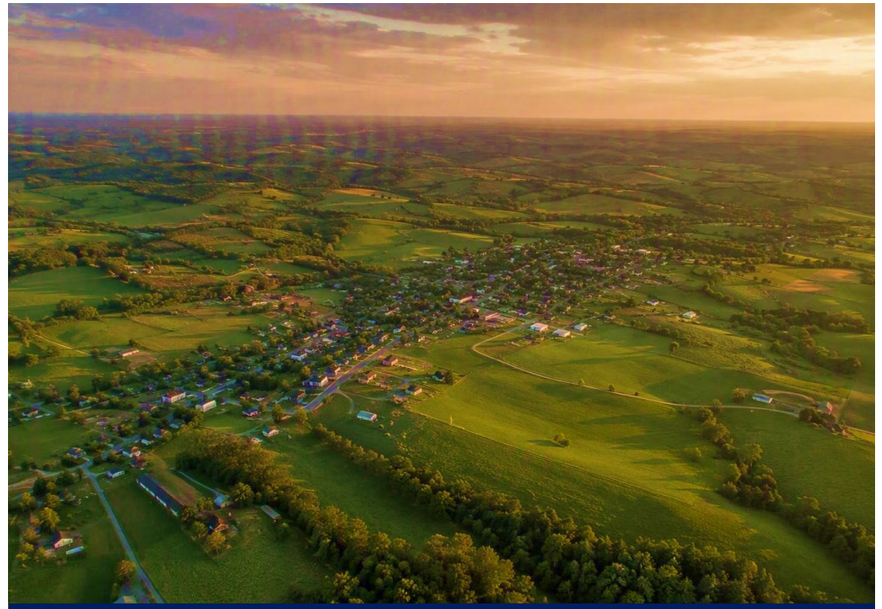
Specialized expertise available within the state

Strengthen partnerships

Local hospitals supported in building programs

Address root causes

Lasting improvement in population health



Serving communities statewide

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CARDIOVASCULAR HEALTH SERVICE LINE

Four-phase roadmap for statewide cardiovascular care

01

Build specialized expertise

Full spectrum of cardiovascular care available within Kentucky

02

Connect expertise to communities

Specialized care linked to local hospital programs

03

Expand community-based care

Prevention and detection beyond clinical settings

04

Address drivers of poor outcomes

Population health and the factors behind disease

Each phase builds on the one before it – from in-state expertise, to community connection, to prevention, to the underlying drivers of health.

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CARDIOVASCULAR HEALTH SERVICE LINE

Access	• Recruited >15 physicians in the CV space, shoring up critical gaps in care • Opened dedicated early access clinics
Mortality	• Mortality index improved from 0.99 → 0.76 • In the top 50% of comprehensive academic medical centers in the country
Length of Stay	• Length of Stay index improved from 0.95 → 0.92 • Saved more than 1,000 hospital days over the year
Patient Safety	• Developing care pathways to reduce patient harm

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BRINGING AI TO CARDIOVASCULAR CARE

INNOVATE
UNIVERSITY OF KENTUCKY RESEARCH

- Streamline "entrance" through the front door

ZeBRA Model Family (expanding list)

- Identify high-risk subgroups. Focused on HF, CAD and valve disease

CardioCare
Digital Health Platform

- Will help to identify procedural patients "lost" within the health system

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SERVICE LINE IN ACTION

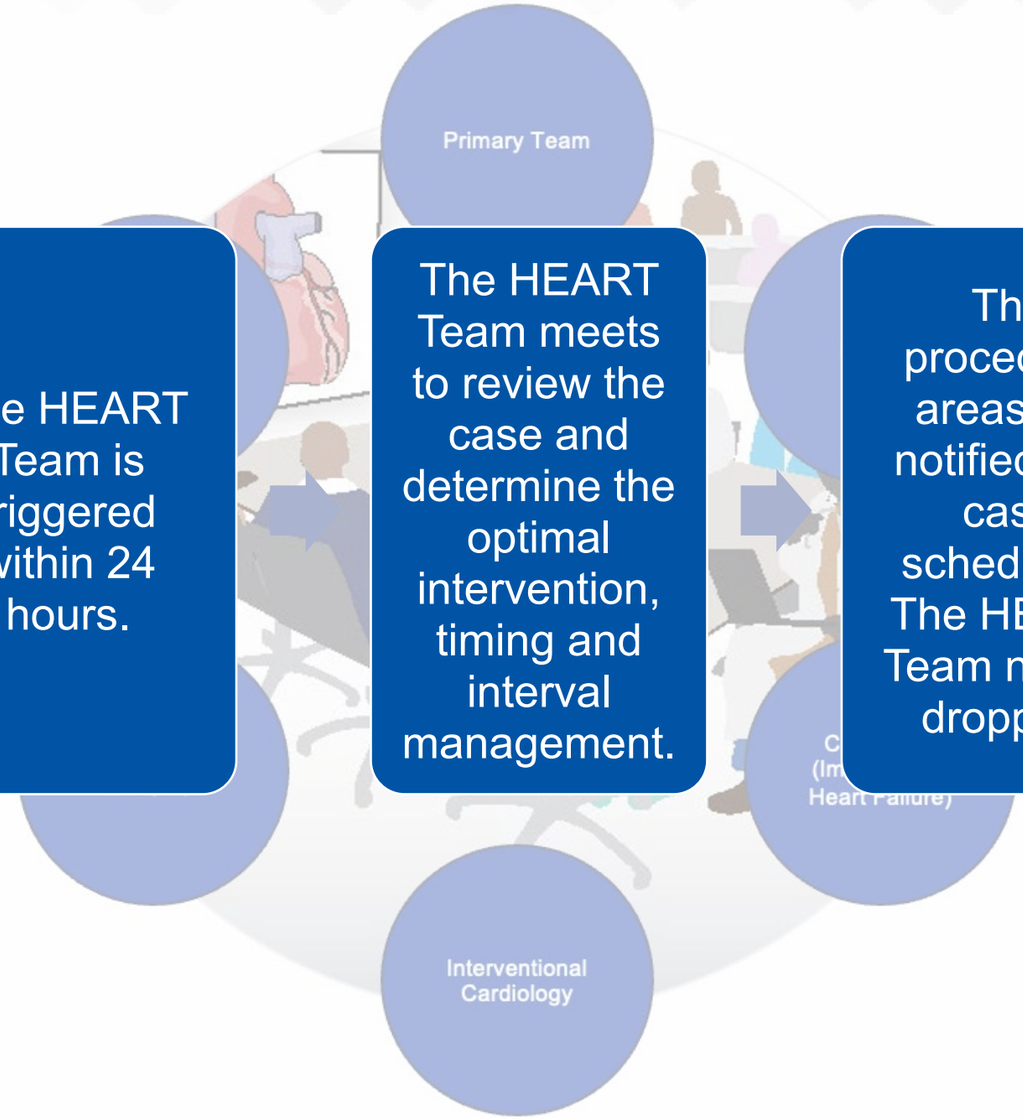
A patient is identified on admission or transfer.

The HEART Team is triggered within 24 hours.

The HEART Team meets to review the case and determine the optimal intervention, timing and interval management.

The procedural areas are notified and case scheduled. The HEART Team note is dropped.

The patient and primary team are notified.



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Taking Care of Our People and Our Partners

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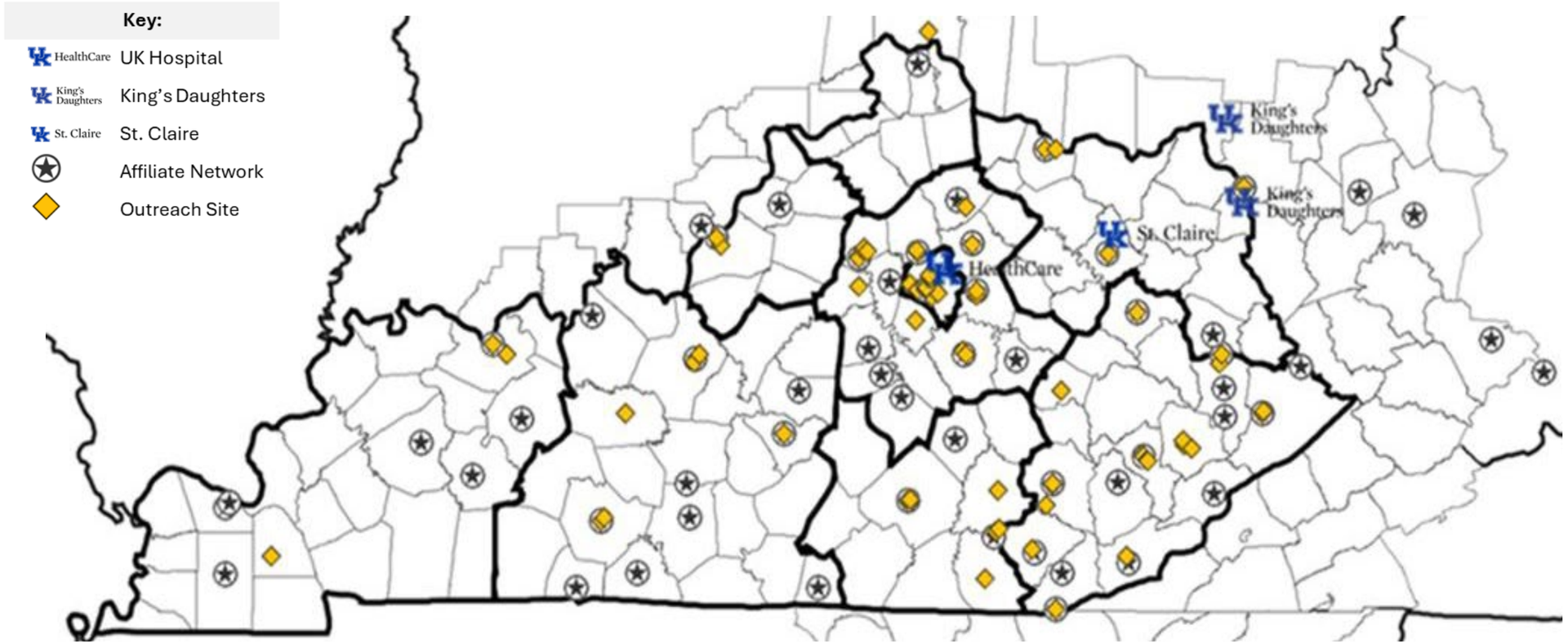
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GROWTH LEADING TO IMPACT

> 500 OUTREACH & 271 PARTNER LOCATIONS STATEWIDE



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Distinction

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LEVERAGING DISTINCTION

- The University of Kentucky and its 17 colleges support the health and healthcare of the Commonwealth, with over $500 million in research funding, impacting care from bench to bedside

- As an academic health system, UK HealthCare is uniquely positioned to provide access to high-quality care, expand education and research, and support community partners



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THE HEALTHCARE PROFESSIONAL WORKFORCE

Physicians	Registered Nurses	Physician Assistants	Public Health Employees
• A shortage of up to 86,000 physicians by 2036.	• The current vacancy rate exceeds 11%.	• Projected shortage of 26.5% by 2032.	• 16.9% of governmental public health employees intend to leave their jobs in the next year


BUILDING
ON OUR
PROMISE

GRADUATE MEDICAL EDUCATION TRAINING



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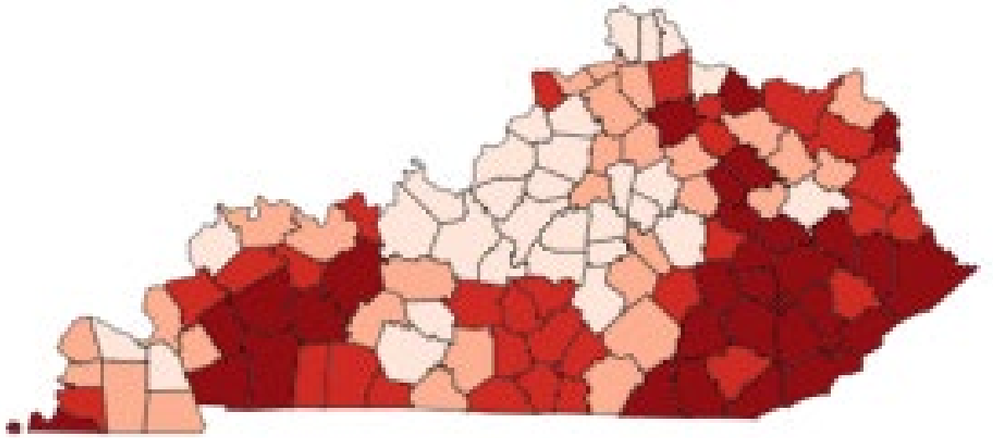
AI IN ALL ACADEMIC MISSIONS: HEARTLENS

Cardiovascular diseases are the No. 1 cause of death globally.

Cardiovascular disease is the No. 1 killer of women.

Someone in the U.S. dies from cardiovascular disease every 34 seconds.

Heart disease causes one in every five deaths in the U.S.



- Why it matters:
  - Heart disease is the leading cause of death in Kentucky.
  - Kentucky's heart disease mortality rate exceeds the national average.
  - Earlier identification of risk creates opportunities to prevent serious cardiac events.
  - AI provides a pathway to identify high-risk patients using data already captured in routine care.

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HEARTLENS: ADVANCING CARDIOVASCULAR CARE THROUGH AI-ENABLED COLLABORATION

Research + Clinical Care + Digital Infrastructure working together to improve cardiovascular outcomes across Kentucky

Revealing Hidden Information

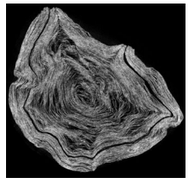
1. 2,000-year-old Herculeaneum scrolls



2. Carbonized and hardened by Mount Vesuvius eruption in 79 AD



3. High-resolution Synchrotron CT imaging used to digitally recover hidden text



Advanced imaging + AI reveal what has been hidden for centuries

Transdisciplinary Team

23 faculty, clinicians, researchers, staff, and trainees

AREAS REPRESENTED

Computer Science
COLLEGE OF
ENGINEERING

Cardiovascular
Medicine
COLLEGE OF
MEDICINE

HEARTLENS
1 Shared Goal

Radiology
COLLEGE OF
MEDICINE

UK HEALTHCARE

How it Works

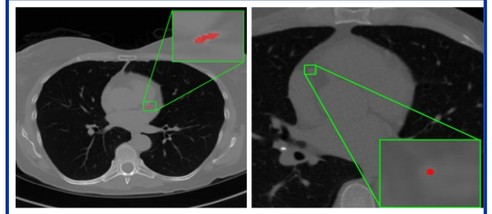
Integrates imaging, EHR, lab and clinical data

Applies AI models to identify cardiovascular risk earlier

Delivers actionable insights within clinical workflows

Supports earlier intervention and personalized care

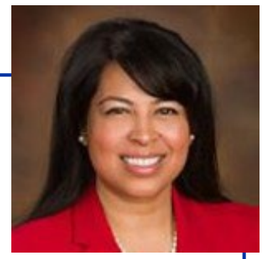
HeartLens in Action



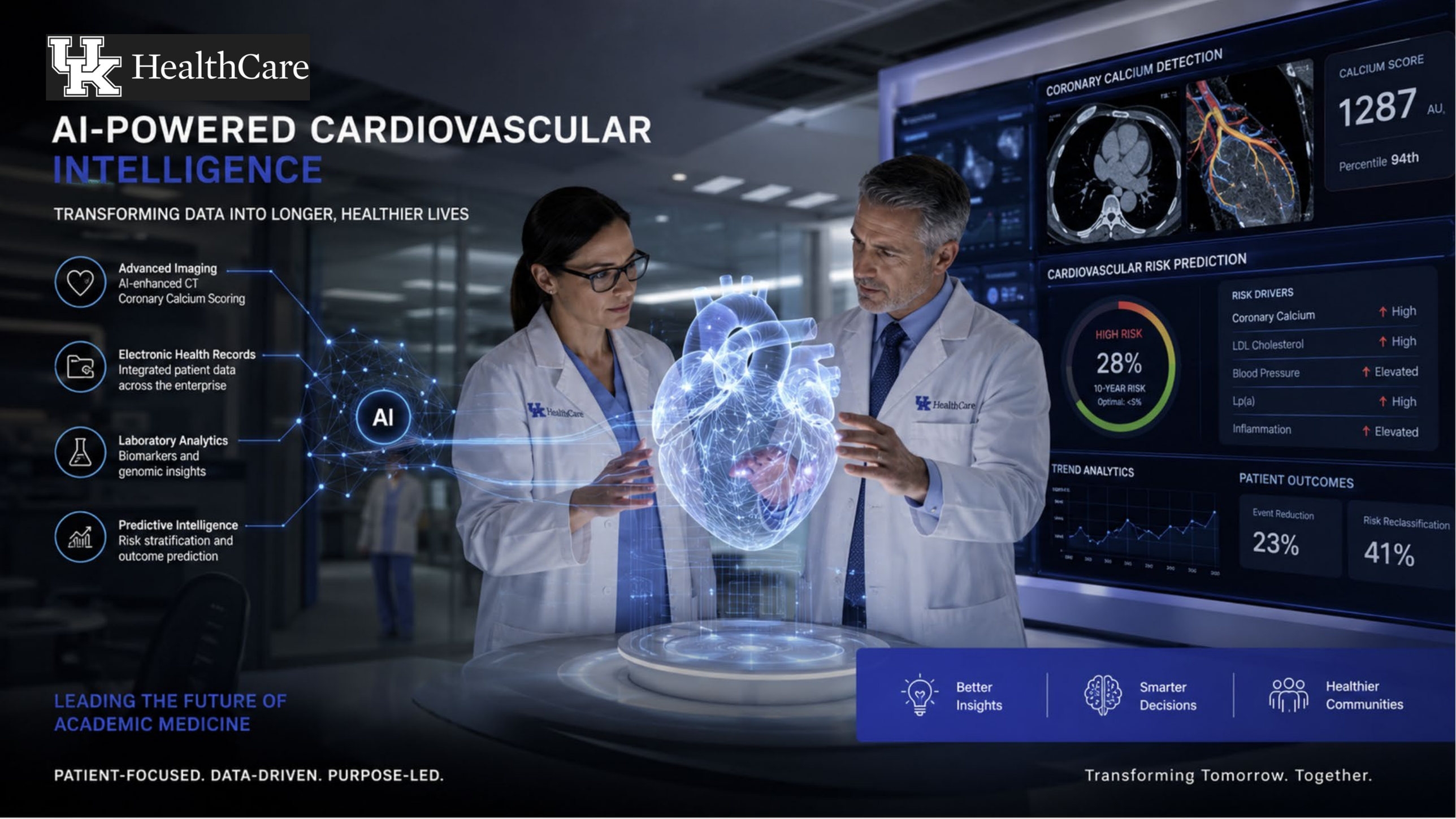
- Developed by HeartLens team with over 200,000 CT slices
- Pioneering AI models that meet or exceeds the specialty CT performance
- Harnessing HeartLens visual models to forge innovative multimodal image and language systems



WHAT SUCCESS LOOKS LIKE



- ✓ Earlier identification of cardiovascular disease
- ✓ Real-time provider alerts for high-risk patients
- ✓ More personalized and precise treatment decisions
- ✓ Better outcomes, especially in Kentucky rural & underserved communities
- ✓ Establishes UK as a leader in ethical, clinically integrated AI


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AI-POWERED CARDIOVASCULAR INTELLIGENCE
TRANSFORMING DATA INTO LONGER, HEALTHIER LIVES
Advanced Imaging
AI-enhanced CT
Coronary Calcium Scoring
Electronic Health Records
Integrated patient data
across the enterprise
Laboratory Analytics
Biomarkers and
genomic insights
Predictive Intelligence
Risk stratification and
outcome prediction
AI
CORONARY CALCIUM DETECTION
CALCIUM SCORE
1287 AU
Percentile 94th
CARDIOVASCULAR RISK PREDICTION
HIGH RISK
28%
10-YEAR RISK
Optimal: <5%
RISK DRIVERS
Coronary Calcium ↑ High
LDL Cholesterol ↑ High
Blood Pressure ↑ Elevated
Lp(a) ↑ High
Inflammation ↑ Elevated
TREND ANALYTICS
PATIENT OUTCOMES
Event Reduction
23%
Risk Reclassification
41%
Better Insights
Smarter Decisions
Healthier Communities
LEADING THE FUTURE OF ACADEMIC MEDICINE
PATIENT-FOCUSED. DATA-DRIVEN. PURPOSE-LED.
Transforming Tomorrow. Together.


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INVESTING IN OUR INFRASTRUCTURE,
ENSURING OUR FUTURE

CANCER AND ADVANCED AMBULATORY BUILDING



*For illustration purposes only. Subject to change.

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HAMBURG EAST MEDICAL OFFICE BUILDING



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CHANDLER EXPANSION



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THANK YOU FOR ATTENDING THIS SESSION!

Questions/Discussion

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