

Broward Health

EHR Options and Cost / Benefits Analysis Project

May 18, 2022



AGENDA

- Project Overview
- EHR Market Overview and Update
- Options Review:
 1. Cerner Clinical Steady State + RevElate Revenue Cycle System Replacement
 2. Cerner Clinical Uplift & Enhance + RevElate Revenue Cycle System Replacement
 3. Epic Direct
 4. Memorial Epic Connect
- Recommendations and Next Steps



Project Overview

DRIVING FACTORS FOR CHANGE OF EHR PLATFORM

- **Cerner** is not contracting **Invision** Revenue Cycle beyond 2025
- **Modernize EHR** for improved care for patients and families across the full continuum of care
 - *Eliminate* disparate ambulatory EHRs
 - *Improve* Patient Experience
 - *Reduce* Readmissions
 - *Improve* Revenue Cycle
- **Increase Interoperability** and Coordination of Care
- **Integrate population health capabilities** to better manage health of Broward County



PROJECT OVERVIEW

SCENARIOS CONSIDERED

Total Cost of Ownership* (TCO) - High-level cost projections concentrating on the following options:

1. **Cerner Clinicals Steady State + RevElate Revenue Cycle (15-month implementation)**
2. **Cerner Clinicals Uplift & Enhance + Implement new Cerner RevElate Revenue Cycle System (24-month implementation)**
3. **Epic Direct (18-month implementation)**
4. **Memorial Epic Connect (15-month implementation)**

** Developed in partnership with Broward and Memorial representatives with assistance from Cerner, Epic, and Memorial Epic Community Connect staff*

HIGH LEVEL OPTION COMPARISON

DISRUPTION AND MAJOR RISK FACTORS

| |  |  |  |
|----------------------------------|---|---|---|
| Disruption - Revenue Cycle Users | High | High | High |
| Disruption - Clinical Users | Low | Medium | High |
| Clinical Adoption Requirements | 30% | 80% | 95% |
| Major Risks | RevElate new / unproven platform | RevElate new / unproven platform Larger IT staffing | Clinical Adoption Larger IT staffing Invision June 2025 Deadline Cooperation between BHS & MHS |

Sources: ¹ Epic Website: <https://www.epic.com/about> | ² "Best in KLAS Software & Services," KLAS 2020 | "Cerner Revenue Cycle Management - Report 4 of 4," KLAS 2020 | ⁴ "US Hospital EMR Market Share 2020," KLAS 2020

HIGH LEVEL OPTION COMPARISON

ORGANIZATIONAL IMPACT AND DEPENDENCE

| | Vendor/Host Provided Functionality | Broward Builds & Supports |
|--|--|---------------------------|
|  Cerner | Cerner Clinical Steady State + RevElate Cerner Standard Functionality | Broward Builds & Supports |
| | Cerner Clinical Uplift + RevElate Cerner Out-of-the-Box System | Broward |
|  Epic | Epic Direct Epic Foundation System | Broward |
|  Memorial Healthcare System | Memorial Epic Connect* Memorial Epic Connect Foundation System | BH |

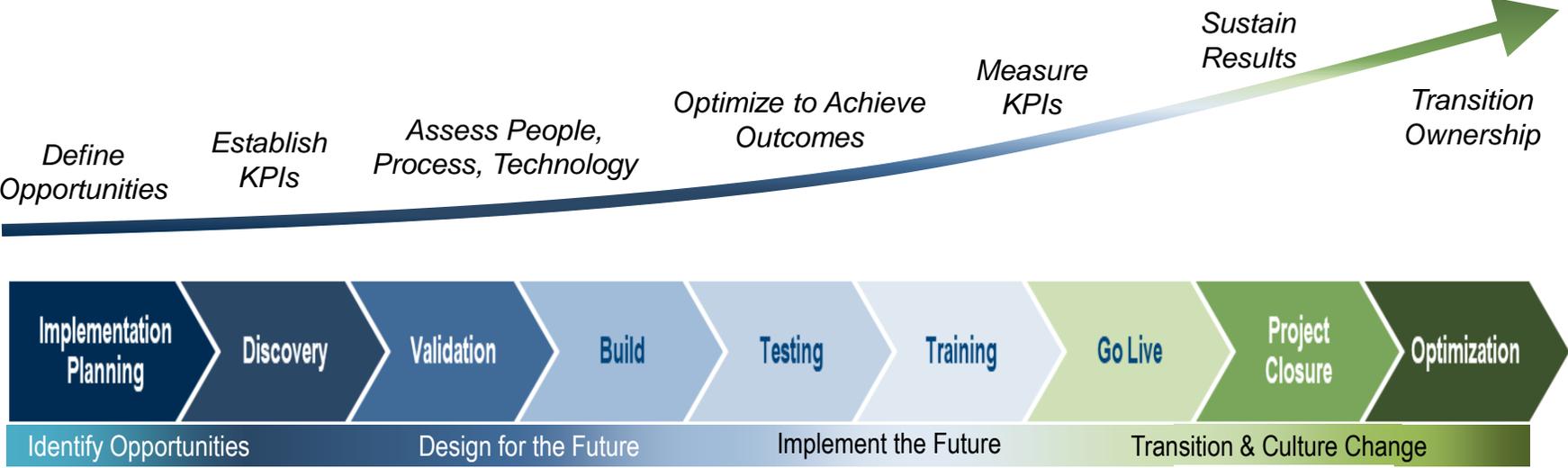
* The Memorial Epic Connect Option will necessitate a shared Governance Model between Broward and Memorial

Sources: ¹ Epic Website: <https://www.epic.com/about> | ² "Best in KLAS Software & Services," KLAS 2020 | "Cerner Revenue Cycle Management - Report 4 of 4," KLAS 2020 | ⁴ "US Hospital EMR Market Share 2020," KLAS 2020

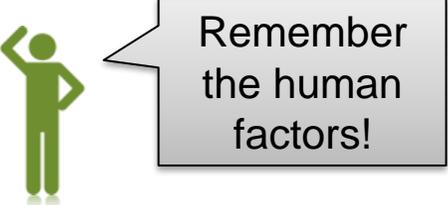
IT IS NOT JUST AN IT PROJECT !

OPPORTUNITY FOR VALUE CREATION

CLINICAL and REVENUE CYCLE TRANSFORMATION



ORGANIZATIONAL TRANSFORMATION



Market Overview & Update

KLAS REPORT

US HOSPITAL MARKET SHARE 2021



Cerner's Net-New Customers (+5 hospitals for 24.4% market share; -5,444 beds)

- Led the market in 2021 among small standalone hospitals (≤ 200 beds); most selecting CommunityWorks model
- Lost a substantial number of Millennium PowerChart customers; primarily to Epic
- Large-hospital losses resulted in seeing large net-decrease in number of beds
- Won 21 specialty hospital contracts
- Outside of government contracts, no net-new large health systems since 2013

Epic's Net-New Customers (+74 hospitals for 32.9% of market; +12,776 beds)

- Top choice for large organizations with nearly half of all acute care beds in the US
- Chosen by smaller hospitals looking to streamline data sharing via Community Connect
- 4 hospital losses were to M&A activity
- Continued trend of academic medical centers choosing Epic
- 2021 wins were by larger organizations, exception for one academic hospital

BEST IN KLAS AWARDS

2022



Overall Software Suite

- Epic
- MEDITECH
- Cerner

Overall Physician Practice Vendor

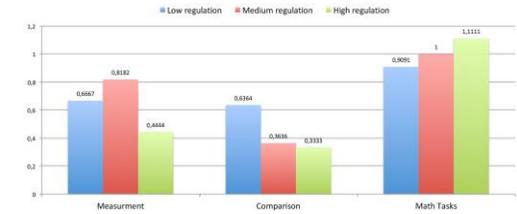
- Epic
- athenahealth
- NextGen

Best in KLAS Awards:

- **Acute Care - Epic**
 - Acute Care EMR (>200 beds)
 - Patient Accounting & Patient Management (>200 beds)
 - Medication Inventory Management
 - Oncology: Medical
- **Ambulatory Care - Epic**
 - Ambulatory EMR (>75 physicians)
 - Practice Management, tied for first, (>75 physicians)
- **Patient Experience - Epic**
 - Patient Flow
 - Patient Portal
- **Services - Epic**
 - Application Hosting

PROJECTING BENEFITS

OFFSET OPPORTUNITIES



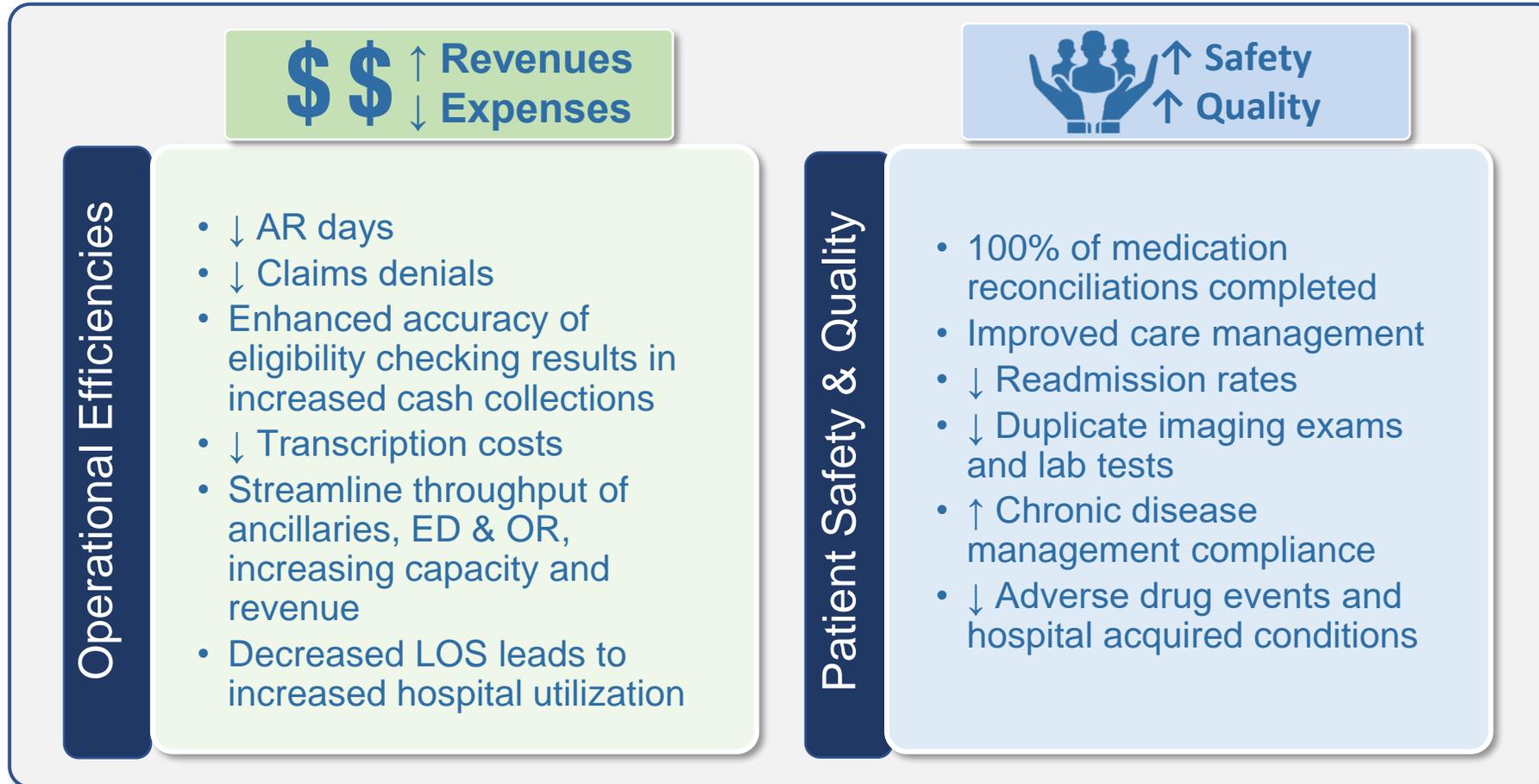
Preliminary projected Benefits* are based on achievements and experience at comparable organizations and *current performance results at Memorial*

| Benefit Examples - Anticipated | Benefits Examples – To be Considered |
|---|--|
| <i>Reduction</i> in days in AR | <i>Increased</i> patient throughput |
| <i>Improvement</i> in Collection Ratios | <i>Decrease</i> leakage / <i>improve</i> referral patterns |
| <i>Increased</i> Care Coordination across the enterprise | <i>Reduced</i> length of stay across complex diagnoses |
| <i>Increased</i> patient clinical and demographic information sharing | <i>Reduction</i> in length of stay for all sepsis patients |
| <i>Increased</i> Clinical / Business Office Functionality | <i>Reduction</i> in length of stay for all sepsis patients |
| <i>Improved</i> Patient Experience | <i>Reduced</i> check-in time by enhanced patient portal |

* Requires operational / clinical leadership engagement and ownership to drive and realize improvements. Full benefits identification will require additional analysis

BENEFITS IDENTIFICATION & REALIZATION MODEL

OPPORTUNITY FOR IMPROVING “TECHNOLOGY-ENABLED” OUTCOMES



Cerner Clinical Steady State + RevElate Revenue Cycle System Replacement

CERNER CLINICAL STEADY STATE + REVELATE REVENUE CYCLE SYSTEM REPLACEMENT OVERVIEW

- **Replace Invision Revenue Cycle with RevElate**
- **Cerner current state still requires significant funding:**
 - Paying \$17.1M per year for application maintenance, support, and hosting fees
 - Overall capabilities not fully utilized
 - System has limited ability to improve current operational and achieve benefits
 - Broward has expressed interest in Business Transformation services:
 - In order to adopt and realize the value and benefits of any new Revenue Cycle system
- **Pricing model includes additional costs not paid to Cerner such as hardware refresh, third-party operations improvements (e.g., Revenue Cycle), internal Labor, etc.**

Cerner Clinical Uplift / Expand and RevElate Revenue Cycle Replacement

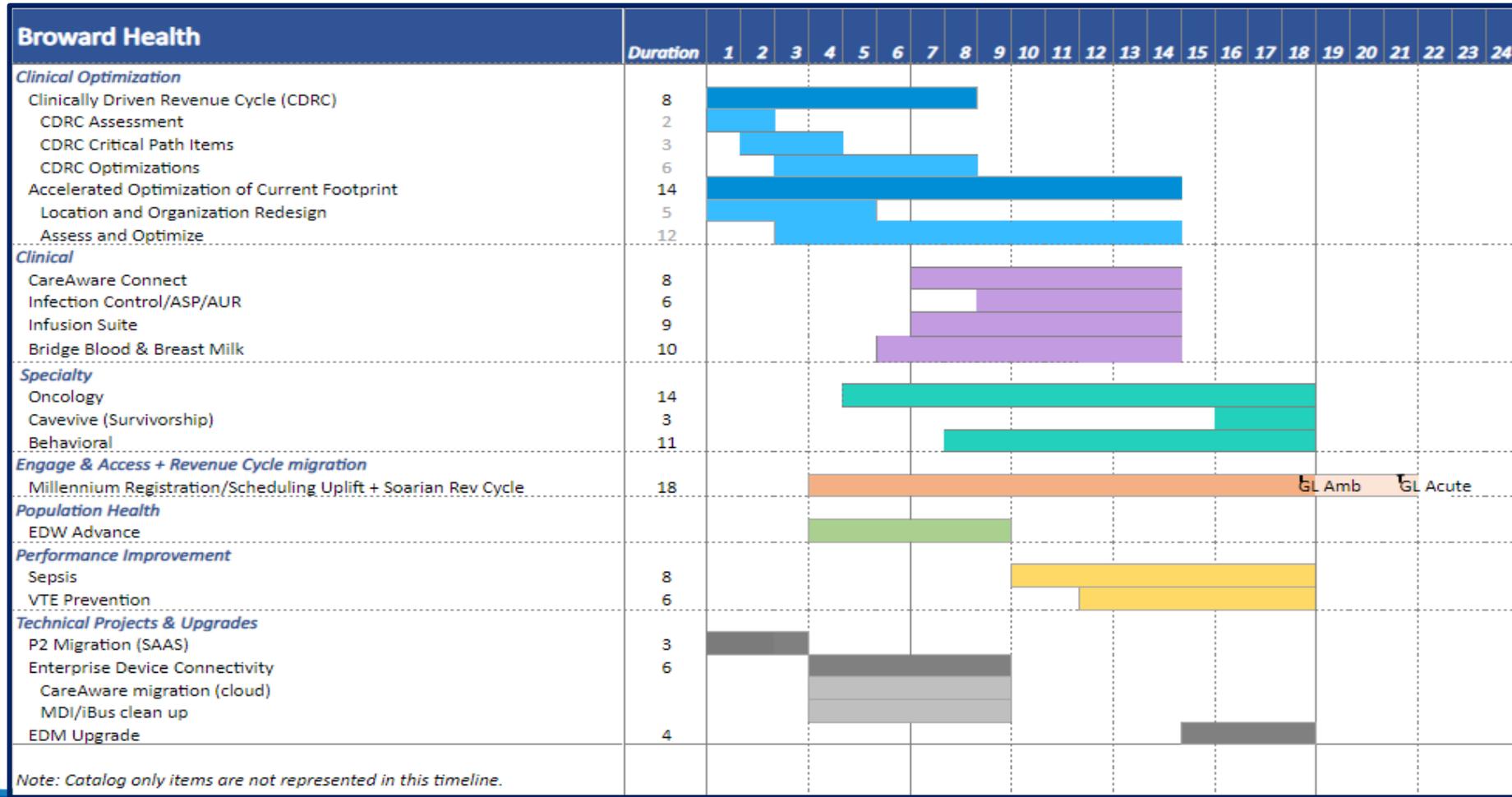
CERNER CLINICALS UPLIFT / ENHANCE AND REVENUE CYCLE SYSTEM REPLACEMENT

OVERVIEW

- **Cerner defined new option to:**
 - *Uplift and enhance* existing Cerner core clinical and patient access applications to benefit from Cerner current best practices/model system
 - *Expand* applications with new and desired Cerner applications/solutions
 - *Transition* Broward from current, aging Invision Revenue Cycle to RevElate (*General Availability pending*)
- Pricing model includes additional costs not paid to Cerner such as hardware, internal labor, etc.

CERNER CLINICAL UPLIFT / EXPAND + REVELATE REVENUE CYCLE SYSTEM REPLACEMENT

HIGH-LEVEL TIMELINE - 2 YEARS



Epic Direct Option

EPIC DIRECT

VALUE PROPOSITION

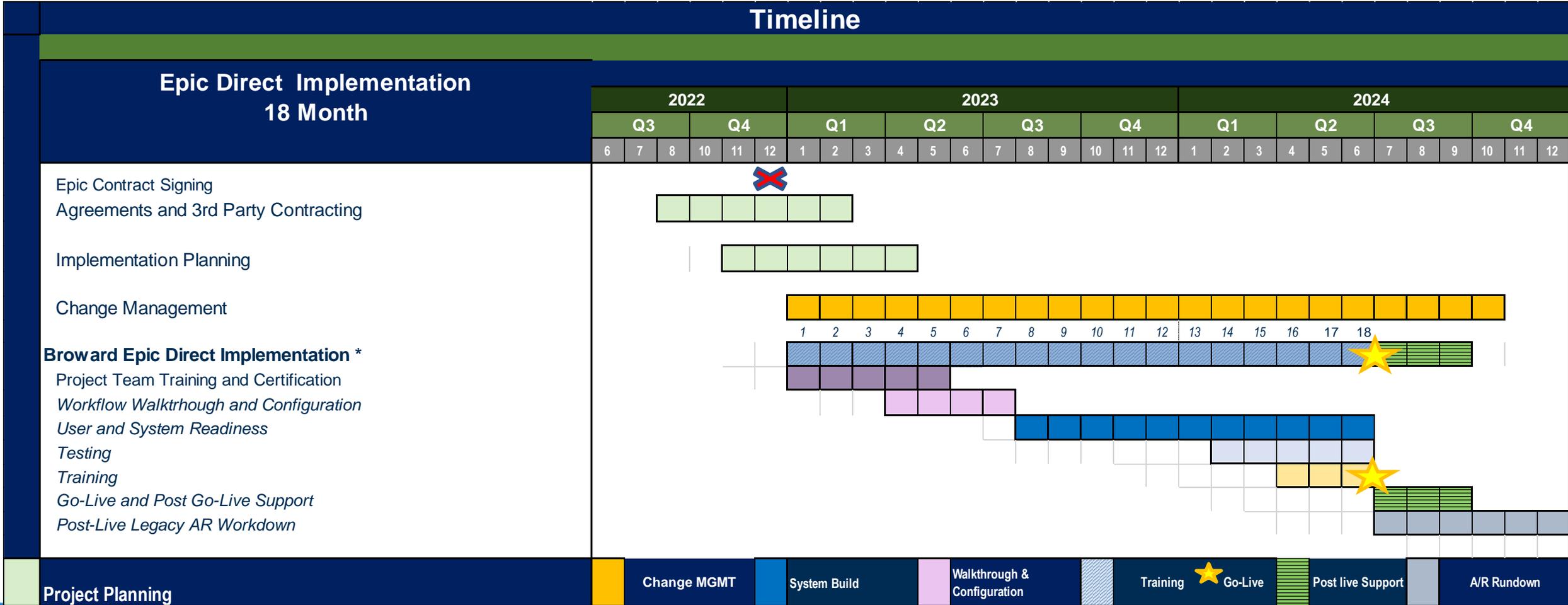
Epic Foundation System

- Built from experiential base over hundreds of Epic clients
 - Maintained by Epic's foundation team
 - Lessons-learned embedded
- Includes support from Epic implementation teams
- Market-leading, proven Hospital and Professional Revenue Cycle System
- Best Practices from large Epic Customer Base
- Requires client team to configure and support tailoring
- Demonstrated ability to Recruit and Retain Physicians trained on Epic



EPIC DIRECT

IMPLEMENTATION TIMELINE - 18 MONTHS



Memorial Epic Connect Option

MEMORIAL EPIC COMMUNITY PROGRAM

VALUE PROPOSITION

Memorial Epic Foundation System – *Built, Tested, Managed, and Maintained*

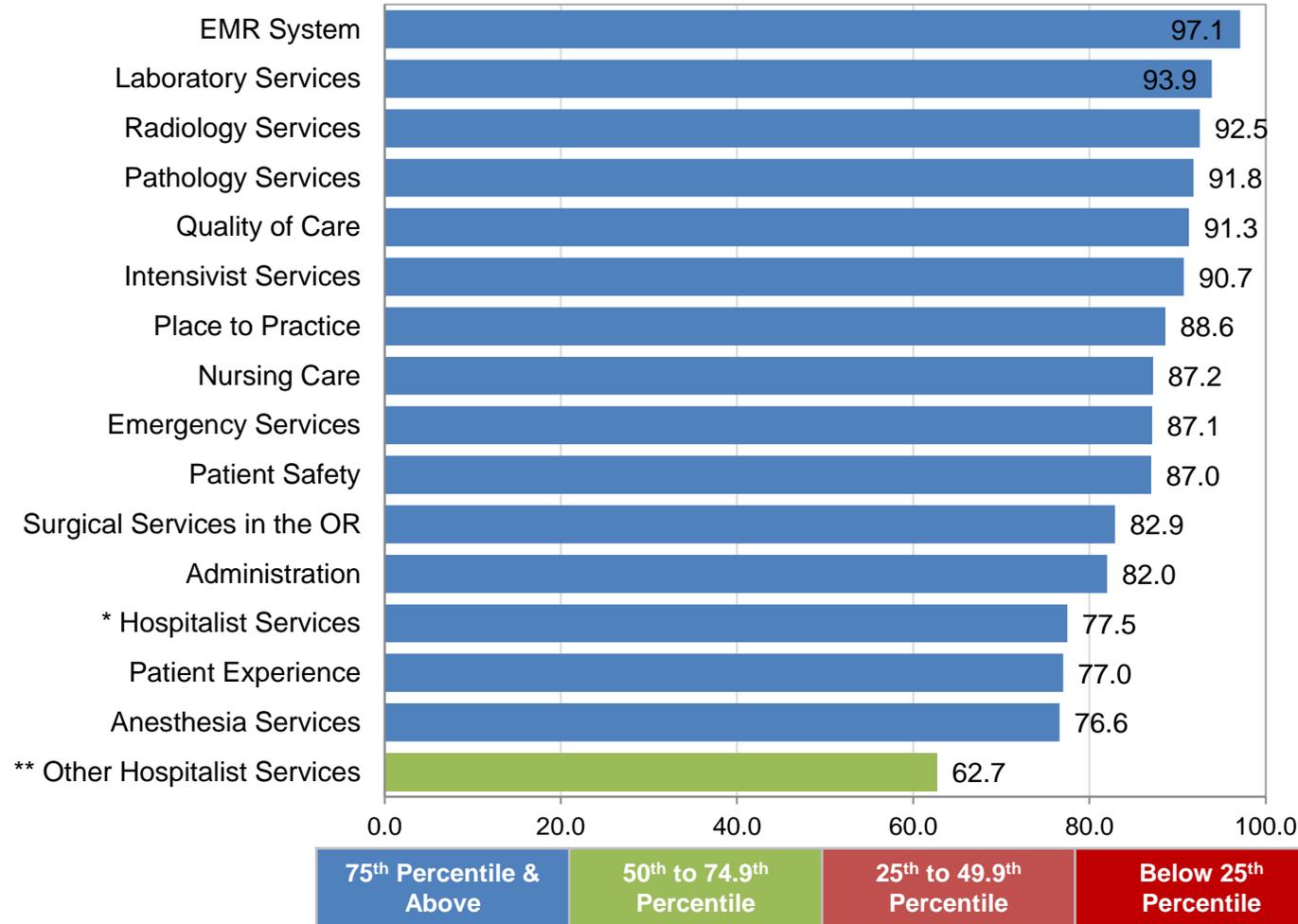
- Configured for Broward Health; Minimum new System Build required
 - Lessons-learned embedded
- Established Clinical and Operations Processes and Workflows
- Market-leading, proven Hospital and Professional Revenue Cycle System
- Best Practices from Memorial and large Epic Customer Base
- Pre-built Predictive Models
- Demonstrated ability to Recruit and Retain Physicians trained on Epic
- High EHR Physician Satisfaction Survey Results



MEMORIAL HEALTHCARE SYSTEM – EHR SATISFACTION

2022 INDEPENDENT SURVEY RESULTS BY PRC

("Excellent" Percentile Rankings)



| 2022 % Excellent | 90th Percentile % Excellent |
|------------------|-----------------------------|
| 47.9% | 36.2% |
| 60.2% | 54.9% |
| 64.9% | 61.7% |
| 63.3% | 61.4% |
| 66.8% | 64.8% |
| 68.2% | 67.4% |
| 64.2% | 65.1% |
| 55.6% | 58.0% |
| 56.1% | 59.2% |
| 61.7% | 65.1% |
| 50.8% | 57.9% |
| 46.4% | 56.0% |
| 54.2% | 64.8% |
| 58.5% | 67.0% |
| 57.6% | 69.1% |
| 44.2% | 64.8% |

* Physicians at JDCH rated Pediatric Hospitalists of South Florida, while all others rated TeamHealth Hospitalists.

** JDCH physicians were not asked to rate other hospitalists.



MEMORIAL EPIC CONNECT OPTION

OVERVIEW

Memorial Healthcare System (MHS) would extend their Epic System to Broward Health

- Broward would utilize existing Memorial Epic Connect as its foundation
 - Over 10 years of experience in South Florida market
- Shared Broward and Memorial patients will have a single patient clinical record
- Patients will have a common Patient Portal with different branding, as desired
- Enhance care coordination across all Broward and Memorial hospitals and ambulatory sites
- Patient Accounting remain **separate** for each organization
- Establish shared governance between Broward and Memorial

MEMORIAL EPIC CONNECT OPTION:

OVERVIEW (CONT'D)

- *Able* to use Epic's predictive models for improving clinical care; such as readmission risk and remaining length of stay predictions
- Access to Epic's Cosmos Data Analytics with over 120 million patient records, including participation with other leading research centers
- *Used* by 19 of 20 US News & World Report Best hospitals
- *Can* share clinical results with other Epic sites nationally via Care Everywhere

MEMORIAL EPIC CONNECT CONSIDERATIONS

BH PHYSICIANS WILL PERSONALIZE THEIR PREFERENCES

| BH Functionality / Master Files | Separate |
|---|----------|
| A/R Revenue | Separate |
| Fee Schedules / Pricing | Separate |
| Account and ADT Work queues | Separate |
| Broward Specific Facility Structure | Separate |
| Preference lists | Separate |
| Operating Room Preference Cards and Supplies | Separate |
| Physician and Equipment Schedules Templates | Separate |
| Employee and Provider User Records | Separate |
| Provider Based Results Routing | Separate |
| Reporting Workbench and Extracts | Separate |
| Patient Lists / ER Room Track Boards | Separate |
| Order Transmittal Routing | Separate |
| Biomed Device Integration | Separate |
| Medication Formulary | Separate |
| Visit Types | Separate |
| Letters | Separate |

| BH Functionality / Master Files | MHS Shared / Recommended |
|--|--------------------------|
| Medication Master Vendor (First Data Bank) | Shared |
| Navigators / Narrators | Shared |
| Best Practice Alerts | Shared |
| Questionnaires | Shared |
| IN basket Administration | Shared |
| Dashboards | Shared |
| Workflows / Training tools | Recommended |
| Smarttools (Order Sets, Smart Phrases, etc.) | Recommended |
| Smart Forms | Recommended |
| Base Procedure and Medication Records | Recommended |
| Base Reports | Recommended |
| Third Party Vendors | Recommended |
| Care plans | Recommended |
| Flowsheets | Recommended |
| Procedures | Recommended |
| Charge Capture | Recommended |

Recommendations and Next Steps

NEXT STEPS

- *Review and complete* high-level Cost Model for all Options
- *Identify* preferred Option and approach
- *Estimate* desired benefit ranges
 - Clinical improvements
 - Better care coordination
 - Operational improvements
 - Patient engagement with more self-service tools
 - Combined staffing
- *Establish* Project and On-going Support Governance
- *Determine and commit* to the level of sponsorship, management, business transformation, and benefits realization required:
 - To achieve projected benefits for Broward Health's providers, users, and Broward County patients and residents
- Others?

Thank You



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