Evidence-based Care Design (EBCD) is a formal, evidence-driven, cross-disciplinary method for clinical workflow development, redesign, or augmentation. EBCD uses a programmatic approach to identify, design, implement, and monitor care pathways with the goal to improve outcomes, efficiently deliver and support evidence-based practice (EBP). EBCD works to advance the Triple Aim through improvement of the patient/member’s care experience, improvement of health outcomes, and reduced cost per capita of care for target populations.

**The Essentials**

- The EBCD process is managed by the PHS Quality Institute.
- The goal of EBCD is to improve clinical outcomes by identifying and reducing variation in practice that may cause unpredictable outcomes.
- EBCD priorities are set by the Presbyterian Clinical Leadership Team (PCLT) and directly align with the PHS Quality Plan.
- EBCD initiatives include broad representation from department staff and clinical subject matter experts.

**Program Success**

The benefits of EBCD are realized through incremental improvement in patient outcomes. Examples include:

- Through the Hypertension EBCD initiative, the number of patients in good blood pressure control improved from 59% in March 2013 to 83.02% in December 2015. PHS was recognized by the CDC as a Million Hearts 2014 Hypertension Control Champion.
- Through the Depression initiative, utilization of depression screening tools increased to 90.58% in December 2015.
- Through the Low Back Pain initiative, access to physical therapy services for acute low back pain improved from a wait time of over 40 days in January 2015 to 8 days in December 2015.

**What We Know About Evidence-Based Practice (EBP)**

Evidence-based practice (also referred to as evidence-based medicine) is the conscientious, explicit, and judicious use of most current best evidence in making decisions about the care of an individual patient. It is the integration of clinical expertise, patient values, and research evidence into the decision-making process for patient care. EBP incorporates evolving clinical expertise and external evidence with a goal to provide excellent clinical care to patients.

In addition to improving quality of care and patient safety, EBP also affects healthcare finance and reimbursement. Since the healthcare industry has begun shifting towards a pay-for-performance reimbursement model (the use of rewards and penalties for achieving key outcomes), major variation in clinical practices has been highlighted as a central issue, as at least some of the variation stems from overuse, underuse, and misuse of medical care. Cost pressures,
compounded by growing transparency of care quality, have prompted organizations to align clinical practices so that they optimize outcomes in quality, safety, and patient experience. This change has highlighted the criticality of EBP programs nationally. As part of the developing EBP program at Presbyterian, the EBCD process builds clinical care pathways to improve patient care and reconcile potential gaps in quality that, in many cases, may have a direct cost impact to the organization.

Outlining a clinical care pathway that is evidence-based, however, does not guarantee that a provider will adopt it into daily practice. EBCD methodology helps to bridge the gap between identifying best practice and its successful implementation.

How PHS’ Evidence-Based Care Design works

PHS strives to optimize the effectiveness of care by using EBCD principles to guide the design of care pathways, in a way that aligns with the PHS Board Quality Committee Position:

“The adoption of evidenced based care paths and protocols and the commitment to reduce variation in the patient care process is central to achieving the Presbyterian purpose: To improve the health of the individuals, families, and communities we serve. It is essential that we promote the design of systems that consistently implement practice that has been shown to reduce harm and mortality and improve health outcomes.”

PHS’ EBCD program identifies, designs, and implements clinical improvement efforts by applying evidence-based practice and Lean-Six Sigma concepts: Lean reduces waste by streamlining a process, while Six Sigma reduces variation so that products or services can be delivered reliably.

The EBCD process engages clinical staff to evaluate evidence, establish provider consensus, and build care pathways that optimally address patient needs based on a specific disease or phase of care. Through its multidisciplinary approach, EBCD leverages evidence, provider expertise, and voice of the customer to create an enterprise-wide approach. Depending on the initiative’s scope, the EBCD process may recommend changes to the following:

- Inpatient/ outpatient clinical workflows
- Provider ordering practices
- Clinical documentation in Epic
- Supplies/ products/ equipment

Each initiative has a unique scope and set of metrics that are identified based on current quality performance, changes to external reporting requirements, and baseline metrics that highlight an opportunity for improvement (OFI). EBCD initiatives are selected and broadly scoped by the PCLT as part of the annual Clinical Priorities and directly align with the PHS Quality Plan. In-process metrics are determined by the project team, once assigned.

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### Improvement Team

At the start of each project, a leadership triad is identified by PCLT. The project leaders are accountable to the set targets and timelines, and each has a unique role:

- **Project Champion** is a subject matter expert (SME) who leads the clinical guidelines committee, communicates with senior leadership, removes barriers, assists process owners with control plan issues, and is accountable for achieving expected gains from the projects. Ideally, clinical projects will have a physician champion.

- **Process Owner** has the responsibility and authority to oversee high-level process changes, sustaining gains and identifying future improvement opportunities. Ideally, the process owner is an established PHS leader (e.g., Clinical Program Leader, Executive Sponsor).

- **Project Lead** serves as the facilitator of the initiative, organizing meetings, tracking progress and providing status reports to leadership. Ideally, the project lead will have experience in clinical process improvement. Knowledge of the Institute for Healthcare Improvement’s (IHI) Model for Improvement and Lean-Six Sigma (ASQ) is required (see links in Additional Resources).

Because EBCD projects often touch multiple areas and phases of care, broad representation is necessary for acceptance and adoption of process changes. At a minimum, the improvement team will include the following:

- Project Champion
- Process Owner
- Project Lead
- Physician Champion
- Nursing Champion
- Pharmacy Champion
- Informatics Champion
- Quality/Process Manager
- Regional Champion
- Reporting Champion
- Clinical Trainer (IT)

Supporting roles that create interconnectivity across the enterprise include:

- PHP Liaison
- Care/Case Manager

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<tr>
<th>SERVICES</th>
<th>TECHNOLOGY</th>
<th>PEOPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streamlined evidence-based clinical workflows</td>
<td>Epic: Electronic Health Record (EHR)</td>
<td>Process Owner: Kathy Davis, Senior Vice President and Chief Experience Officer</td>
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<tr>
<td>Care pathway development and deployment</td>
<td>MIDAS: Quality reporting</td>
<td>Janice Beene, Administrative Director, Quality Institute</td>
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<tr>
<td>Improved metrics for external Quality reporting</td>
<td>Tableau: Scorecard/ Metric Dashboard</td>
<td>Fauzia Malik, Director of EBCD</td>
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<td>Order set reviews and revisions for chronic disease management</td>
<td></td>
<td>LeeAnne Smith, EBCD Project Coordinator</td>
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<td>Training and process improvement for clinical staff</td>
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The Process
Once an initiative is prioritized, the EBCD process follows an outlined and structured process:

1. Establish a baseline.
   a. What is current performance?
   b. What work has already been completed?
   c. What external reporting measures are impacted?
2. Scope the initiative.
   a. What are we trying to improve/ build/ change?
   b. What is the affected patient population?
   c. What facilities/ departments will be impacted?
3. Create a Charter.
   a. Outline the high level plan to include current performance and scope
   b. EBCD is a quality process designed to improve the quality of care in this community. As such, this work is intended to be protected by the New Mexico Review Organization Information Act (ROIA). Charters should include an acknowledgement that the EBCD initiative work is intended to be protected under ROIA.
4. Establish a physician-led clinical guideline committee to review current evidence.
5. Identify best practices from evidence.
7. Conduct a Rapid Improvement Event (RIE).
   a. Gather key stakeholders, SMEs, and project team to develop a plan to deploy best practice across the system.
   b. Outline current state to include care process and outcomes, including metrics.
   c. Establish future state process of care and desired outcomes based on best practice consensus. Identify gap between current state and future state.
   d. Propose changes to care process that will eliminate gap.
8. Leadership to confirm that targets are achievable and metrics are appropriate.
9. As needed, assemble workgroup sessions after the RIE to outline standard work and desired workflows.
10. Work with IT governance to propose any changes in Epic or other ancillary systems (e.g., order set management).
11. Prioritize implementation efforts.
   a. Collaborate with Clinical Informatics teams on clinician education/ training roll out.
12. Begin systematic implementation, including process for regular review and refresh cycles of evidence.
**EBCD Process Summary**

| Identify evidence for care pathway | Establish consensus on the evidence | Develop care pathway | Submit Epic build requests | Develop and implement measurement system | Deploy improvement plan | Complete one feedback cycle | Sustainment (PDOSA activities) |

**Governance and Approvals**

All clinical workflow changes that affect Epic (EHR) are documented in an SBAR to be reviewed and/ or approved by the following governance bodies:

- **Decision Assist**: Approves Epic-specific alerts, such as Health Maintenance (HMs) and Best Practice Advisories (BPAs)
- **Clinical Advisory Workgroup (CAW)**: Reviews requested changes to Epic content at the clinical program level
- **Clinical Integration Workgroup (CIW)**: Reviews changes to Epic content that affects multiple areas
- **Clinical Coordination and Communication Committee (C4)**: Serves as single point of contact for Epic requests, including order sets, and coordinates requests to correct governance body
- **IT Governance**: Determines Epic build prioritization for major projects and designs strategic Epic road map
- **Clinical Performance Committee (CPC)**: Approves clinical content for use in the Central Delivery System
- **Hospital Medical Executive Committees (MECs)**: Approves clinical content for use at regional facilities. Each regional facility has its own MEC.

**Measures of Success**

High level anticipated outcomes of an EBCD initiative include:

- Protocols and care pathways aligned to setting and provider
- Improved clinical outcomes, as defined by leadership and clinical guideline committees
- Improved customer satisfaction with care delivery
- Overall cost reduction

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<th>Objective</th>
<th>Measure</th>
<th>Aligns with Aim</th>
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| Improve Clinical Outcomes | - Streamline care; reduced fragmentation across the continuum  
- Reduce variation in care that causes inconsistent outcomes | Better Health |
| Engage the Customer | - Design care systems that meet customers’ needs  
- Gather and incorporate voice of the customer feedback | Exceptional Experience |
| “LEAN” the Care Process | - Reduce overutilization  
- Ensure efficient use of staff and supplies | Cost Leadership |
All EBCD initiative metrics are captured on the EBCD Scorecard in Tableau (a dashboard where all metrics are populated); sometimes these are high-level measures that are also captured on board scorecards.

Individual EBCD initiatives also have in-process and outcome metrics, which are reviewed by PCLT. EBCD scorecard metrics are reported internally only.

**Patient Education and Shared Decision Making**

Patient education and shared-decision making are pillars of evidence-based practice. The EBCD process acknowledges the patient’s role in his/her care, and care pathways are designed in a manner that provides context for clinicians and patients to practice shared decision making. This creates systematic alignment with a shared responsibility model, which accelerate EBP efforts in a patient-centered manner.

**Future Work**

The EBCD process will continue to support the PHS Quality Plan through the Quality Plan Clinical Initiatives Portfolio. Prioritized 2018 EBCD initiatives include, but are not limited to:

- Perioperative Surgical Home Initiative
- Pneumonia

Previously implemented care pathways will be updated to reflect changes in clinical evidence. These include:

- Asthma
- COPD
- Depression
- Diabetes
- Heart Failure
- Hypertension
- Low Back Pain
- OB Management
- Sepsis
- VTE

**Glossary**

**Evidence-Based Care Design (EBCD)**
A formal, evidence-driven, cross-disciplinary method for clinical workflow development, redesign, or augmentation

**Evidence-based practice (EBP)**
The use of the best scientific evidence integrated with clinical experience and incorporating patient values and preferences in the practice of professional patient care

**PCLT**
Presbyterian Clinical Leadership Team

**LEAN**
Lean-Six Sigma is a fact-based, data-driven philosophy of improvement that values defect prevention over defect detection. It drives customer satisfaction and bottom-line results by reducing variation, waste, and cycle time, while prompting the use of work standardization and flow, thereby creating a competitive advantage. It applies where variation and waste exist, and every employee should be involved. (American Society for Quality)

**Six Sigma**

**SBAR**
Summary document used to identify and document the: 1) overall summary of the situation; 2) background of the issue; 3) assessment of the solutions; and, 4) recommendation to resolve.
**SME** Subject matter expert

### Additional References

#### Clinical Care Model
- COPD Management
- Depression
- Hypertension Management
- Low Back Pain
- Sepsis
- VTE (pending)

#### Resources: PHS login required
- PHS EBCD Projects on SharePoint
- PHS Quality Plan
- EBM White Paper
- Enhancing Physicians Use of Clinical Guidelines
- Evidence-Based Practice is not Synonymous with Delivery of Uniform Care
- EBCD Level 2 Flowchart Pre-Deployment
- EBCD Level 2 Flowchart Post-Deployment

#### Additional Resources
- Lean-Six Sigma (ASQ)
- Model for Improvement (IHI)