



VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century

Smart Service Delivery Systems to support Systems of Care within VHA

Heather Woodward-Hagg, PhD

Acting Director, Veterans Engineering Resource Center
(VERC) National Program Office

Director, VA Center for Applied Systems Engineering

- **Heather Woodward-Hagg**
 - Acting Director, Veterans Engineering Resource Center (VERC)
National Program Office
 - Director, VA Center for Applied Systems Engineering
- PhD in Manufacturing Engineering (emphasis in Health Systems) from Worcester Polytechnic Institute, MS Materials Science, BS in Mechanical Engineering, BS in Ceramic Engineering
- Previously Assistant Professor, College of Engineering and Technology, Purdue University (Indianapolis) and Process Engineer at Intel

12/5/14



- Introduction to the Veterans Engineering Resource Center Program
- VA 'Future State' Service Delivery Model
- Challenges to building robust Systems of Care

What is a VERC?



VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century

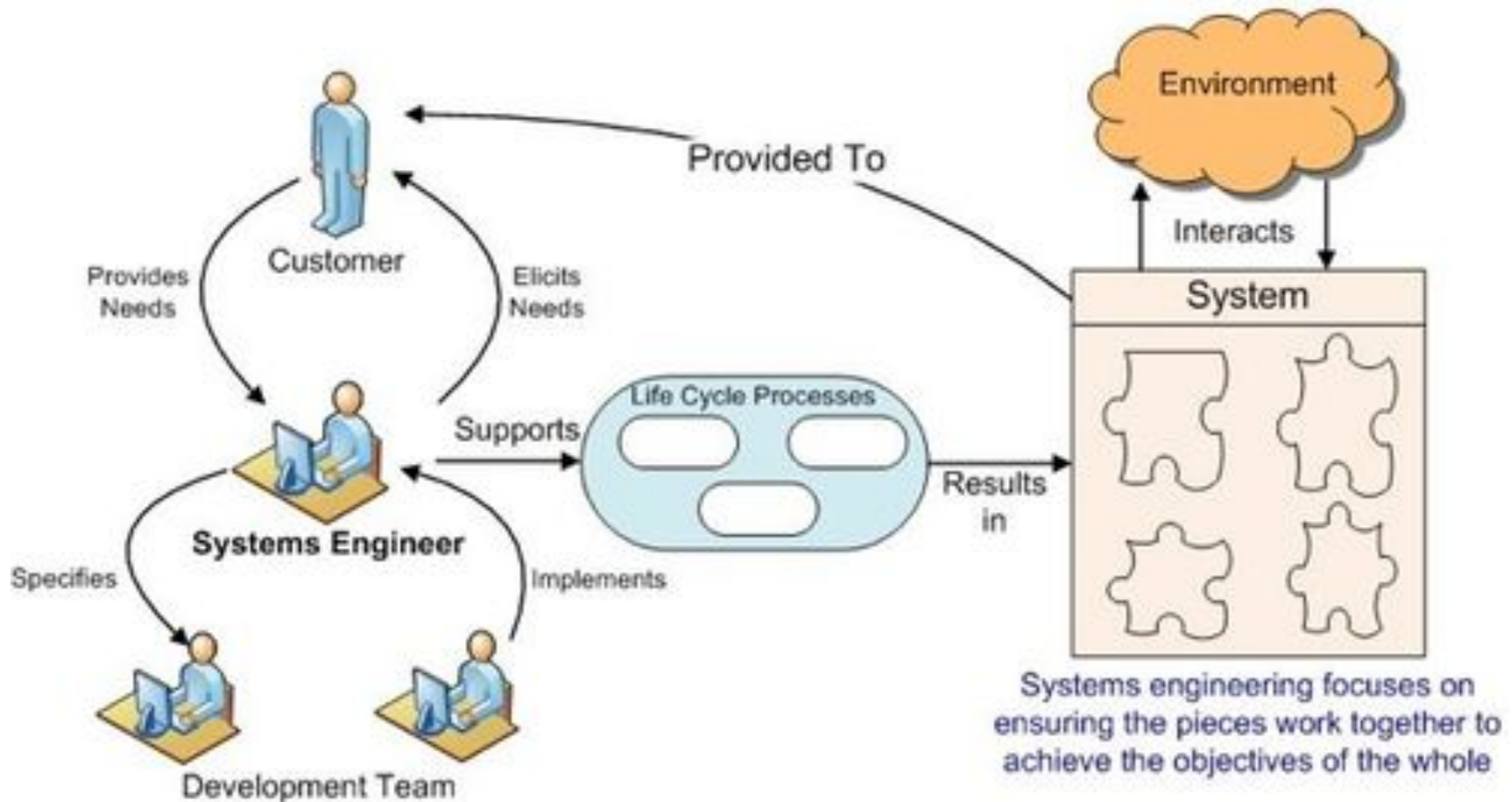
- Veterans Engineering Resource Center (VERC)
- Mission:
 - *To propose, develop, and facilitate innovative solutions to challenges within VHA healthcare delivery through the integration of systems engineering principles.*

VHA Health Systems Engineering



VA
HEALTH
CARE

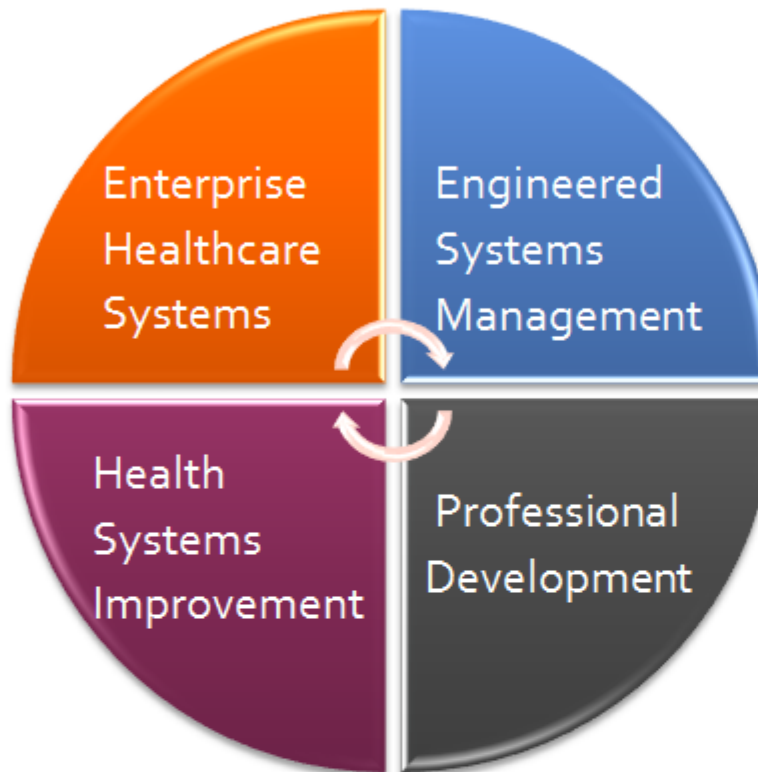
Defining
EXCELLENCE
in the 21st Century



National VERC Program Approaches



VA
HEALTH
CARE | Defining
EXCELLENCE
in the 21st Century



- **Enterprise Health Systems:** Design, analysis and control of complex, enterprise-level systems
- **Engineered Systems Management:** Develop/ deploy models processes and standards for systems management
- **Health Systems Improvement:** Application of Systems Engineering/Science methods to design, analyze and control local, targeted or bounded systems (Lean, LSS)
- **Professional Development:** Development of VHA workforce capacity in Systems Thinking

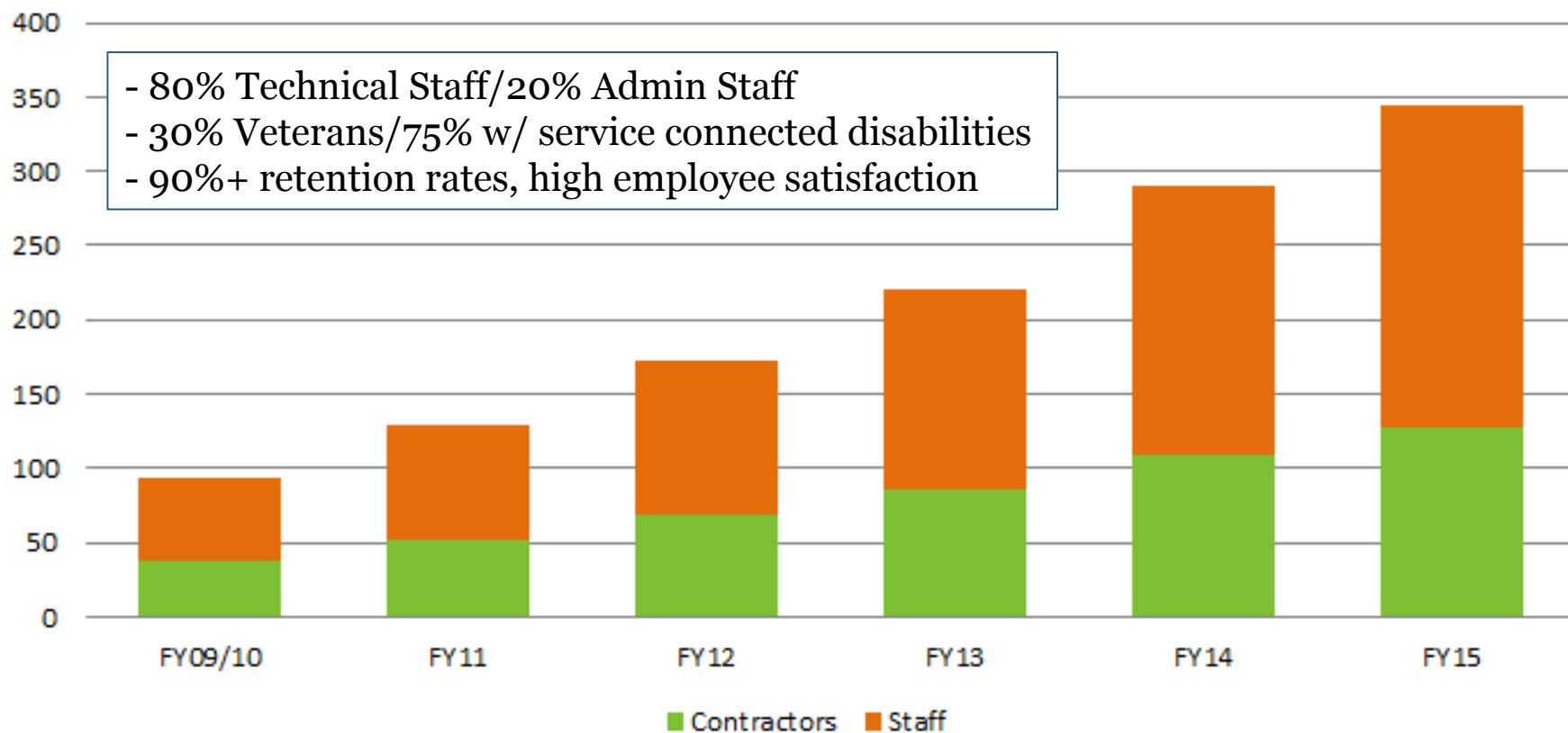
VERC Staffing by FY



VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century

Total VERC Staff (FY09-15)



VERC National Engagement



VA
HEALTH CARE

Defining
EXCELLENCE
in the 21st Century

Over 1000
engagements
across 90% of
VHA facilities.



Denotes VERC on-site support/training or engagement activity, individual markings may indicate multiple engagements

VERC Academic Partnerships



VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century



HSE Integration with VHA – Lessons Learned



VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century

- Translation of SE in healthcare is our responsibility
- Health Services Research (HSR) and Implementation Science (IS) are key
- Resiliency...lack of organizational/cultural readiness should not be an excuse/constraint
- The journey is more important than the destination!

12/5/14





VA 'Future State' Service Delivery Model

Challenges to building robust Systems of Care

Understand Experience Across the Spectrum



VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century



VBA



VHA



NCA

Veteran Experience

Employee Experience on behalf of Veteran

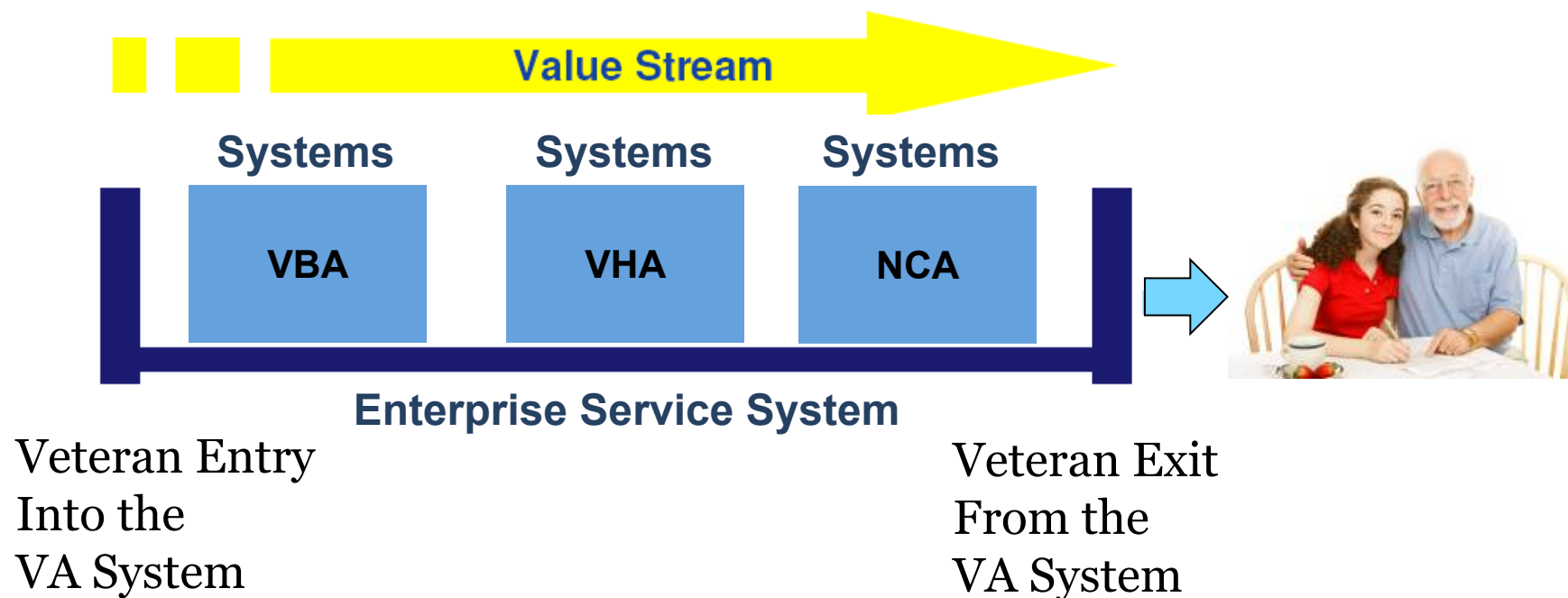
Enterprise Value Stream Defined



VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century

- All of the activities required to achieve a specific outcome from Veteran entry into the system to Veteran exit from the system



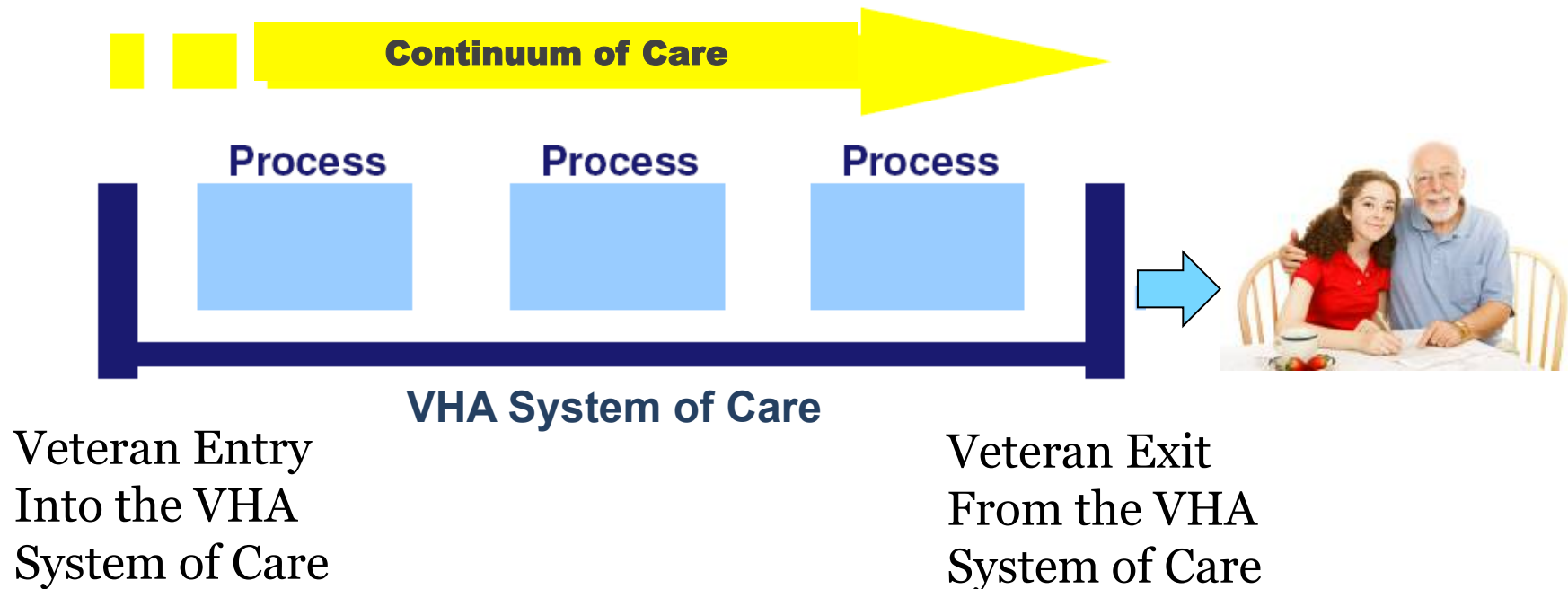
Continuum of Care Defined



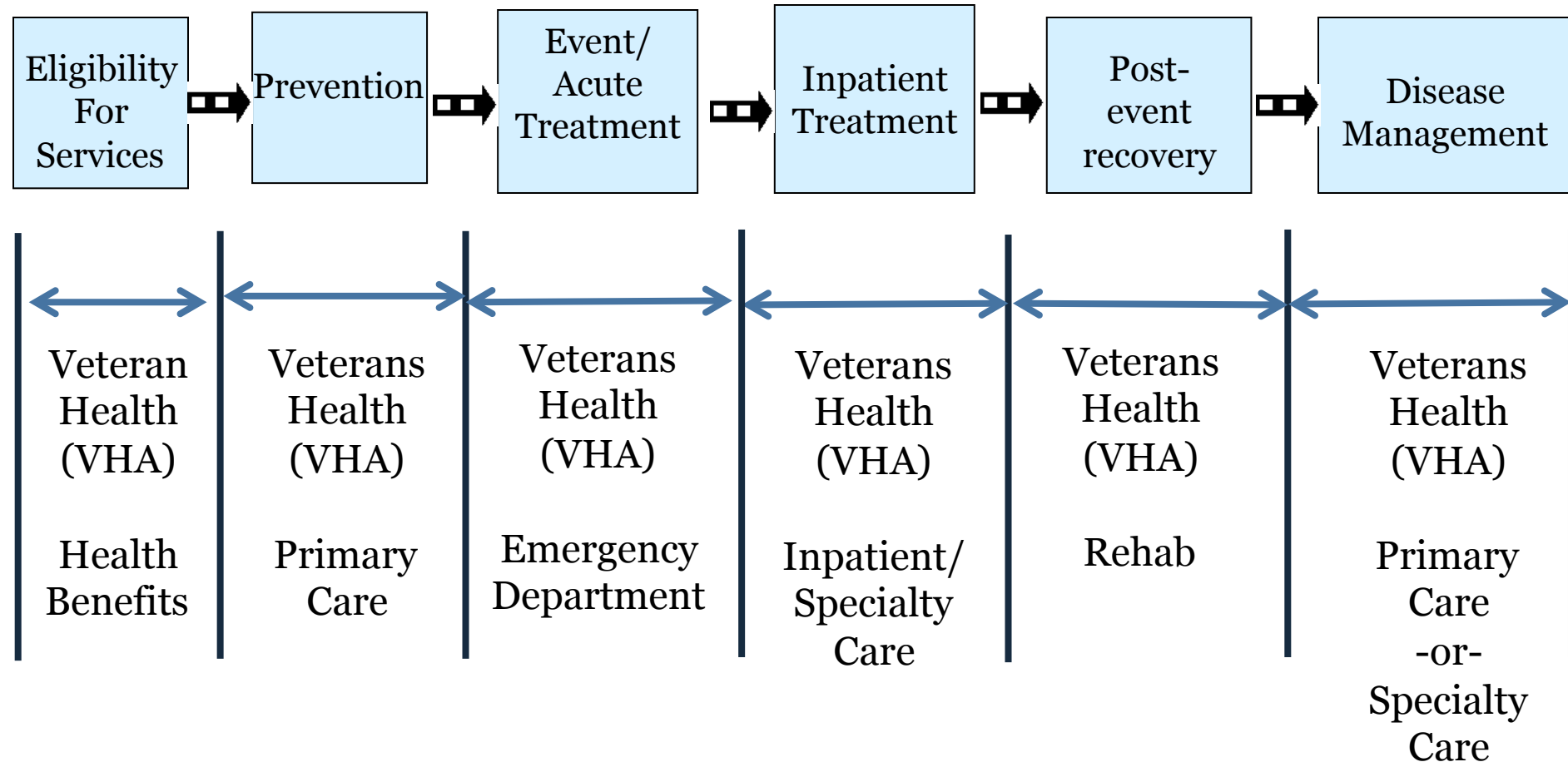
VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century

- All of the activities required to achieve a specific outcome from Veteran entry into the VHA System of Care to Veteran exit from the VHA System of Care.



VHA Systems of Care Example

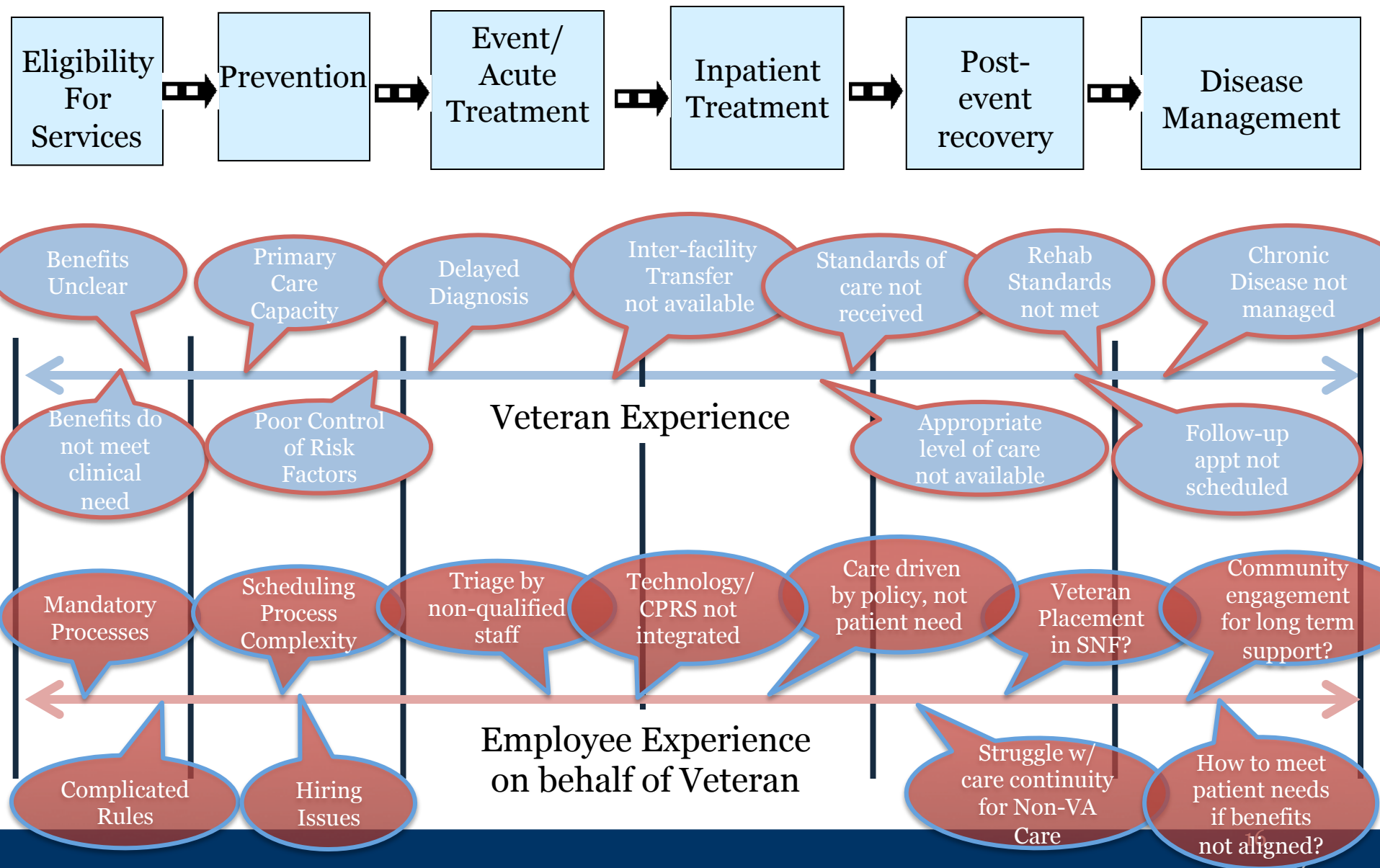


VHA Systems of Care Breakdowns



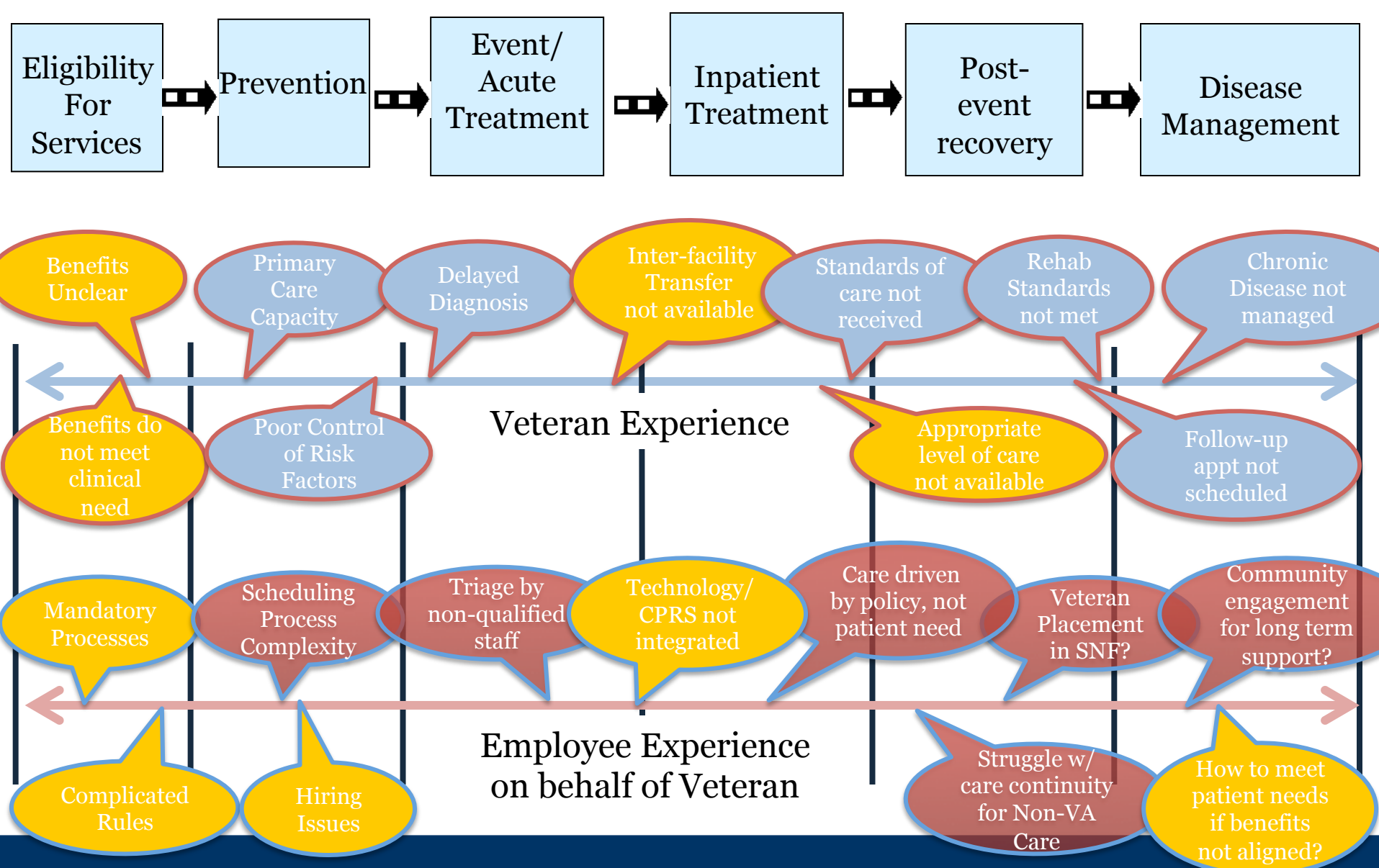
VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century





Link to Shared Services/Upstream Systems

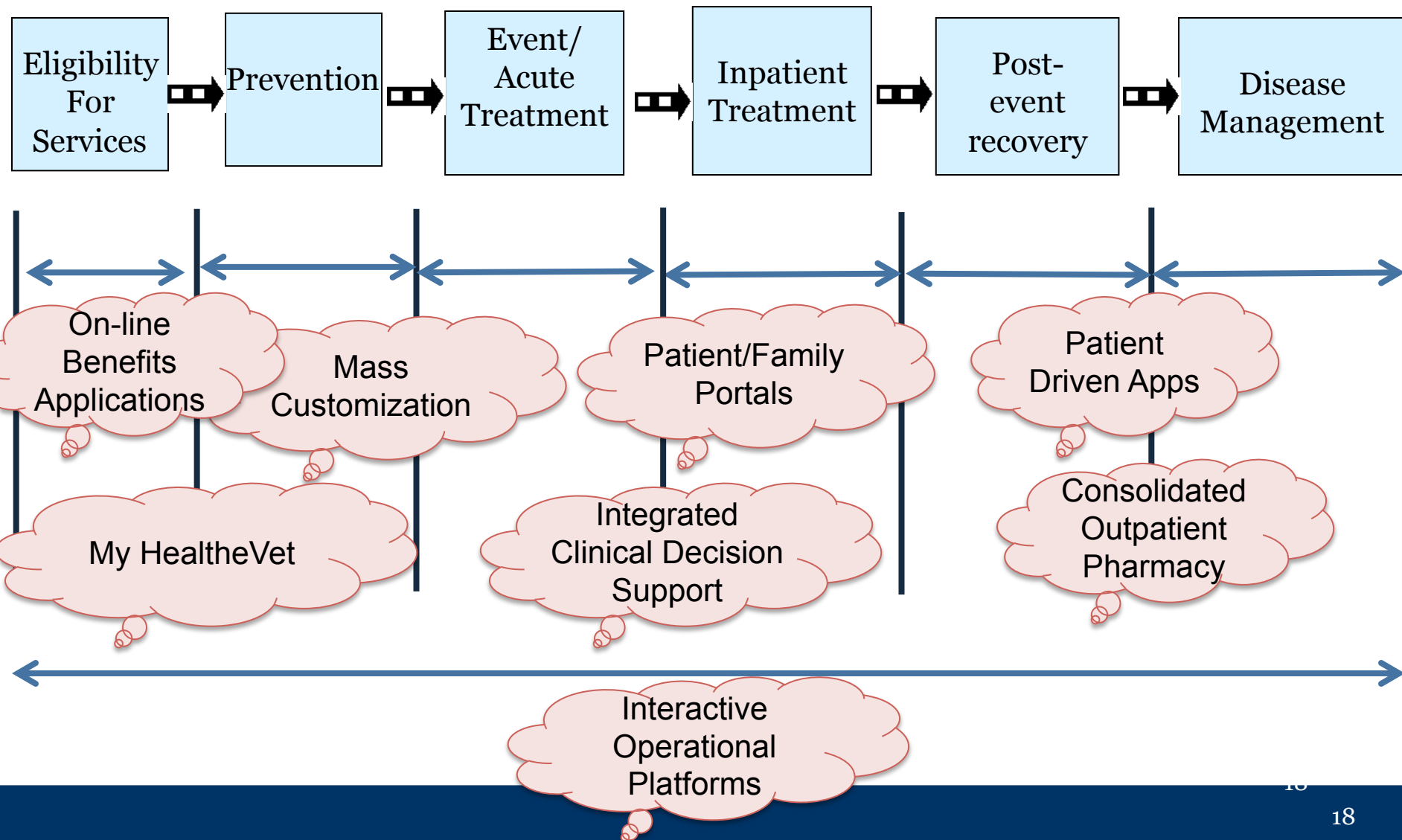


VHA Service System Examples (Current State)



VA
HEALTH
CARE

Defining
EXCELLENCE
in the 21st Century





- How to integrate VHA Systems of Care with proposed VA Service Delivery Systems?
- How to align system analysis/design/deployment approaches to insure that integration across VBA, VHA and NCA is possible?