VETERAN HEALTH ADMINISTRATION (VHA)
MEDICAL APPOINTMENT SCHEDULING SOLUTION (MASS)
Business Blueprint

November 2014
Version 2.0

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1 Introduction

The VHA Medical Appointment Scheduling System (MASS) will replace the legacy Veterans Health Information Systems and Technology Architecture (VistA) scheduling system to provide more efficient access to care for Veterans. Medical appointment scheduling is complex in that it requires coordination across one or more medical service lines while enforcing numerous business rules. VistA Scheduling was built in the early 80's as an inpatient care scheduling system with few embedded clinical delivery business rules. Today's VHA care delivery is dramatically different from the past with the majority of appointments scheduled for outpatient care. Recent movements towards home healthcare, telehealth and Veteran self-scheduling illuminated the limitations of VistA Scheduling.

This Business Blueprint supplements the Medical Appointment Scheduling System (MASS) Business Requirements Document (BRD) and further defines business needs. Although the Business Blueprint focuses on outpatient scheduling processes, VHA requires both outpatient and inpatient scheduling capabilities. VHA is currently developing additional business artifacts to illustrate the future state and describe all necessary scheduling capabilities.

2 Blueprint Structure

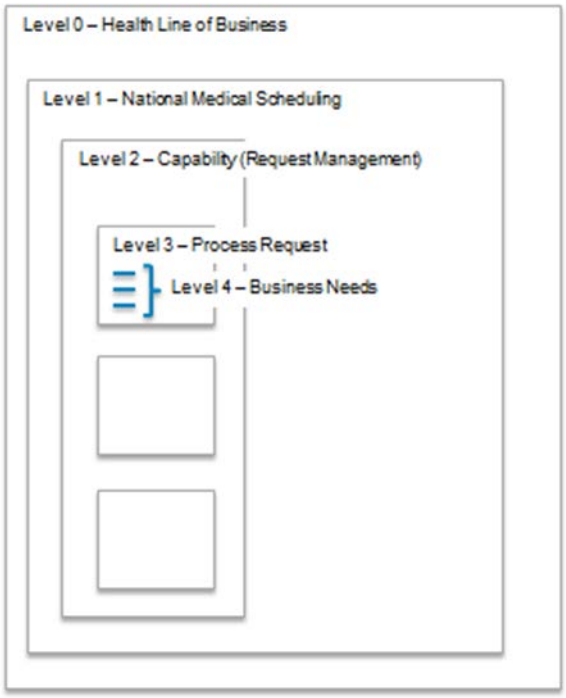
This Business Blueprint is organized based on an overarching Framework, which is divided into scheduling capability descriptions. The framework section is followed by VistA functional integration points, Acronyms, Descriptions of Terms, Configuration Items, a Business Needs Matrix, an end to end process flow and References sections. The Scheduling Capability Descriptions define the overall capabilities desired for a new scheduling solution. Each capability consists of several sub-capabilities, which are described in detail.

3 Framework

Outpatient scheduling is complex and the intersections with many other business processes has made it difficult to isolate and define. In order to define scheduling business needs, the initial step was to create a framework that established a common definition for scheduling. This provided the opportunity to discuss outpatient medical scheduling apart from the other business processes that rely on scheduling data and interactions.

The framework is a graphical representation defining VHA outpatient scheduling functions. The framework draws a boundary around scheduling and clusters similar capabilities and their sub-capabilities.

The framework represents the scheduling operation, capabilities, and business functions at four levels.

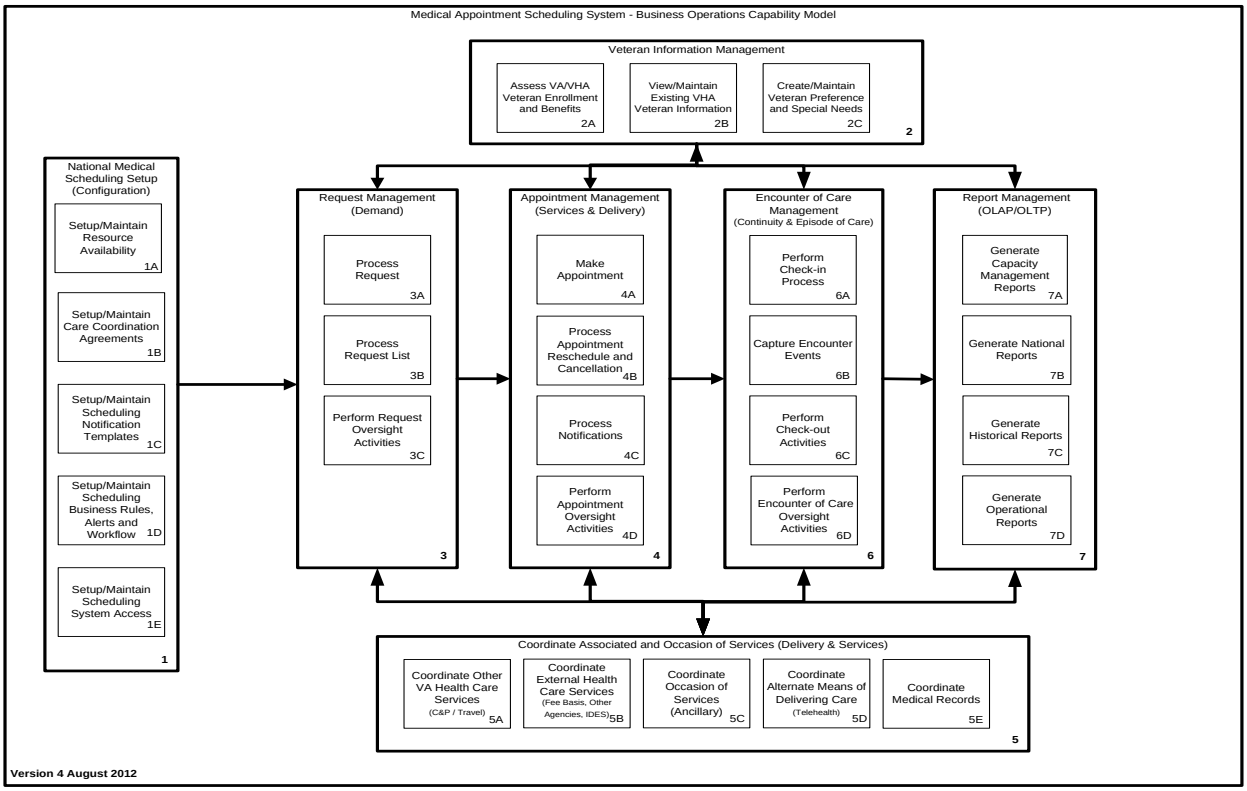


Level 0: Represented by the Health Care Line of Business. The Health Care Line of Business identifies the operational model within VA that is related to providing health care specifically. Other lines of business might be the Financial Line of Business or The Burial and Cemetery line of Business.

- Level 1: Represented as the VHA's vision of the scheduling operation, that encompass outpatient scheduling.
- Level 2: Represented by the business' capabilities for the specific grouping of activities and functions, for example, "Manage Appointment". In our framework, we have identified the following capabilities:

    1. Medical Appointment Scheduling System (MASS) Setup (Configuration)
    2. Veteran Information Management
    3. Request Management (Demand)
    4. Appointment Management (Services and Delivery)
    5. Coordinate Associated and Occasion of Services (Delivery and Services)
    6. Encounter of Care Management (Episode of Care)
    7. Report Management
- Level 3: Represented by a group of functions for each capability. For example, Manage Appointment has four functions and each has a set of business needs.
- Level 4: Represents the business needs as described in the end to end scheduling process activities, integration between the capabilities, and flow of information.

The framework serves as VHA's highest level artifact and is used as a guide to identify high-priority and VHA-unique characteristics of scheduling. The MASS Framework illustrates the Operational Capability Model for scheduling.



3.1 National Perspective

3.1.1 Vision Statement

Medical care is changing and there is an increasing need for Telehealth, rural healthcare, home healthcare and electronic access by patients. VHA seeks the opportunity to establish new patient expectations and move toward patient centered healthcare. To meet these needs and expectations, an enterprise scheduling solution is needed to provide consistent, seamless, timely and high-quality scheduling interactions for patients, providers and VHA scheduling staff. The solution must also support standardization of scheduling data and business practices with full transparency across VHA. Additionally, the enterprise solution must be flexible and extensible so that VHA can deliver scheduling solutions with agility and the capability of continuous process improvement as healthcare changes.

3.1.2 Scope

For reference, the scope of an enterprise scheduling solution must provide the following:

- Standardize and improve scheduling processes and workflows
- Provide the ability for all organizational levels to manage demand, supply and utilization of resources
- Provide the capability to standardize data and business rules across the enterprise
- Enable efficient centralized and decentralized scheduling programs
- Enable greater automation, efficiency, reliability and oversight
- Meet Congressional and other external stakeholder reporting requirements

3.1.3 Unique/High Priority Business Needs

National Level		
ID	***Feature or Characteristic***	***Measure of success***
UHPN1	VistA reporting and DSS coding must continue to support non-scheduling business processes as it currently does today	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHPN2	Timestamps to capture Veteran cycle of care and episode of care, starting from first contact with VA	Any veteran contact date / wait time or care cycle can be tracked by type of services received, time to complete requested service or segment of services received from the initial request presented by the patient
UHPN3	Capture of preferred date	Changes to preferred date are reportable
UHPN4	Proactive resource management-based scheduling that schedules staff, facilities, equipment	Ability to coordinate necessary resources at the time the appointment is made, based on predetermined configuration information
UHPN5	Patient-scheduling	Patients are able to easily request and schedule routine appointments themselves through multiple avenues, such as mobile applications and web.
UHPN6	Single view of the patient across the enterprise	Patients do not encounter delays and administrative tasks when they need to be seen away from their local center
UHPN7	Efficient, effective user interface that enables error-free scheduling of resources	Total actions for scheduler to create appointment in the solution requiring minimal navigation and training Appointments are scheduled efficiently and error free

Table 1 National Unique/High Priority Business Need

3.2 Medical Application Scheduling System Set up

3.2.1 Process Overview for Medical Appointment Scheduling System Setup

The Medical Appointment Scheduling System Setup capability establishes system operating parameters such as: provider, facility, and equipment, care coordination agreements, notification templates, business rules, alerts, workflow, and system access. These configuration items are generally referred to as “scheduling master records”. Master records are the backbone of most organizations and contain the information required to create and maintain a nation-wide "system of record" for business entities to capture business transactions and measure results for these entities. Data considered for master data management varies, but generally is categorized along the lines of customer, product, employee and vendor. For the VHA, this translates to Veteran, service, provider, facility, appointment, request, and encounter.

There are five sub-capabilities within the Setup capability:

- Setup and Maintain Resource Availability
- Setup and Maintain Care Coordination Agreements
- Setup and Maintain Scheduling Notification Templates
- Setup and Maintain Scheduling Business Rules , Alerts and Workflow
- Setup and Maintain Scheduling System Access

Each is described with the high level activities and lays the groundwork to identify more detailed processes.

3.2.2 MASS Setup Unique/High Priority Business Needs

Medical Application Scheduling System Setup		
ID	***Feature or Characteristic***	***Measure of success***
UHP1.1	Current VistA reporting and DSS coding must continue to support non-scheduling business processes as it does today	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHP 1.2	Resources, such as provider, support staff, equipment and facilities, can be configured for availability and services	When scheduling appointments, those resources required to fulfill the appointment that are available and appropriate are presented.
		Scheduling is simplified because business rules are captured during setup and used throughout the scheduling processes

Medical Application Scheduling System Setup		
ID	***Feature or Characteristic***	***Measure of success***
		Errors in scheduling are reduced because the solution prompts, warns or otherwise enforces the configured business rules
UHP 1.3	Ability to create system level configurable business rules that are leveraged throughout the scheduling process	Automation of business rules throughout the process
UHP 1.4	Access to schedule resources must be role-based, allowing for various levels of access.	Different user groups may be granted differing levels of access throughout the system, at the functional level (view appointment vs schedule appointment) and at the data level (one facility vs another, one service line vs another)
UHP 1.5	Development and sharing of templates to ease implementation	Templates for facility or service configurations can be created and shared, allowing for easy propagation of common configuration of business rules
UHP 1.6	Configuration must mirror the multi-level construct of VHA, national, VISN, Health System, Facility, Outpatient clinics, allowing for cascading of policy via business rule enforcement	A policy established at any level of the hierarchy is automatically enforced (soft enforcement with a warning, hard enforcement with a prohibition of capability) downstream

Table 2 Setup Unique/High Priority Business Needs

3.2.3 Setup Sub-Capability Descriptions

The five Setup sub-capabilities are instrumental to the scheduling solution as these foundational configuration components determine system efficiency and effectiveness. *Figure 1 - Setup (Framework View)* provides detailed descriptions of the five Setup sub-capabilities. These descriptions define the importance of each sub-capability and how these sub-capabilities

contribute to the overall Setup capability.

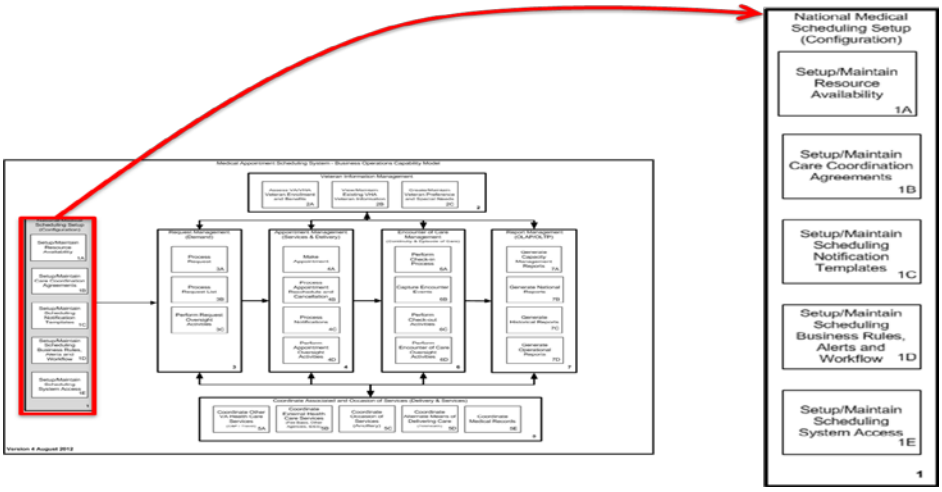


Figure 1 - Setup (Framework View)

MEDICAL APPOINTMENT SCHEDULING SYSTEM (MASS) SETUP SUB-CAPABILITIES		
BN1 The Medical Appointment Scheduling System Setup capability establishes configurable operating parameters, such as: providers, facilities and equipment, care coordination agreements, notification templates, business rules, alerts, workflow, and system access. While some entities are established at the national level, other parameters such as workflow, alerts and templates may be tailored at VISN and facility. National standards would be enforced to ensure accurate data exchanges and consistent reporting results.		
BN1A	Setup and Maintain Resource Availability	Setup and Maintain Resource Availability creates and maintains the type of resources to be used throughout the scheduling process. Resources consist of facilities, rooms, equipment and providers, and the creation and maintenance of configurable components such as service lines, modes of delivery, appointment durations which are required for the scheduling process. Defined resources comprise a critical aspect that ties not only to scheduling Veterans, workforce utilization, but also sustaining VistA systems such as the revenue processes (Decision Support System (DSS)).
BN1B	Setup and Maintain Care Coordination Agreements	Setup and maintain Scheduling Care Coordination Agreements provides a means of defining and maintaining workflow rules between any two or more services that send work to one another. A care coordination agreement establishes a protocol to use resources according to provider or service line guidelines; this work aid will guide schedulers throughout the scheduling process. A framework of agreements may be created at a National level, but VISNs and facilities may require a certain level of flexibility to tailor agreements to meet unique needs and goals.
BN1C	Setup and Maintain Scheduling Notification Templates	Setup and maintain Scheduling Notification Templates establishes a library of standardized template types for all outbound communication between VHA and Veterans. This sub-capability also integrates with various delivery types such as mobile applications, secure messaging, mail, email, and personal phone calls with Veterans.
BN1D	Setup and Maintain Scheduling	Setup and maintain Scheduling workflow, Business Rules, and alerts

MEDICAL APPOINTMENT SCHEDULING SYSTEM (MASS) SETUP SUB-CAPABILITIES		
	Business Rules, Alerts and Workflow	establishes overarching parameters that ensure consistent scheduling practices by controlling the configuration of business rules, alerts, and workflow.
BN1E	Setup and Maintain Scheduling System Access	Setup and maintain Scheduling System Access establishes user access roles, permissions and rules at a national level. Flexible assignments of system access roles to users supporting the scheduling process should flow to the VISN or facility levels.

Table 3 Setup Sub-Capabilities

3.2.4 Components of Setup

Medical Appointment Scheduling System is expected to require the definition of specific scheduling elements including scheduling resources, care coordination agreements, scheduling templates, alerts and workflow, and scheduling system access. Each must be identified and defined not only in regard to making appointments, but also whether it is used by other downstream systems. The table of configured items shown below is preliminary. It is expected that the complete list will be identified and incorporated into the setup processes. This table depicts business uses. Definitions are in the Terms and Definitions section.

MEDICAL APPOINTMENT SCHEDULING SYSTEM CONFIGURED ITEMS	
Request Types	Used to differentiate requests for care for the purposes of applying business rules
Appointment Types	Used to determine resources required for care delivery. Will be analogous to VistA appointment types
Service Types	Used to determine resources required for care delivery and the application of business rules
Facility Types	Also referred to as Administrative entity tree, used for rolling up data to high level organizations, depicts business relationships between facilities
Equipment Types	Scheduled resource used in the delivery of care, such as MRI, dental chair.
Room Types	Scheduled resource, used for the delivery of care, depicts a physical location
Health care Delivery Types	Modes of care delivery determined at time of appointment scheduling, such as home health, face to face, phone, mobile unit
Types of Providers	For the determination of ability to satisfy the care request, such as Doctor, Nurse Practitioner, Nurses Aid
Veteran Types	Based on special designations beyond priority grouping, such as OEF/OIF
Master Templates/Letters/Forms/ Notifications	Standard set of products for dissemination throughout organization
Alerts	Informational, Caution and Warnings presented to system users
Workflow	Series of tasks required to satisfy a work unit. Configured at a level within the organization that will then be enforced at lower level of organization

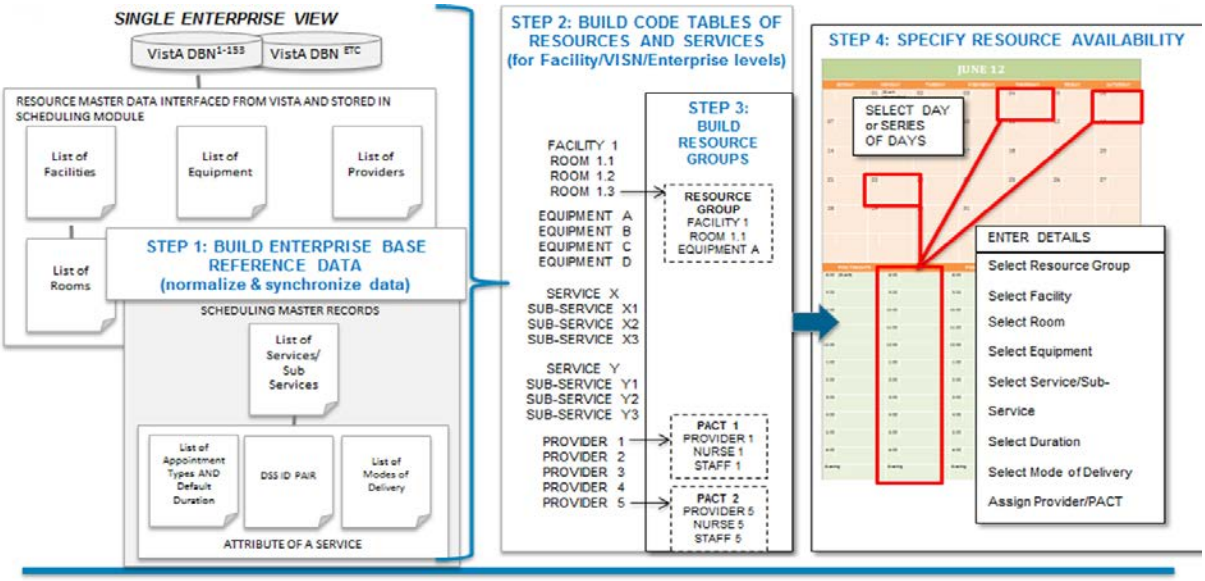
Table 4 Medical Appointment Scheduling System Configured Items

3.2.5 MASS System Setup Process Flows and Business Needs (1)

VHA requires the ability to maintain a high-level partnership agreement with integrated VistA modules to ensure consistent system operability with scheduling and non-scheduling systems. The business requires the ability to configure and maintain system-operating parameters to ensure standards at a national level, and the ability to tailor at VISN, facility and service line levels.

3.2.5.1 Setup and Maintain Resource Availability (1A)

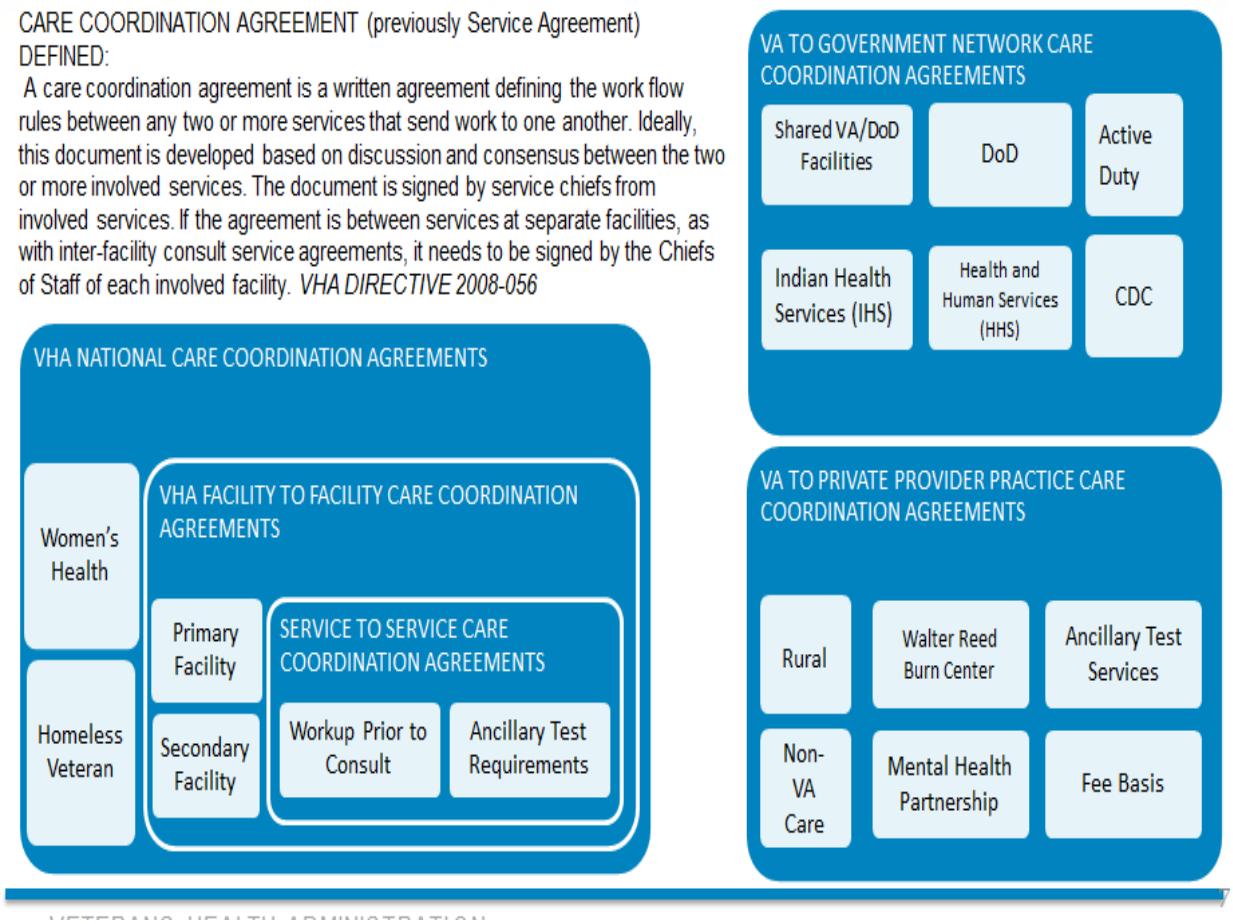
Figure 2 - Setup and Maintain Resource Availability Process Flow



VHA requires the ability to determine, create and maintain resources such as facility, room, equipment, support staff and provider to be used throughout the scheduling process. The business requires the ability to create and maintain configurable components (e.g., service lines, modes of delivery, appointment durations, etc.) necessary for the scheduling process. The business requires the ability to use pre-defined resources when scheduling Veteran appointments and creating provider schedules. The ability to associate data within the MASS will allow for sustainment of current processing within VistA and other systems.

3.2.5.2 Setup Maintain Scheduling Care Coordination Agreements (1B)

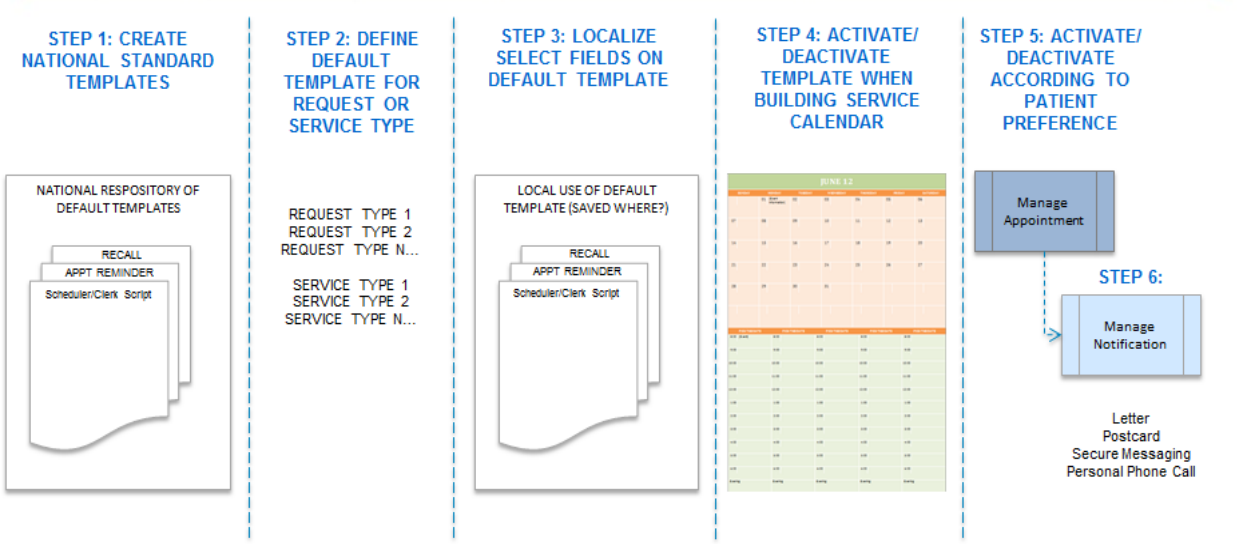
Figure 3 - Setup Maintain Scheduling Care Coordination Agreements Process Flow



The business requires the capability to create a national framework of care coordination agreements to support the establishment of protocols to use resources according to provider or service guidelines; and to serve as a work aid for schedulers throughout the scheduling process. VISNs and facilities require a certain level of flexibility to tailor agreements to meet unique informational goals.

3.2.5.3 Setup and Maintain Scheduling Notification Templates (1C)

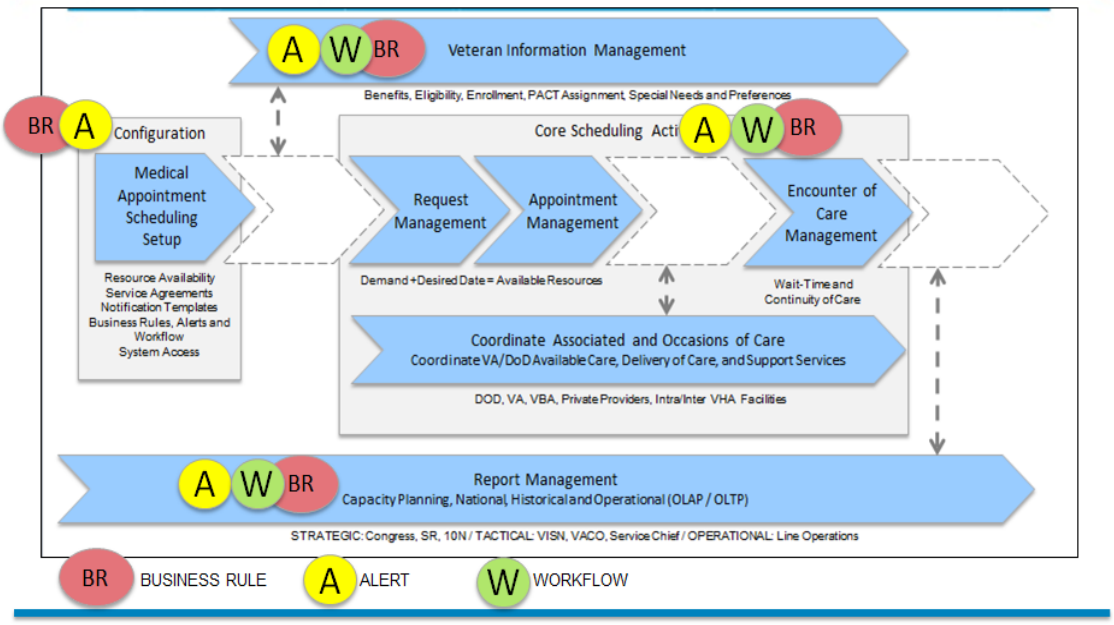
Figure 4 - Setup and Maintain Scheduling Notification Templates Process Flow



The business requires the ability to use clear, accurate, consistent, and targeted messages by standardizing notification templates to be used for outbound communications between VHA, healthcare stakeholders, and Veterans with various delivery types such as mobile applications, secure messaging, mail, email, and personal phone calls with Veterans.

3.2.5.4 Setup and Maintain Scheduling Business Rules, Alerts and Workflow (1D)

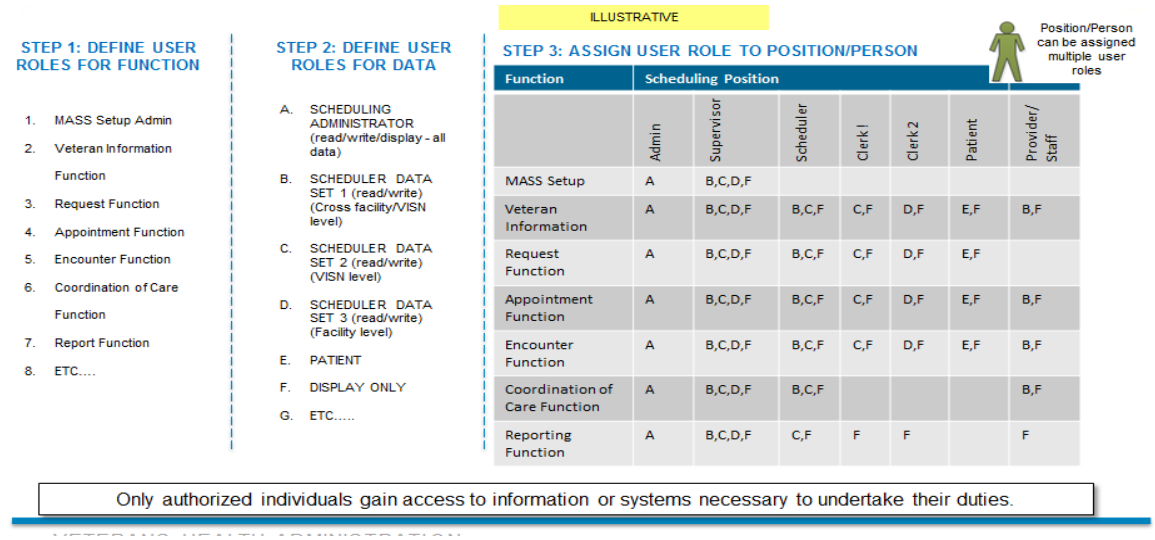
Figure 5 - Setup and Maintain Scheduling Business Rules, Alerts and Workflow Process Flow



The business requires the capability to establish and report on overarching parameters to ensure consistent scheduling practices by controlling the configuration of business rules, alerts, and workflow.

3.2.5.5 Setup Maintain Scheduling System Access (1E)

Figure 6 - Setup and Maintain Scheduling System Access Process Flow



The business requires the ability to establish user access roles and rules at a national level, and the flexibility to assign/unassign users performing scheduling transactions to established security roles.

3.3 Veteran Information Management

3.3.1 Process Overview for Veteran Information Management

The Veteran Information Management capability provides access to a common set of Veteran-related information (such as demographics and eligibility). The capability accommodates integration with other business units or organizations inside VA/VHA, with geographically dispersed health care location across VA regions, between VA and community based partners, and with other government partners. Veteran special needs and preferences shall be accessible and able to be updated. There are many situations throughout the end-to-end scheduling process where Veteran information is accessed and modified. Verifying identity, eligibility and enrollment while fielding requests for care, scheduling appointments and during the encounter are among the most frequent actions, and require current information from authoritative sources. Additionally, this information must be available to external partner organizations as permitted by policy and security regulations.

VHA envisions a 'Single View of the Veteran' to ensure continuity of care and capture encounter of care by treatment protocols. The scheduling capability needs to provide consistent and automated access to near real-time Veteran data across independent 130 VistA instances (stand-alone versions of the scheduling system) to provide visibility and scheduling at any location from any other location in accordance to the business rules and security policy.

The Austin Information Technology Center (AITC) controls the Master Veteran Index (MVI) where the majority of Veteran information is stored. Today, local VistA instances synchronize data to the MVI through various background processes. However, these processes are not run simultaneously when a change is made; therefore if a Veteran's data is updated in a facility, other systems may not know about the update. One result of delayed updates can be that if a Veteran goes to another facility, the demographic data may be incomplete - resulting in potential gaps in medical care information.

3.3.2 Manage Veteran Information Unique/High Priority Business Needs

Manage Veteran Information		
ID	***Feature or Characteristic***	***Measure of success***

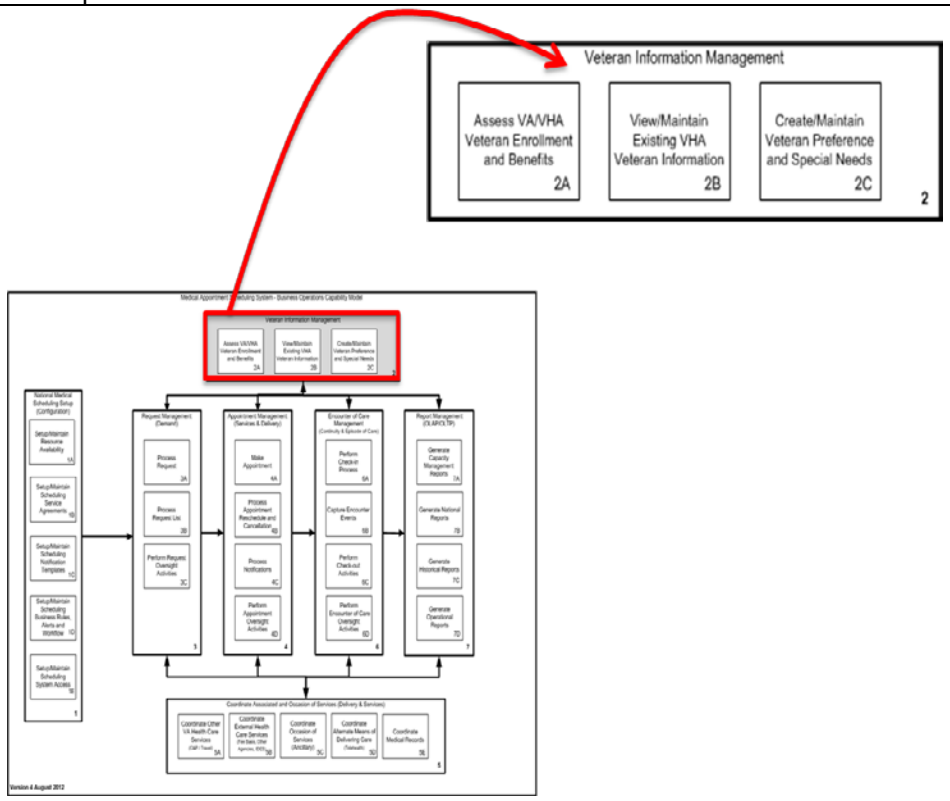
Manage Veteran Information		
ID	***Feature or Characteristic***	***Measure of success***
UHP 2.1	VistA reporting and DSS coding must continue to support non-scheduling business processes as it currently does today	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHP 2.2	The scheduling solution shall capture special needs and preferences for each patient	Schedulers can easily identify patients with special needs and preferences and use this information throughout scheduling processes
UHP 2.3	Patient information must be consistent with other VA data about the patient	The same patient data update does not have to occur more than once because the initial update was not propagated
UHP 2.4	Patient information is shared with any facility where the patient will be seen	Patients scheduled in a facility that is not their preferred facility will have the patient information at the time of service
UHP 2.5	VHA eligibility and enrollment data must be integrated into scheduling process	Scheduling process takes into consideration the eligibility of the patient throughout the scheduling process
UHP 2.6	The scheduling solution shall allow patients to schedule appointments at any facility based upon service line permissions and patient permissions	The patient can access their personal information and applicable lists of available appointments for any facility
		The patients can schedule an appointment at any facility
UHP 2.7	New, easily accessible reporting capability allowing for broader analysis (across VHA) and deeper analysis (category of patient, condition, era, etc.) of scheduling performance	Easily accessible data for trend analysis across the VA (broad analysis) as well as deep analysis for specific conditions or populations

Table 5 Manage Veteran Information Unique/High Priority Business Needs

3.3.3 Capability Model Description

Veteran Information Management contains three sub-capabilities described in *Figure 7 - Veteran Information Management (Framework View)* which outlines how they contribute to the overall Veteran Information Management concept.

Figure 7 - Veteran Information Management (Framework View)



VETERAN INFORMATION MANAGEMENT SUB-CAPABILITIES		
BN2 The Veteran Information Management capability provides access to a common set of Veteran-related information (such as enrollment, eligibility, benefits, and registration). The capability accommodates integration with other business units or organizations inside VA/VHA, with geographically dispersed health care location across VA regions, between VA and community based partners, and with other government partners. Veteran special needs and preferences shall be captured, stored and made accessible throughout scheduling processes.		
BN2A	Assess VA/VHA Veteran Enrollment and Eligibility	Assess VA/VHA Veteran Enrollment and Benefits enables access to view eligibility determination provided by the VBA and CBO (such as enrollment, eligibility, priority group, service connection, and means test status, insurance, and travel benefits) from a single authoritative source.
BN2B	View/Maintain Existing VHA Veteran Information	View and Maintain Existing Veteran Information provides the ability to view, establish and maintain existing Veterans' provider assignments. User is alerted when it is necessary to confirm or complete data.
BN2C	Create/Maintain Veteran Preference and Special Needs	Create and Maintain Veteran Preference and Special Needs sub-capability provides the ability to capture, store and access critical patient healthcare preferences (such as preferred appointment days and time, preferred provider, and language assistance) and special needs (such as transportation, escort services, and handicap assistance). User is alerted when the need to coordinate additional services is required.

Table 6 Veteran Information Management Sub-Capabilities

3.3.4 Examples of Common Veteran Information Situations

Managing Veteran Information is shown in a variety of situations as illustrated in *Table 7 Common Veteran Information Management Situations*.

EXAMPLES OF COMMON VETERAN INFORMATION SITUATIONS	
View/Maintain Existing VHA Veteran Information: It is VHA policy that Veterans enroll once into VA's health care system and are continuously enrolled. Enrolled Veterans may seek care at any VA facility without being required or requested to reestablish eligibility for VA health care enrollment purposes.	
New to VHA	Outside of the scheduling application, the VA eligibility center enacts processes to establish (enroll) a Veteran. Part of enrollment includes eligibility criteria and includes the Means Test (income and geographic determiners). The output from the eligibility process goes to the Health Eligibility Center Systems, and to the Master Veteran Index, which assigns a unique ID system number used by scheduling and other systems. This information must be available to the scheduling solution upon initiation of scheduling. If the Veteran is not enrolled, the process needs to accommodate adding a Veteran in a temporary manner and then associate data to the enrolled Veteran later.
Updating Veteran Demographics	Demographic data is verified per policy and security practices throughout Veteran interaction with VHA. When Veteran demographics are updated, the updates should be processed real time and made available to MASS. The Veteran should not be required to continually update the same demographic information throughout the same encounter/visit event.
Deceased Veteran	When a Veteran is deceased, yet still has appointments for care, those appointments must be cancelled. The Manage Veteran Information process will receive the update to the Veteran's status from the authoritative source, and create a workflow item for scheduling staff to process the appointment cancellation(s). The scheduling solution should then recognize the Veteran as deceased and prevent any future accidental appointment scheduling.
Register Veteran with New Facility	Veteran information must be available across the entire VHA to allow for seamless scheduling of Veterans without the need to engage the Veteran to provide repetitive registration information at each facility.
Create/Maintain Primary Care Provider Assignment:	
Create/Modify Primary Care Assignment	A single primary care provider must be assigned to each Veteran. This assignment occurs outside of the scheduling system. Additional primary care providers may be established for a Veteran for each facility in which the Veteran receives care.
Create/Maintain Veteran Preference and Special Needs:	
Create/Modify Preferences and Special Needs	Preferences or special needs may be different for a Veteran at different facilities. For example at one facility, a Veteran may need assistance finding parking in busy lots. That same Veteran may not need the same accommodation at another facility. The preferences and specials needs should be searchable and sortable, and have ranking by priority. The ability to keep preferences and special needs current and visible will help provide a more Veteran-centered experience. VistA patient flags must be accessible to the scheduling processes as well. This is a fixed set of flags associated with the Veteran that currently resides in VistA.

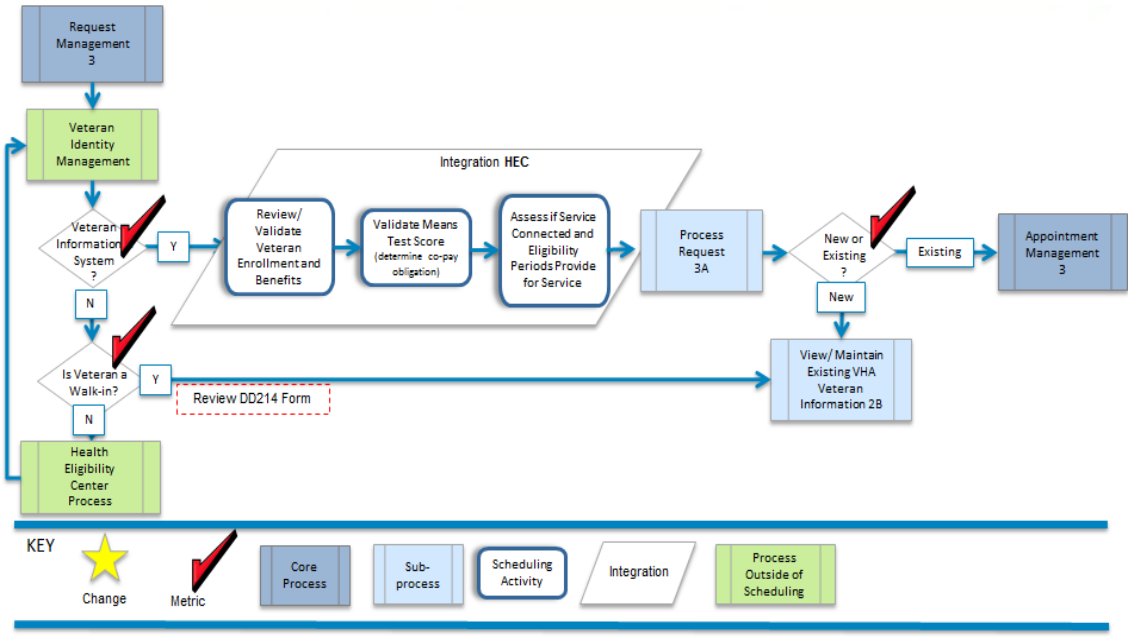
Table 7 Common Veteran Information Management Situations

3.3.5 Veteran Information Management Process Flows and Business Needs (2)

The business requires access to a common set of Veteran-related information (such as enrollment, eligibility, benefits, and registration). The business requires access to other business units or organizations inside VA/VHA, with geographically dispersed health care location across VA regions, between VA and community based partners, and with other government partners. The business requires the ability to access and update Veteran special needs and preferences.

3.3.5.1 Assess VA/VHA Veteran Enrollment and Benefits (2A)

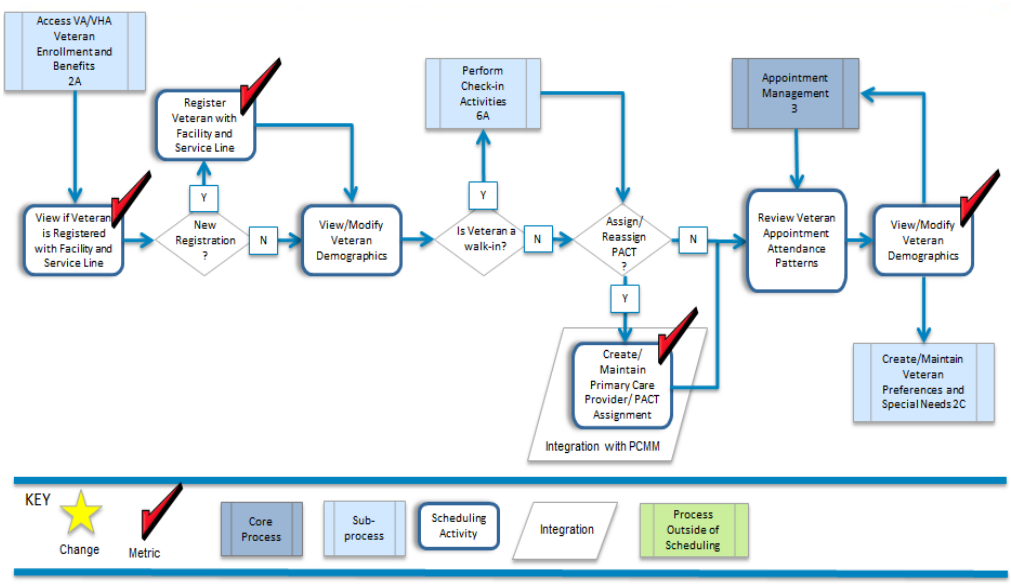
Figure 8 – Assess VA/VHA Veteran Enrollment and Benefits Process Flow (2A)



VHA requires the ability to view enrollment and eligibility information, to include priority group, provided by the single authoritative source, the enrollment system.

3.3.5.2 View/Maintain Existing Veteran Information (2B)

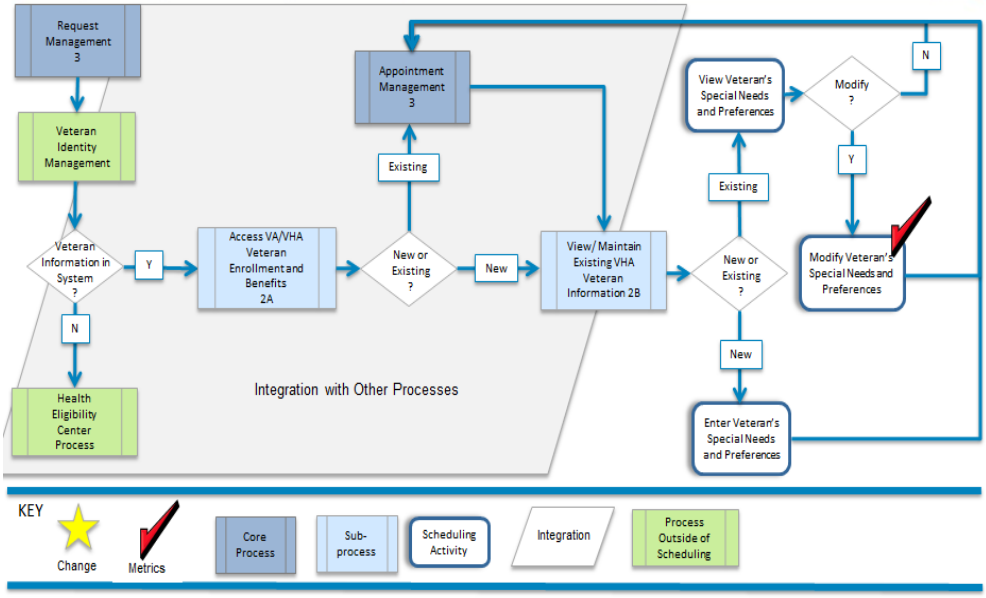
Figure 9 - View/Maintain Existing Veteran Information Process Flow (2B)



VHA requires the ability to view, establish and maintain existing Veteran assignments (such as one or more facilities within or outside of VA, service lines, and PACT). VHA also requires user alerts when information is incomplete or out of date (such as demographics) from a single data entry screen.

3.3.5.3 Create/Maintain Veteran Preference and Special Needs (2C)

Figure 10 - Create/Maintain Veteran Preference and Special Needs Process Flow (2C)



VHA requires the ability to capture, maintain, and access patient healthcare preferences (such as preferred appointment days and times, preferred provider, and language assistance) and special needs (such as transportation, escort services, and handicap assistance) when scheduling an appointment. VHA also requires user alerts when the need to coordinate additional services is required. VistA patient flags must be accessible by the scheduling processes.

3.4 Request Management

3.4.1 Process Overview for Request Management

The Request Management capability initiates the scheduling process with a request for care. The date a request is submitted and the Veteran's preferred date are key components to be captured during the request process. Requests are entered from a variety of input sources (such as web, mobile applications, email, phone, and other communication modes) using a standard set of information to be processed, tracked and reported.

Requests are routed differently at each facility, yet the basic process is the same. VHA will set and monitor performance standards and guidelines for request processing. Requests are received, assessed, and routed. How they are received, criteria for assessment, routing rules and practices, and workflow are all driven by business rules and practices unique to a facility.

Part of the Request Management capability is Process Request List. VHA envisions a consolidated list to contain what are now several non-integrated lists. It is anticipated that having more efficient processes to match patient medical needs with available resources will reduce patient wait times (how long the Veteran must wait for care calculated from their preferred date.)

The Perform Request Oversight Activities sub-capability encompasses a variety of management tools and techniques to report operational efficiencies or deficiencies in near real-time (such as time to process new requests, accuracy of capturing preferred date, performance against National, VISN and facility standards, etc.)

The goal of this capability is to capture and track the demand for care, track how the VHA is meeting the Veterans' preferred dates, incorporate supply and demand management and use metrics to reduce the amount of time Veterans wait for care.

3.4.2 Request Management Unique/High Priority Business Needs

Request Management		
ID	***Feature or Characteristic***	***Measure of success***
UHP 3.1	VistA reporting and DSS coding must continue to support non-scheduling business processes as it currently does today	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHP 3.2	Able to capture requests for service from multiple sources, to include NEAR, EWL, Recall, patient, providers	All current list purposes are captured and maintained
UHP 3.3	Patients are able to request care using different modes such as email, web access, mobile applications, etc.	Patients can request appointments via different modes such as email, web access, mobile applications, etc. Routine or follow up appointments are easily scheduled without error by patients without the aid of a VA scheduler
UHP 3.4	Robust capability to manage multiple sources of requests to achieve appointment fulfillment rate standards	Schedulers can create appointments directly from the list to improve efficiency rates, reduce data and scheduling errors, provide traceability and ensure accountability of all list entries

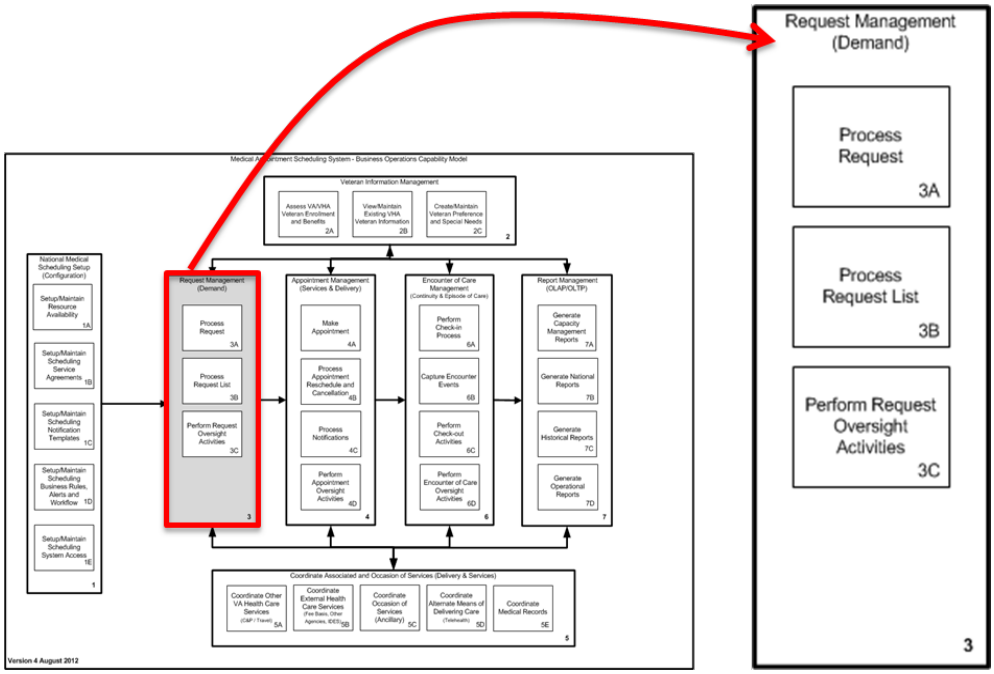
Request Management		
ID	***Feature or Characteristic***	***Measure of success***
UHP 3.5	Able to track all dates associated with any services from VA. Dates/times should be system-protected and not changed, reportable, auditable	When VA can track all patient interactions with VA services from first contact to the end of provided care. Dates/times should be system-protected and not changed

Table 8 Request Management

3.4.3 Capability Model Description

Request Management is comprised of three sub-capabilities as illustrated in *Figure 11 - Request Management (Framework View)*.

Figure 11 - Request Management (Framework View)



REQUEST MANAGEMENT SUB-CAPABILITIES
BN3 The Request Management capability begins with a request for care from a Veteran, or a provider on behalf of a Veteran. The Veteran's preferred date is one of the key components to be captured during the request process. Requests are entered from a variety of input sources (such as web, mobile, email, phone, and other communication modes) creating a standard view of information to be processed, tracked and reported.

REQUEST MANAGEMENT SUB-CAPABILITIES		
BN3A	Process Request	The Process Request sub-capability provides users the ability to enter requests for care and preferred date from a variety of input sources (such as web, mobile application, email, phone, and other communication modes) in a standard format. The request is then processed to determine which service is initially required, with what priority, and in accordance with preferred date.
BN3B	Process Request List	The Process Request List sub-capability involves the generation and management of an all-inclusive list of patient requests, including those that have yet to be scheduled into an appointment for care and those that have been scheduled. Managing one standard, consolidated, sortable, searchable list by patient or by service streamlines the process of matching patient medical needs with available resources. Additionally, a comprehensive, searchable, persistent request enables the VA to 1) ensure all care requests are fulfilled in a timely manner, 2) ensure a continuous process between requests and appointments that eliminates redundant input of data and disconnects between process steps; 3) enables monitoring of demand fulfillment.
BN3C	Perform Request Oversight Activities	The Perform Request Oversight Activities sub-capability encompasses a variety of proactive management tools and techniques to 1) develop a comprehensive view of demand for care; 2) monitor the request processes and capability to report operational efficiencies or deficiencies in near real-time from service-line to national level; and 3) leverage industry best practices for management of supply and demand.

Table 9 Request Management Sub-Capabilities

3.4.4 Examples of Common Request Management Situations

Table 10 Common Request Management Situations illustrates how request management occurs in the course of outpatient scheduling.

EXAMPLES OF COMMON REQUEST MANAGEMENT SITUATIONS	
Request Management: The Request Management capability initiates the scheduling process with a request for care. VHA needs the ability to track and report the origin of requests. This capability tackles weaknesses in the current process, particularly the existence of multiple lists, requiring manual and error-prone processes to manage. The ability to manage one list will allow VHA to more accurately track demand to supply and better manage capacity. All care delivery starts with a request for care. The request is the core element in the appointment lifecycle that captures critical information such as the initiation of the request; patients' preferred date, actions taken to fulfill the request.	
Urgent Request for Care	Supports a scheduler receiving an urgent request from a Veteran. Business rules assist the scheduler in determining actions, such as scheduling a same day appointment, directing to triage process.
Non-urgent Request for care	Receive requests from one of several sources (Veterans, providers, other VistA data sources, and via on-line mechanisms) and allow the scheduler to assess the request and take the appropriate action to capture the request, and act upon according to

EXAMPLES OF COMMON REQUEST MANAGEMENT SITUATIONS	
	business rules.
Request Entered into Care Request List	Capture and access an all-inclusive list of requests for care that have not been fulfilled. The goal is to consolidate all requests for care and prioritize processing of requests based upon established business rules.
Manage Care Request Lists: VHA needs a consolidated view of requests for care. The consolidated list needs to be sortable, searchable, routable and able to be updated. The consolidated list will be used for decision making, capacity planning and for performance measurement reporting. The consolidated list will need to incorporate the lists below.	
New Enrollee Appointment Request (NEAR) Call List	The NEAR Call List is a tool used by enrollment staff to communicate to primary care management coordinators or schedulers at the Veteran's designated preferred location that a newly enrolled Veteran has requested an appointment during the enrollment process.
Electronic Wait List (EWL)	The EWL is the official VHA wait list used to track and manage Veterans waiting to be scheduled, which consists of newly registered, Newly enrolled, new consult requests for Veteran waiting for their first scheduled appointment, or waiting for a panel assignment. In general, the EWL is used to keep track of Veterans with whom the clinic does not yet have an established relationship and cannot be scheduled in target timeframe.
CPRS	Requests may also be received from VistA Applications (e.g. CPRS). CPRS is the GUI in VistA where requests for Consults and Service Orders are entered and received. Currently there is a consult package that tracks requests for care between specialties. Return to clinic orders are recorded in CPRS, in progress notes and other fields.
Recall/Reminder	The recall/reminder software application is used for Veterans with whom the service has an established relationship. Typically used when the requested follow-up appointment date is greater than 3 to 4 months into the future.
Veteran Appointment Request Application	This is a mobile application under development that allows established Veterans to request and/or make appointments with their primary care provider or mental health professional. This is anticipated for deployment in 2015.
Perform Request Oversight Activities Oversight activities are the tasks performed by personnel responsible for keeping the outpatient scheduling processes running smoothly. Activities will include running reports to ensure requests for care are being fulfilled in accordance with national and local policy, monitor aging of requests, and assess demand over time in order to adjust resource supply. Request oversight provides tools to manage day-to-day operations to include filling open time with those waiting for earlier appointments, a walk-in, and expedient processing of requests in backlog.	
Activities	A supervisor wants to check the status of the facility and how quickly new requests are being processed, run daily reports to show how well the facility provides an appointment by the preferred date. A manager wants to see the demand for care, by service line, over a specified period A manager wants to see all requests for care that are awaiting action A user wants to see all requests assigned to him/her for action A manager wants to track status of Non VA care requests A user wants to prioritize a list of requests for processing

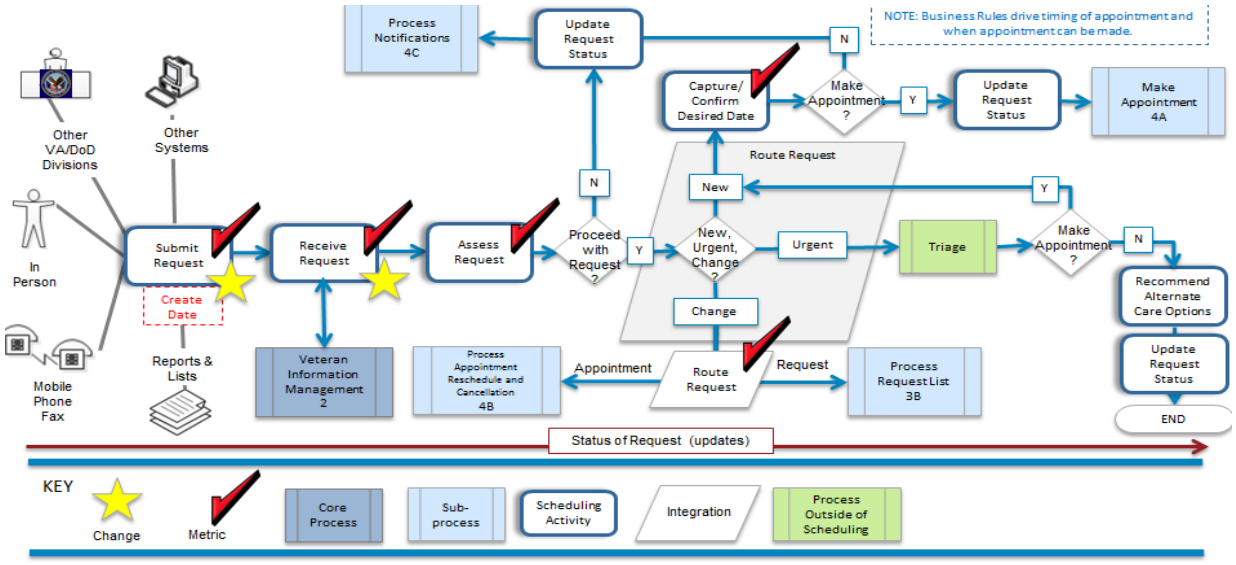
Table 10 Common Request Management Situations

3.4.5 Request Management Process Flows and Business Needs (3)

The business requires that a request for future care, either from a Veteran or a provider on behalf of a Veteran, be captured consistently using standard data. The information gathered should be captured from a variety of input sources and viewed from a single screen as well as generated in a list for processing and reporting. The business requires that requests be captured to include system capture of date/time/user stamps to support operational oversight reporting.

3.4.5.1 Process Request Process Flow (3A)

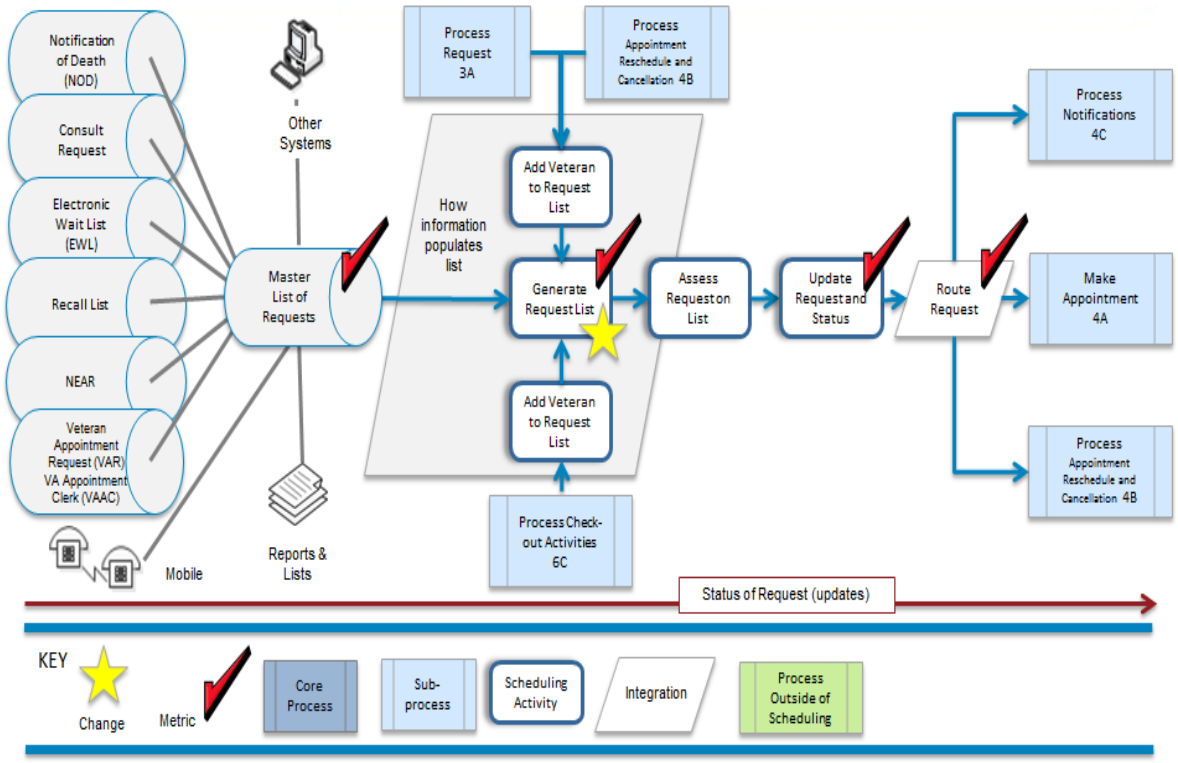
Figure 12 - Process Request Process Flow



VHA requires the ability to capture the creation date of a request and demand for services in accordance to a Veteran's preferred date for care from a variety of input sources (such as web, mobile, email, phone, and other communication modes) in a standard format, while tracking the request status until an appointment is fulfilled. Processing request activities and attributes will be tracked and date/time/user stamped for auditing and reporting.

3.4.5.2 Process Flow for Process Request List (3B)

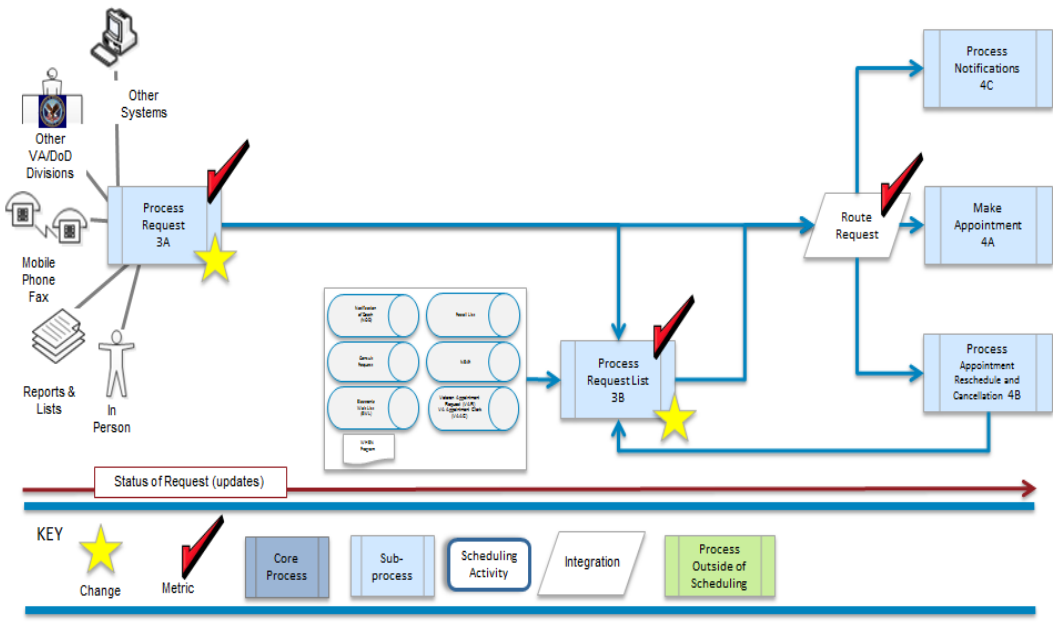
Figure 13 –Process Request List Process Flow (3B)



The business requires an all-inclusive master list designated for active requests, waiting for available appointments, recalls or other terms to be consolidated in a standard format and accessible for daily request processing and appointment management. Processing request list activities will be tracked and date/time stamped.

3.4.5.3 Perform Request Oversight Activities (3C)

Figure 14 - Perform Request Oversight Activities Process Flow (3C)



VHA requires that processing request activities be tracked and date/time stamped to support oversight and reporting (structured, user defined, and ad-hoc) operational efficiencies or deficiencies in near real-time.

3.5 Manage Appointment

3.5.1 Process Overview for Appointment Management

The Manage Appointment capability is the ability to meet Veteran's desire for care by viewing availability of desired resources for services across a set of facilities from a single graphical representation. This capability allows for flexibility to substitute resources, cancel and reschedule appointments, and includes standardized notifications to issue communications to Veterans, their families, and other stakeholders.

Meeting the preferred date is one of the driving factors in the scheduling process, and the ability to audit and monitor compliance in meeting preferred date is a significant requirement of VHA policy. Reporting the reasons that appointments are made outside the preferred date policy is vital to meet expectations of Veterans and meet Congressional mandates.

While making an appointment is often straightforward for primary and specialty care; there are situations where coordinating multiple same day appointments, prerequisite testing,

medications, and transportation become hurdles that may cause difficulties for schedulers. For this reason, the Coordinate Services and Occasions of Service capability is closely integrated with this process.

The volume of appointments and the current rate for rescheduling appointments makes it necessary to ensure robust features for canceling, rescheduling and reallocating resources to appointments. These features ensure reduced no-show rates and short notice cancellations while allowing for smooth clinic operations and overall Veteran satisfaction.

Notifications are outbound messages in the form of postcards, personal calls, letters, emails, etc. Examples include sending a letter to a Veteran with preparatory instructions prior to an appointment, a postcard notification to a Veteran to schedule a follow-up appointment, or contacting a Veteran for failure to show up for their appointment. The goal of the notification sub-capability is to facilitate timely, efficient care through easily understood and timely communications with standard formats leveraging mechanisms specified by the Veteran.

Perform Appointment Oversight Activities encompasses a variety of proactive management tools and techniques to ensure the productive use of resources. Oversight tasks are driven by observation and indicators critical to ensure efficient process performance. Indicators illuminate entities such as resource management, capacity planning, scheduler performance, and notification management.

3.5.2 Appointment Management Unique/High Priority Business Needs

Appointment Management		
ID	***Feature or Characteristic***	***Measure of success***
UHP 4.1	Current VistA reporting and DSS coding must continue to support non-scheduling business processes as it currently does today	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHP 4.2	Capture preferred date in accordance with policy for each appointment created	When preferred date is captured indicating the source of the preferred date (patient, provider, other) for each individual appointment
UHP 4.3	Automated implementation of business rules as configured (setup) when searching for resources and creating appointments	Scheduler training requirements are decreased since majority of business rules are automated
		Reduction in scheduling errors because of automated business rules

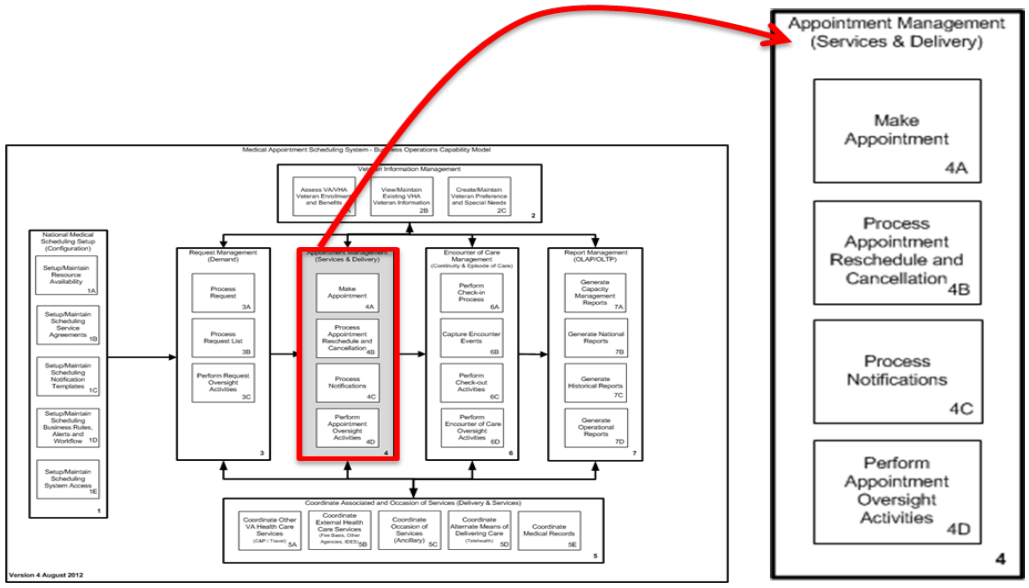
Appointment Management		
ID	***Feature or Characteristic***	***Measure of success***
		Scheduler has immediate feedback and visibility when scheduling outside of policy, guidance or business rules
UHP 4.4	Flexibility to substitute appropriate resources assigned to appointment	Reduced cancellations due to short term unavailability of resource
UHP 4.5	Improve notification process through capture of patient preference for notification, configurable and enforceable notification templates	Patients consistently receive notifications in their preferred method (phone, email, USPS) in a timely and accurate manner
UHP 4.6	Ability to coordinate multiple resource sets at multiple locations for a single appointment (telehealth)	Telehealth appointments are coordinated seamlessly between the provider(s), equipment, facilities and patients with on time delivery of care, no lost time due to poorly coordinated appointments
UHP 4.7	Ability to link associated and/or dependent appointments	Schedulers able to view, coordinate and link multiple appointments (series or multiple same-day)
UHP 4.8	Create appointment for any service at any facility and delivery type based upon role-based access as defined in setup	Patients can schedule services as they desire
UHP 4.9	Ability to coordinate multiple appointments for a patient	Patients have an itinerary of appointments that suits their needs, with appointments coordinated in an efficient manner
UHP 4.10	Use scheduling preferences when scheduling appointments	Patients preferences are automatically considered when creating appointments
UHP 4.11	Coordinate special needs throughout scheduling process	Staff are aware of and prepared for patients with special needs when they are being scheduled and when they present for care

Table 11 Appointment Management

3.5.3 Capability Model Description

There are four sub-capabilities to describe the activities in Appointment Management. They are described in *Figure 15 - Appointment Management (Framework View)*.

Figure 15 - Appointment Management (Framework View)



APPOINTMENT MANAGEMENT SUB-CAPABILITES		
1.1 The Manage Appointment capability is the ability to meet Veteran's desire for care by viewing availability of desired resources for services across a set of facilities from a single graphical representation. This capability allows for flexibility to substitute resources, cancel and reschedule appointments, and includes standardized notifications to issue communications to Veterans, their families, and other stakeholders.		
BN4A	Make Appointment	The Make Appointment sub-capability provides the ability to search available healthcare resources, schedule a care and reserve resources while meeting Veteran needs and preferred date, in accordance with business rules.
BN4B	Process Appointment Reschedules and Cancellations	The Process Appointment Reschedule and Cancellation sub-capability provides the ability to assess the impact of care due to cancellation requests initiated by a patient, a provider, or in cases where equipment is inoperable and expeditiously resolve either by rescheduling, backfilling resources, or providing alternate modes of healthcare delivery options.
BN4C	Process Notifications	The Process Notifications sub-capability emphasizes the need to provide clear, accurate, consistent, and targeted messages to Veterans and their families, and other stakeholders. A standardized notification process uses common forms that allow the ability to customize, and select a mode of delivery to accommodate Veteran and stakeholder preferences.
BN4D	Perform Appointment Oversight Activities	The Perform Appointment Oversight Activities sub-capability encompasses a variety of proactive management tools and techniques to monitor and report operational efficiencies or deficiencies in near real-time from service-line to national level

Table 12 Appointment Management Sub-Capabilities

3.5.4 Examples of Common Appointment Situations

Appointment Management is probably the most visible and frequent activity for outpatient scheduling. A list of common situations is presented in *Table 13 Common Appointment Management Situations*.

EXAMPLES OF COMMON APPOINTMENT MANAGEMENT SITUATIONS	
Appointment with Primary Care: Primary Care addresses the routine medical needs such as initial diagnoses, annual exams and management of illness and preventive care. Through Primary Care, Veterans are encouraged to manage their health and well-being, prevent disease; receive treatment for existing acute illnesses; recover function to its highest level and utilize the long-term care when it is needed.	
Initial	Scenario in which a scheduled appointment is made at the request of a new or established patient. "Primary Care New Patient" is new enrollee with VHA, newly enrolled at the facility, or one not seen by a qualifying provider type within a defined stop code or stop code group at that facility within the past 24 months. New patient appointments in primary care are longer in duration than follow up appointments. Primary Care Management Module (PCMM) manages assignment of a patient to a primary care provider.
Primary Care Follow-up/urgent	A provider or patient initiates this scenario when a follow-up/urgent appointment is required. The request can be made by the VA or by the patient. A follow-up appointment could be follow up of an emergent or urgent care encounter. These appointments can also be used to see patients for urgent care, such as cold, flu, etc.
Appointment with Specialty Care (Consult): Specialty care consists of two types: Consultative Care and Highly Specialized Care. Consults are used regularly to request specialist care, evaluation and treatment. A consult is a document that facilitates consultative and non-clinical consultative service requests and subsequent activities.	
Clinical Consultative Care	Consultative care assists the primary care provider with the diagnosis or initiation or alteration of treatment strategies. A clinical consultation is provided by a physician or other health care provider in response to a request seeking opinion, advice, or expertise regarding evaluation or management of a specific Veteran problem)e.g. consult to Dermatology). Physician initiates clinical consultation to the specialty provider. (VHA Directive 2088-056) The major triggers of consultative care involve: • Primary to Specialty • Specialty to Specialty • Mental Health
Specialized Care	Highly specialized care is provided to Veterans with illnesses that are too uncommon or complex for the primary care provider to maintain competence in their management. (VHA Directive 2088-056).
Specialty Care Follow-up	The provider initiates this scenario when a follow-up appointment is required for the Veteran. The request can be initiated by the provider on behalf of the Veteran or by the Veteran following through with the provider's recommendation.
Non-Clinical Consultation	A non-consultative service request is used for all other non-clinical activities. Currently these requests are sent using the CPRS consult functionality for a purpose other than a clinical consultation, e.g. a request to Dermatology for a

EXAMPLES OF COMMON APPOINTMENT MANAGEMENT SITUATIONS	
	non-formulary approval or request to reschedule a no-show.
Care Coordination Agreement	Care coordination is an agreement or understanding between any two or more services, one of which sends work to the other(s), defining the work flow rules. The agreements may exist within one facility or between two or more facilities. Typically this a written document that is developed based on discussion and consensus between the involved services and facilities. Some examples where service agreements may exist include agreements between: • Primary to Specialty • Specialty to Specialty • Primary/Specialty to Mental Health (vice versa) • Primary to Specialty to Surgery with follow-up with Specialty and closing the encounter of care with a Primary follow-up. Care coordination may include orders to coordinate with associated and occasion of services (ancillary test). These enhancements will be discussed in more detail in the capability section #4: Coordinate Associated and Occasions of Service.
Emergent or Urgent Care Care for an acute medical or psychiatric illness or for minor injuries for which there is a pressing need for treatment to manage pain or to prevent deterioration of a condition where delay might impair recovery. [VHA Directive 2010-027]	
Urgent	An example of urgent care includes the follow-up appointment for a Veteran discharged from a Department of Veterans Affairs (VA) medical facility if the discharging physician directs the Veteran to return on a specified day for the appointment.
Emergency	Emergency care is the resuscitative or stabilizing treatment needed for any acute medical or psychiatric illness or condition that poses a threat of serious jeopardy to life, serious impairment of bodily functions, or serious dysfunction of any bodily organ or part.
Triage	Initial triage evaluations are required within 24 hours for all Veterans either self-requesting or being referred for mental health and substance abuse treatment. Additionally, when follow-up is needed, it must include a full diagnostic and treatment evaluation with 14 days.
Veteran Notifications (output notifications): Notifications to Veterans are handled differently in each facility and by each type of service. An anticipated area of efficiency gain is in the form, format, and type of communication being sent to Veterans. Some standardization has begun with the inception of the Recall List and the introduction of the Appointment Card project. Similar discussions and pilots have emerged to automate communications. There are three main scenarios involving Veteran notifications. They include: Veteran preparation, Veteran reminders, and Veteran follow-up. Whether the mode of delivery is a personal call, a letter, or a post card, the workload should be organized, prioritized, monitored and tracked for efficiency. Notifications should be standardized so the process is the same for each Veteran regardless of the location or service being provided, yet tailor-able at the local level in order to accommodate local variations and patient preferences.	
Veteran Preparation	This scenario is first triggered when the Veteran is confirming an appointment or a series of appointments. The notification could include: • Preparation instructions prior to arriving for an appointment such as required preliminary test and x-rays; or of special instructions (e.g. not eating 12 hours prior to the visit). • An itinerary of times, providers' names and locations for multiple same day

EXAMPLES OF COMMON APPOINTMENT MANAGEMENT SITUATIONS	
	appointments along with confirmation regarding a Veteran's special needs and/or requests (e.g. escort services for handicapped Veterans). • Coordination of services would be indicated where transportation and other types of assistance is required.
Veteran Reminders	Three main types of Veteran reminders currently exist including: • Veteran reminder of existing appointment • Veteran reminder to call for an appointment • No-show notification to reschedule appointment Veterans with a request for care that is within the scheduling horizon will be reminded to contact the VA to schedule his/her appointment. Veterans should be reminded of appointments via their notification preferences. Veterans that fail to appear for their appointment may receive a call immediately by the service and are returned to the request list with a pending open request.
Veteran Follow-up	This scenario is the result of an encounter. As a courtesy to Veterans by some services, a post appointment follow-up call is carried out. A second type of follow-up scenario involves the results of tests that were performed. In some cases a follow-up for test results could result in a request to make an additional appointment with the provider. • Post appointment follow-up call • Notification of test results
Notification of cancelations	Notification of cancellation of appointment (s) by the VA (provider, clinic management, and administration) will be communicated to the Veteran in a timely manner via the Veterans preferred notification means.
Cancel and Reschedule Appointments: The Veteran or VA itself, such as the provider, clinic manager or facilities management, may initiate cancellations. In cases where either the provider initiates a cancellation or the Veteran fails to appear for the schedule appointment, the medical records need to be reviewed to ensure that urgent medical problems are addressed in a timely fashion. Provisions need to be made for necessary medication renewals and Veterans need to be rescheduled as soon as possible, if clinically appropriate. (VHA Directive 1020-027). A request associated to the appointment cancelled should be updated with cancellation details, such as date/timestamp, reason and follow up action. All appointments cancelled by the VA will result in a request action for reschedule.	
Cancellation/Reschedule by Veteran	A cancellation or a reschedule may be made in advance of the appointment date or the same day of the appointment. Assessment of other coordinated services, occasions of service, linked appointments, or same day appointments should be determined for any impacts from the cancellation or reschedule request regardless of when the cancellation/reschedule was received. Same day cancellations may be backfilled with walk-in Veterans, over booked appointments, or reverted to administrative time. In all cases, the reason and resolution for the cancellation and or reschedule should be captured and reportable.
Cancellation/Reschedule by Provider	The provider scenario involves the limitation of a resource such as the provider, support staff, equipment or facilities. Assessment of coordinated services, occasions of service, linked appointments, or same day appointments should be determined for any impacts from the cancellation request regardless of when the cancellation was received. Provider cancellations may be backfilled with specified surrogate resources, and broken equipment may be resolved by a reciprocating facility with open slots.

EXAMPLES OF COMMON APPOINTMENT MANAGEMENT SITUATIONS	
	Capability is required to easily substitute an appropriate resource for the appointment without undue workload by the clinical staff or disruption to the traceability between requests for care and appointments. In all cases, the reason and resolution for the cancellation and or reschedule should be captured and reportable.
Cancellation/Veteran status/test values not available/incomplete	A common cause for a cancellation is failure to fulfill prerequisite actions for an appointment (coordinated services and occasions of service). The integration of all associated and coordinated services and the relationship to a specific appointment should be established and the status of each should be tracked to prevent unnecessary cancelations. Configuration of notifications, alerts and workflows for clinical staff are expected to provide visibility into emerging situations that can then be handled well in advance of the appointment
No-show Reschedule	When a Veteran fails to appear for the scheduled appointment, the responsible provider, surrogate, or designated team representative needs to review the Veteran's medical record, including any consult or procedure request received or associated with the appointment and then determines and initiates appropriate follow-up action. (VHA Directive 1020-027 (k)).
Consultation Process: The policies defined for managing the clinical consultation process are described in VHA Directive 2008-056. It states that the consultation process is a relationship between a sending and receiving Health care service where defined workflow rules exist. Effective use of care coordination agreements establishes clear processes and reduces the need for inspection and rework, and improves the relationship between practices. The policy and actions required request that clinical consultations be clinically completed with results consistent with VHA timeliness standards and is efficiently resolved while taking into account an individual's health care needs. A consult is a specific document that facilitates and communicates consultative and non-consultative service requests and subsequent activities.	
Clinical Consultation	A clinical consultation is a request by a physician or other health care provider to seek an opinion, advice, or expertise regarding evaluation or management of a specific health issue. Most often, a consult is generated electronically and is intended to facilitate and communicate requests for service with an expectation that a reply is provided within a timely manner. Currently, the CPRS functionality in VistA is the mechanism used to initiate, manage, and communicate clinical consultations, referred to as the Consult Package. • Consultations can be resolved without a face-to-face encounter yet should be captured and documented for tracking purposes • All other clinical consultations must be acted on by scheduling an appointment within VA's established timeframe. In cases where a consult cannot be scheduled within the established timeframe, a reason for the deviation must be captured. • The ideal process is direct scheduling of consult appointments without clinical review by the receiving service, and performed by the referring provider's team before the Veteran leaves. • When a Veteran fails to keep a scheduled consultation, the receiving service must reassess the need for service and either reschedule the appointment or cancel the consult request, as appropriate. • A consultation is considered a 'count' encounter, which refers to workloads that meet the definition of on encounter. An encounter is a professional contact between a Veteran and a provider vested with the responsibility for diagnosing, evaluating, and treating the Veteran's condition. Some Occasion of Services can be considered as 'count' encounters.

EXAMPLES OF COMMON APPOINTMENT MANAGEMENT SITUATIONS	
Non-count encounters	An appointment for occasion of services, such as laboratory work-ups and imaging services, are considered non-count encounters. A non-count encounter is one where diagnosing, evaluating, and treating a Veteran's condition does not take place. There are two scenarios why an encounter is designated as 'non-count', One, if the encounter is administrative in nature and the Veteran care is not provided; and two, in cases where the workload associated with the occasion of service has already been captured during a count encounter. • Requests for laboratory and imaging services are made via provider orders. • Orders transmit directly to the lab or radiology software applications. • Work performed in response to such orders triggers transmission of encounter data via VHA Veteran Care Encounter (PCE) software application.
Consult Tracking	To ensure a balanced level of oversight and autonomy by Systems Redesign, VISN Directors and Facility Directors, the consult process should be standardized to the extent possible while maintaining the flexibility to accommodate care coordination agreement requirements. • Procedures are established to track and process clinical consultation requests that are without action within 7 days of the request. • Appropriate checks and balances are in place before the consult request (VA and Non-VA) is closed out to ensure the clinical documentation is complete and accurately associated to the Veteran's medical record. • Both clinical consultation and non-consultative service requests will be tracked. Each is designated as a type of consult and used to ensure workflow and that the Veteran's medical needs have been fully satisfied, and within acceptable timelines.

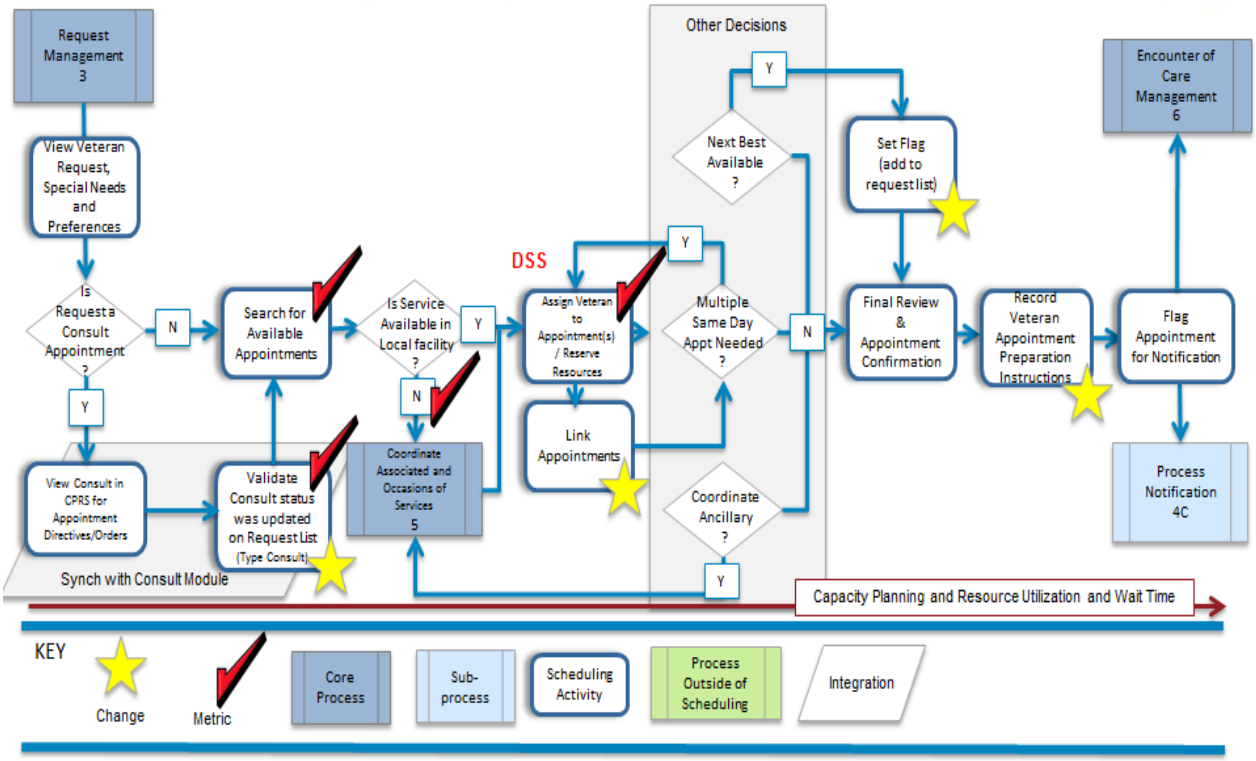
Table 13 Common Appointment Management Situations

3.5.5 Appointment Management Process Flows and Business Needs (4)

The business requires an integrated graphical view of all available resources and services across facilities, time zones and scheduling horizons (daily, weekly, monthly) in order to locate and schedule the appropriate resources within the Veteran's preferred date. The business requires the flexibility to cancel and reschedule appointments, and standardize the notification process that issues messages to Veterans, their families, and other stakeholders. The business requires that appointment activities be tracked and date/time stamped to support operational oversight reporting.

3.5.5.1 Make Appointment Process Flow (4A)

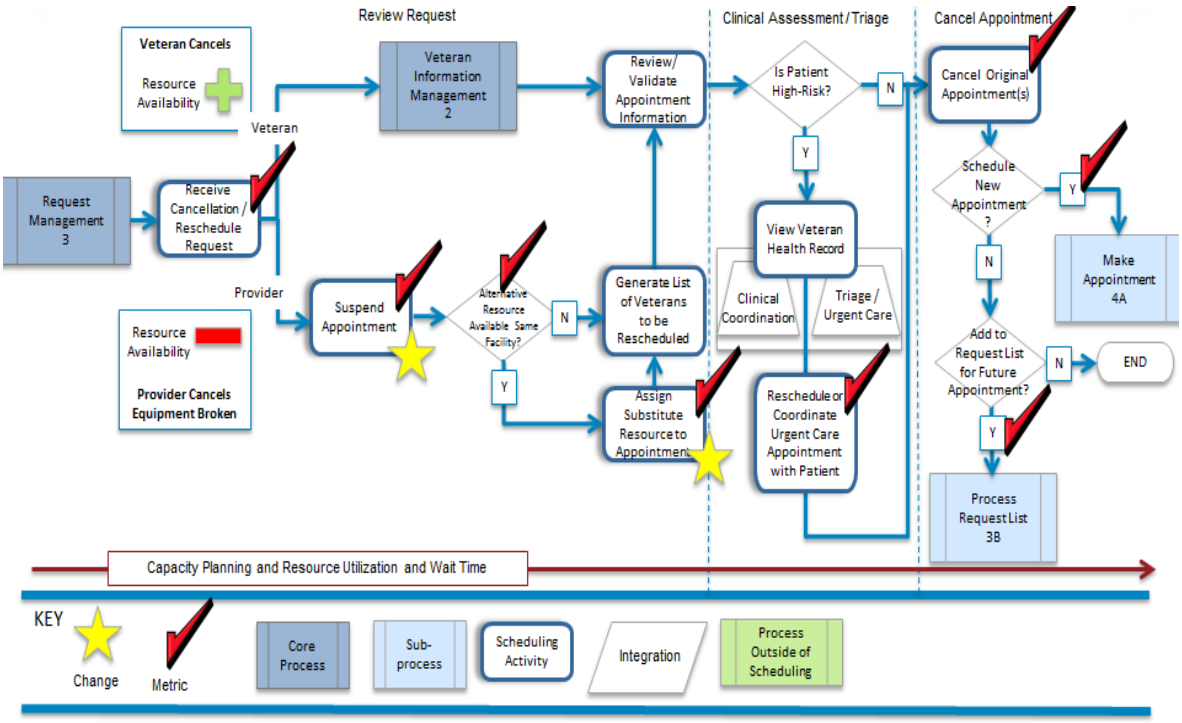
Figure 16 - Make Appointment Process Flow (4A)



VHA requires the ability to search all applicable healthcare resources and instantly schedule an appointment to reserve resources to meet the Veteran's needs in accordance with stated preferred date for care from a single integrated view. Processing make appointment activities will be tracked with date/time stamp and userid.

3.5.5.2 Process Appointment Reschedules and Cancellations Process Flow (4B)

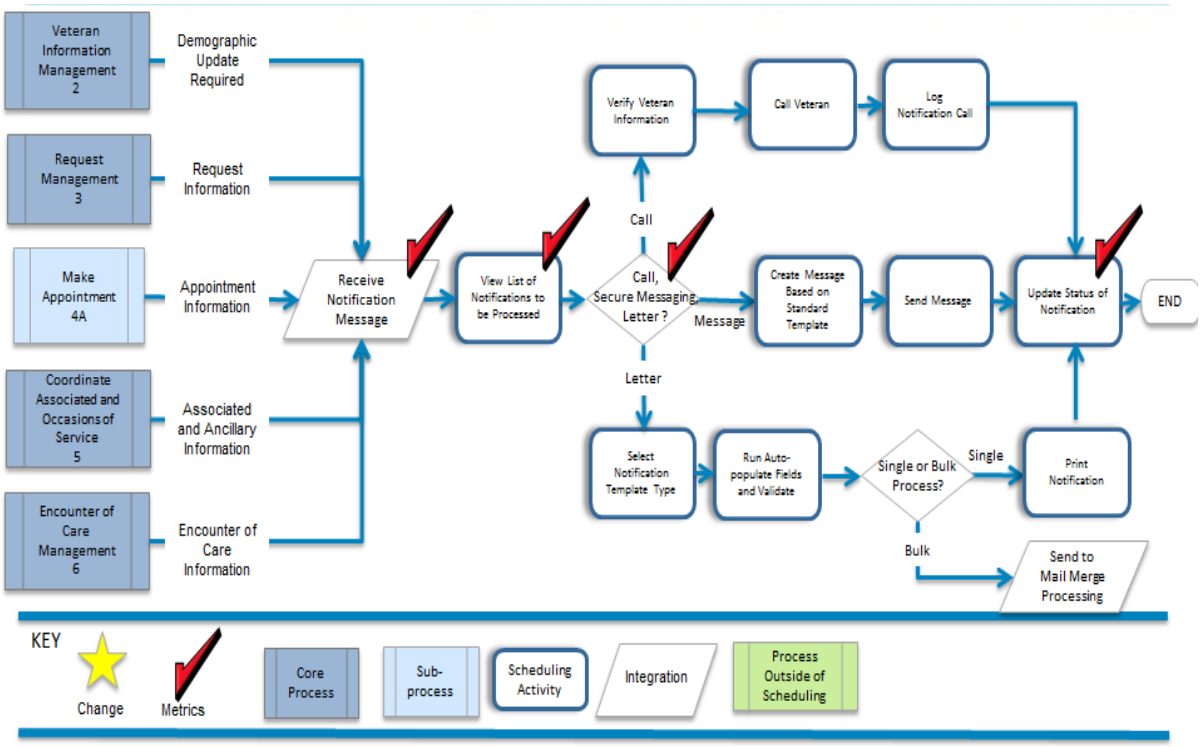
Figure 17 - Process Appointment Reschedules and Cancellations Process Flow (4B)



VHA requires the ability to assess the impact of care due to a cancellation request and resolve by either rescheduling the appointment, providing alternate modes of healthcare delivery options, backfilling resources, or cancelling the appointment). Processing appointment reschedules and cancellation activities will be auditable through capture of transaction detail, such as date/time stamp, USERID, precondition, post-condition.

3.5.5.3 Process Notifications Process Flow (4C)

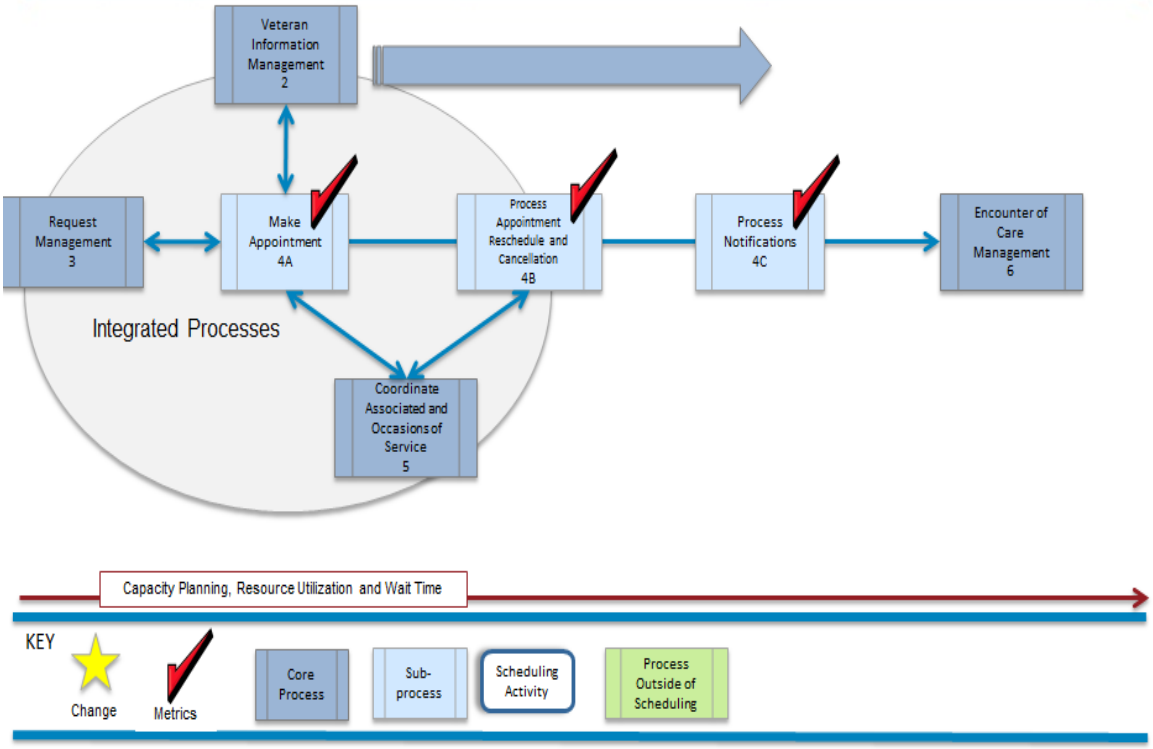
Figure 18 - Process Notifications Process Flow (4C)



The business requires the ability to streamline the notification process by providing an auto-populated, standard set of templates for all types of communication and all modes of delivery based on specified personal preferences and business rules. Processing notifications activities will be auditable through capture of transaction detail, such as date/time stamp, USERID, precondition, post-condition.

3.5.5.4 Perform Appointment Oversight Activities Process Flow (4D)

Figure 19 – Perform Appointment Oversight Activities Process Flow (4D)



VHA requires the ability to monitor the appointment, cancellation, reschedule, and notification processes for rapid decision making and issue resolution, as well as, the ability to report (structured, user defined, and ad-hoc) operational efficiencies or deficiencies in near-real time. The appointment activities will be included in supply and demand tracking and management.

3.6 Coordinate Associated and Occasions of Services

3.6.1 Process Overview for Coordinate Associated and Occasions of Services

The Coordinate Associated and Occasion of Services capability fosters open access between VistA instances with other VHA and VA facilities and outside VA to promote effective information sharing between stakeholders. The ability to view available enterprise resources allows for the coordination and fulfillment of requests (such as C&P process, telehealth, fee basis, IDES, ancillary, travel and medical records). The ability to coordinate care and communicate with other government partners will provide more options, and track care across agencies.

Occasion of Service, as defined in VHA Directive 2010-027 section (14) 'Occasion of Service' identifies ancillary service, as an "occasion of service" which is a specified identifiable instance of an act of technical and administrative service involved in the care of a Veteran or consumer, which is not an encounter and does not require independent clinical judgment in the overall diagnosing, evaluating, and treating the Veteran's condition(s).

(a) Occasions of service are the result of an encounter. Clinical laboratory tests, radiological studies, physical medicine interventions, medication administration, and vital sign monitoring are all examples of occasions of service.

(b) Some occasions of service, such as clinical laboratory and radiology studies and tests, are automatically loaded to the Veteran Care Encounter (PCE) database from other VistA packages.

As VHA strives to meet the needs of an increasingly mobile Veteran population, offer expanded service mechanisms, providing schedulers the ability to coordinate across organizational boundaries and occasions of service will mean a more efficient experience for the Veteran.

3.6.2 Coordinate Associated and Occasion of Service Unique/High Priority Business Needs

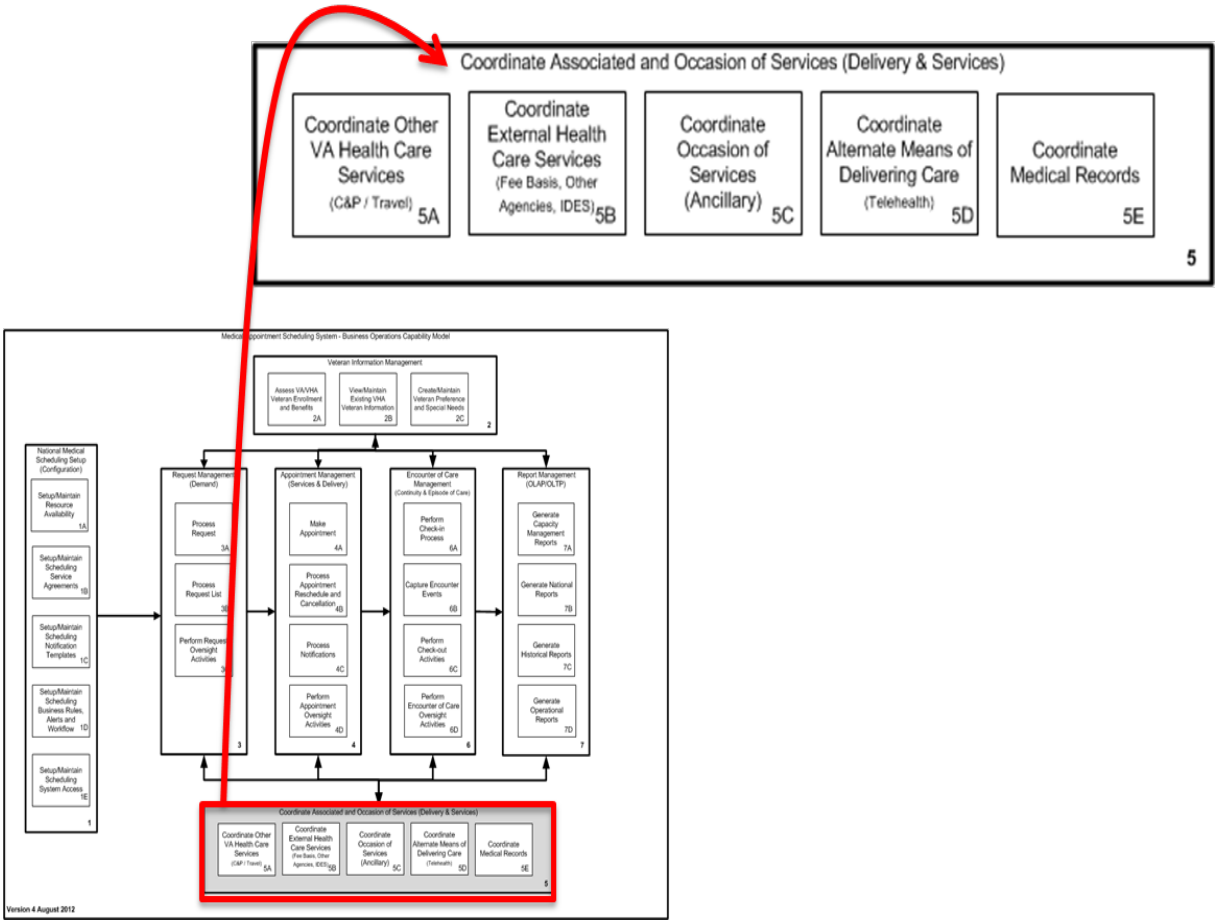
Coordinate Associated and Occasions of Service		
ID	***Feature or Characteristic***	***Measure of success***
UHP 5.1	VistA reporting and DSS coding must continue to support non-scheduling business processes as it currently does today	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHP 5.2	Need to make travel reimbursement data available to the travel determination process	Travel pay is consistent with patient schedules
UHP 5.3	Request scheduling data from non-VA healthcare delivery	Patient's pending appointments include all care delivery, to include delivery from non-VA healthcare delivery sources
UHP 5.4	Coordinate consults and resultant appointments across service lines to reduce waiting time	Wait times for consults are reduced, data is not lost, easily able to report on consults and resultant appointments
		Seamless integration of data from consults to scheduled appointments
UHP 5.5	Schedule health care delivery modes including home based healthcare, telehealth & phone/email/web services	Appointments can be scheduled for telehealth, home health, email, phone and other care delivery options

Table 14 Coordinate Associated and Occasions of Service Unique/High Priority Business Needs

3.6.3 Capability Mode Description

Figure 20 - Coordinate Associated and Occasions of Service (Framework View) describes the sub-capabilities that define this process.

Figure 20 - Coordinate Associated and Occasions of Service (Framework View)



COORDINATE ASSOCIATED AND OCCASION OF SERVICE SUB-CAPABILITIES		
BN 5The Coordinate Associated and Occasion of Services capability fosters open access between VA facilities and outside VA to promote effective information sharing between stakeholders. The ability to view available enterprise resources allows for the coordination and fulfillment of requests. The ability to coordinate care and communicate with other government partners will provide more options for care delivery as well as to track care across agencies.		
BN5A	Coordinate Other VA/VHA Health Care Services	The Coordinate Other VA Health Care Services sub-capability exchanges information across VA facilities and VA departments, such as VBA/CBO. Providing the ability to exchange information from care received outside the Veteran's home facility ensures schedulers can readily view and work with other healthcare services both internal and external to their facility.
BN5B	Coordinate External Health Care Services	The Coordinate External Health Care Services sub-capability emphasizes the need to coordinate, track, and transition care

COORDINATE ASSOCIATED AND OCCASION OF SERVICE SUB-CAPABILITIES		
	(Private/Other Agencies)	inside the government network or outside with other private providers. Factors that contribute to an episode of care for a Veteran include the transition from active to inactive duty or inactive to active duty, and care delivered by private physicians. Each scheduled appointment should trigger the capture, update or synchronization of each encounter into a single medical health record.
BN5C	Coordinate Occasion of Services (Ancillary)	The Coordinate Occasions of Services (Ancillary) sub-capability ensures that providers and schedulers use care coordination agreements to schedule tests and labs required prior to an appointment. All related appointments would be linked. This connection of provider care with ancillary tests enables a holistic view of all of the Veteran's healthcare encounters. Coordination of ancillary activities and appointments are predefined order sets that represent a basic unit of care.
BN5D	Coordinate Alternate Means of Delivering Care (Telehealth)	The Coordinate Alternate Means of Delivering Care sub-capability allows for innovation by focusing on delivery methods outside the traditional face-to-face encounter. This enables the Veteran to receive timely care while meeting expectations for quality, timeliness and responsiveness when delivering care.
BN5E	Coordinate Medical Records	The Coordinate Medical Records Services sub-capability expands on VA's established electronic healthcare record capability to ensure a complete medical record when care is delivered across agencies and private healthcare partners.

Table 15 – Coordinate Associated and Occasion of Service Sub-capabilities

3.6.4 Examples of Common Associated and Occasion of Service Situations

Table 16 Common Associated and Occasions of Service Situations describes how outpatient scheduling relies on Coordination of Associated and Occasions of Service.

COMMON ASSOCIATED AND OCCASION OF SERVICE SITUATIONS	
Coordinate with Partner Organizations	
Active duty person requires care at VHA facility	An option to active duty persons is to receive care at a VHA facility. If this occurs, VHA scheduling personnel need to have visibility to the person's medical records and eligibility status.
Veteran Transitions from Active Duty	When a Veteran initiates the VBA process by enrolling for VHA benefits over the internet, the scheduling process is triggered by the receipt of the Veteran's request via the NEAR (New Enrollee Appointment Request – Call List). In this scenario, though, the Veteran takes the initiative to call his local facility to begin the scheduling process. The first appointment is to establish the Veteran's Compensation and Pension (C&P) status. The person handling the request must coordinate with VBA, and the C&P Coordinator (if one assigned) to ensure multiple requests are not in the queue. A service level agreement for this practice outlines the need to schedule an ancillary appointment as a prerequisite to the C&P appointment. The scenario ends with completed ancillary test results, C&P exam and a consult request for a specialist to be setup in order to monitor a lifelong health situation.

COMMON ASSOCIATED AND OCCASION OF SERVICE SITUATIONS	
Telehealth Scheduling	When a provider determines that he or she may wish to meet with a Veteran via telehealth or consult with a Veteran and another provider via telehealth, scheduling becomes more complicated. The schedulers must include the correct equipment, correct facilities, the providers, telehealth personnel and the Veteran.
Medical Records	A Veteran may obtain care between different facilities, sometimes across VistA instances. For example, the Veteran may primarily use a CBOC in his rural locale, but sometimes must drive for a few hours to go to a VAMC that happens to be in a larger city in another VistA instance, or even in a different VISN. Medical records are maintained at the facility or facilities where care was provided. Veterans and providers must have access to the complete picture of care, rather than the current state where each facility must be contacted personally to request any medical records maintained at that facility.
Coordinate Occasion of Care	A Veteran may have a scheduled appointment with a provider but before the provider meets the Veteran for care, asks that certain lab test be run. Coordinating care will allow schedulers to ensure the lab tests were completed prior to booking the appointment. Or, when the appointment with the provider is booked, an appointment for the labs (or other tests) will be booked and linked to the main appointment.

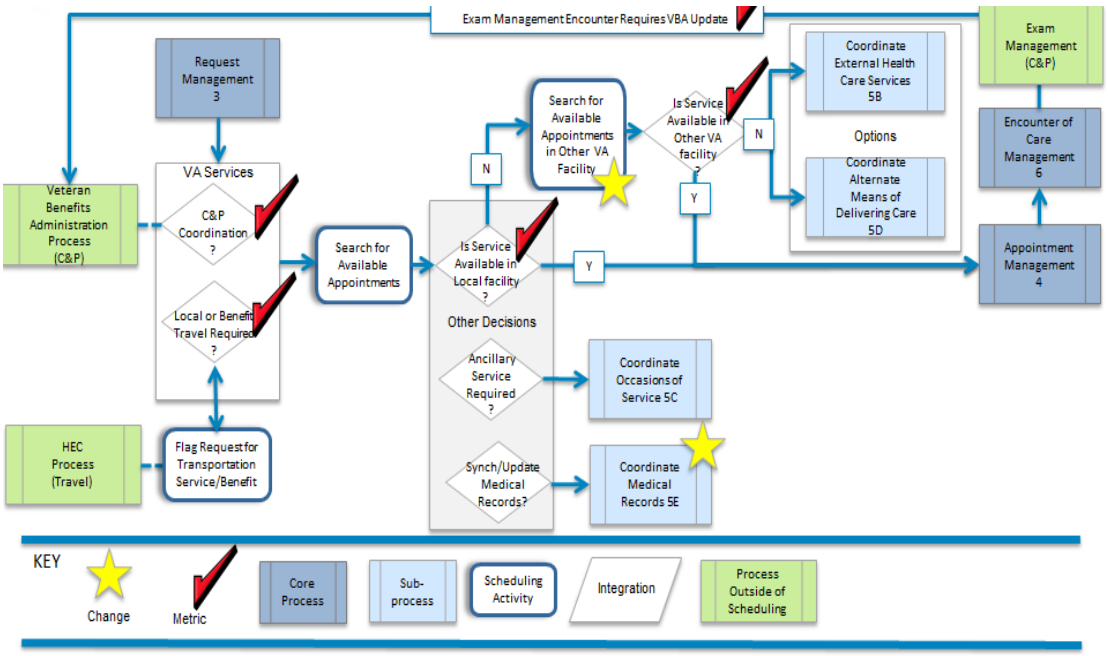
Table 16 Common Associated and Occasions of Service Situations

3.6.5 Coordinate Associated and Occasion of Care Process Flows and Business Needs (5)

The business requires the capability to provide open access between VA facilities and outside VA to promote effective information sharing between stakeholders. The business requires the ability to view available enterprise resources to enable the coordination and fulfillment of requests (such as C&P process, telehealth, fee basis, IDES, ancillary, travel and medical records). The business requires the ability to coordinate care and communicate with other government partners to provide more options, and track care across agencies.

3.6.5.1 Coordinate Other VA Health Care Services (5A)

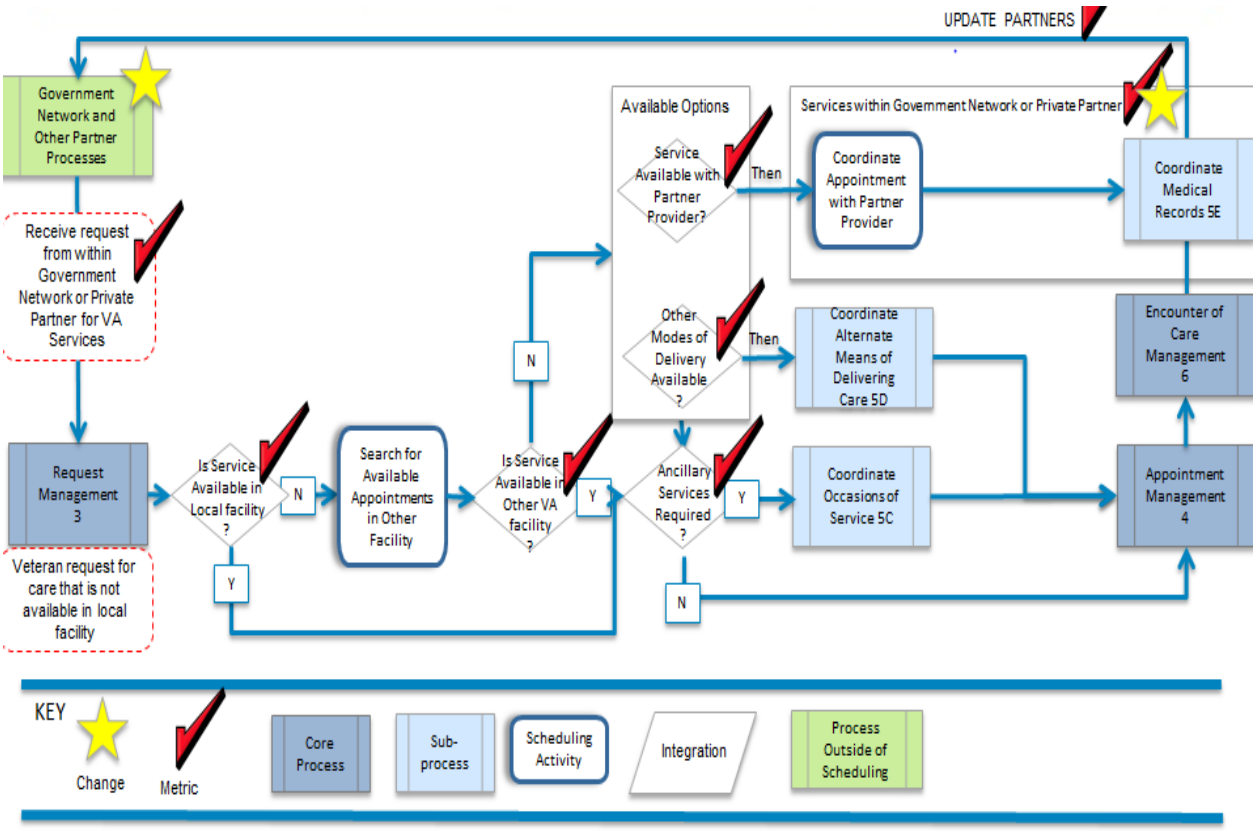
Figure 21 - Coordinate Other VA Health Care Services Process Flow



The business requires the ability to coordinate services and access to care by providing Veterans, their families, and other healthcare stakeholders with integrated access to services by enabling the exchange of information across VA. Coordinated activities within VA will be tracked and date/time stamped.

3.6.5.2 Coordinate External Health Care Services (5B)

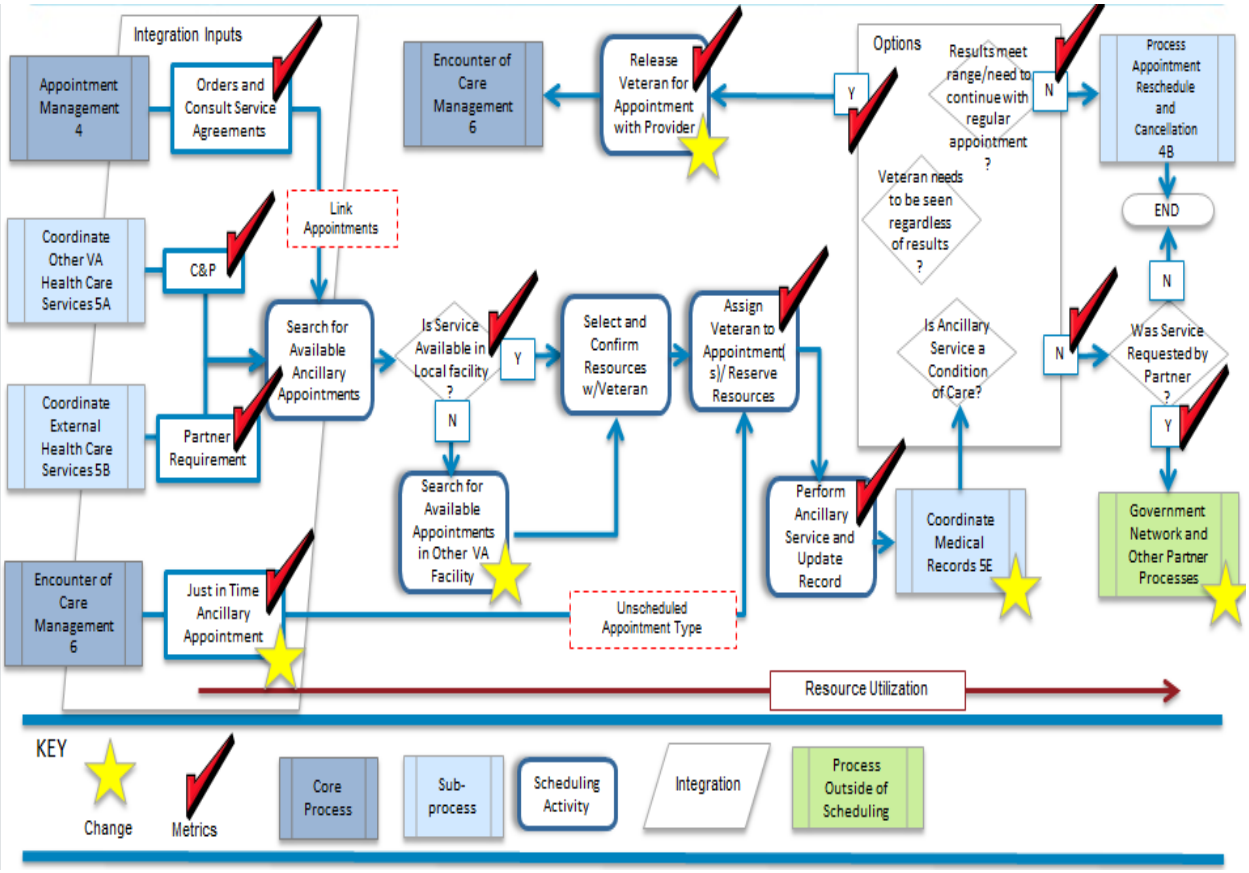
Figure 22 - Coordinate External Health Care Services Process Flow



The business requires the ability to coordinate services and access to care by providing Veterans, their families, and other healthcare stakeholders with integrated access to services by enabling the exchange of information inside the government network or outside with other private providers. Coordinated activities inside the government network and outside VA will be tracked and date/time stamped.

3.6.5.3 Coordinate Occasions of Service (Ancillary) (5C

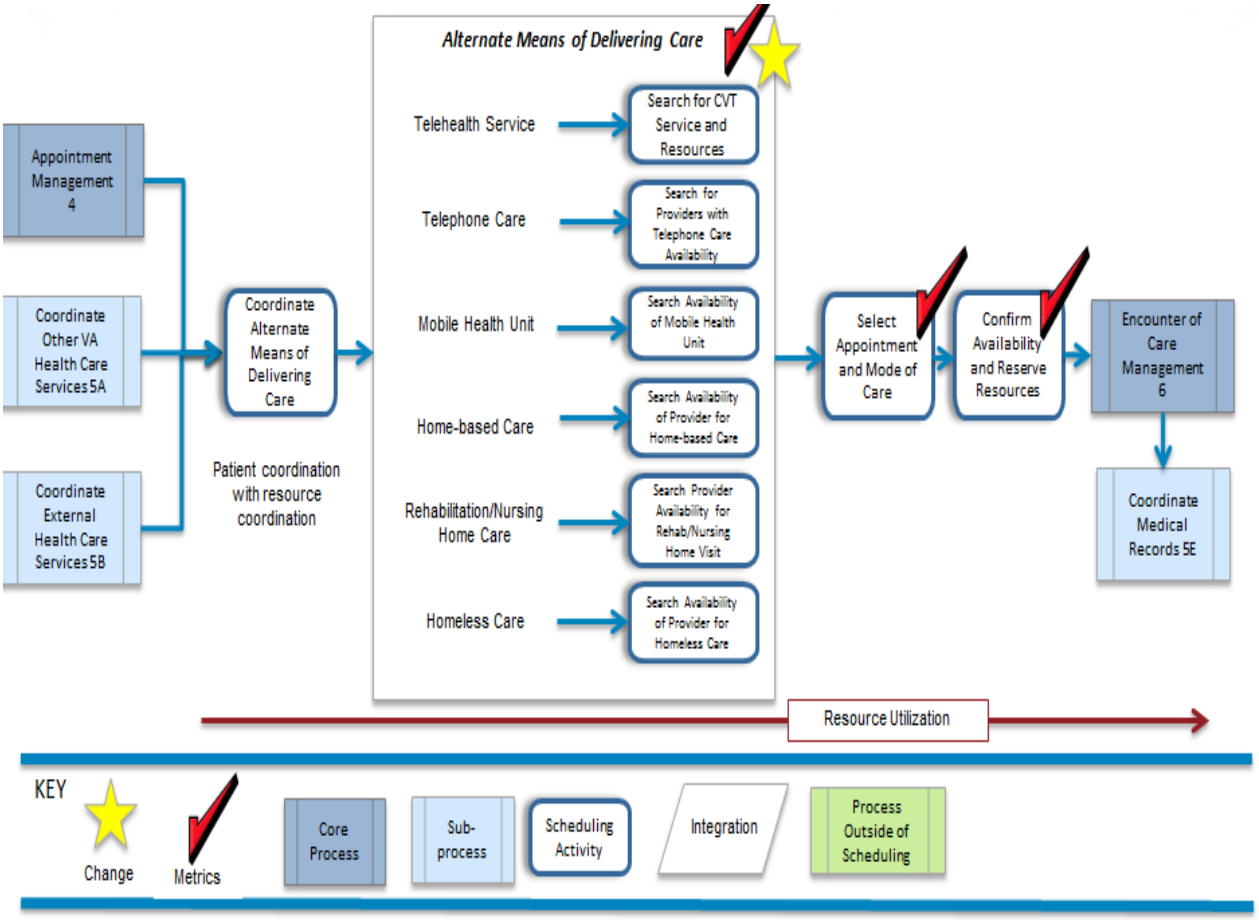
Figure 23 - Coordinate Occasions of Service (Ancillary) Process Flow



The business requires the ability to improve and integrate services across VA to increase reliability, quality, and accuracy of delivery through established care coordination agreement protocols and to better control and monitor the coordination and completion of appointments linked with required associated ancillary test.

3.6.5.4 Coordinate Alternate Means of Delivering Care (5D)

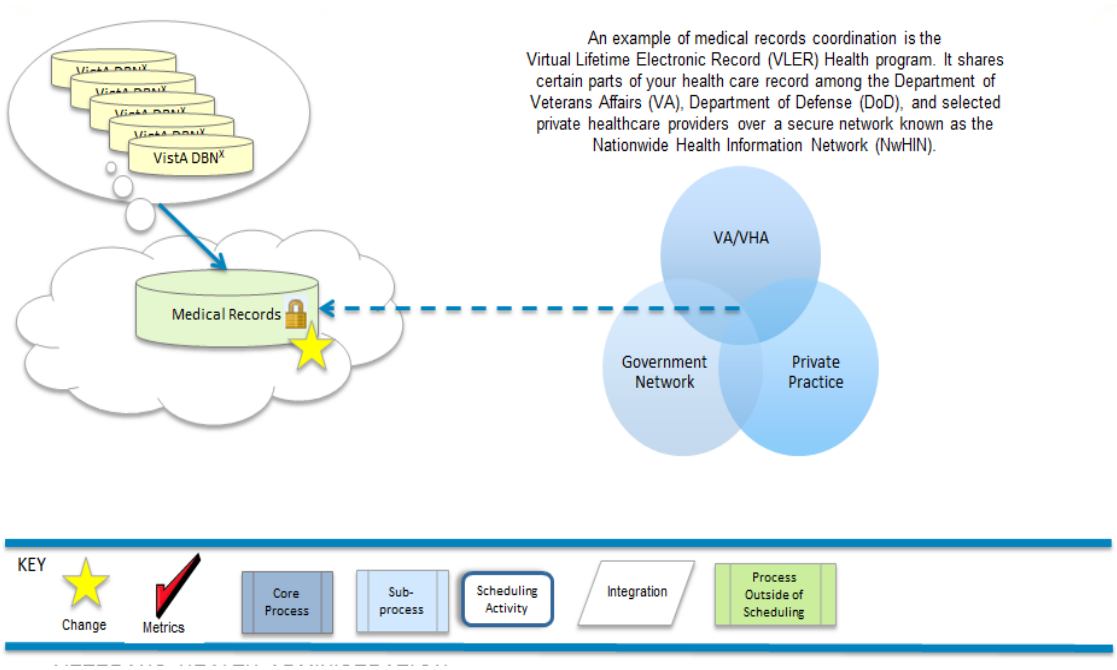
Figure 24 - Coordinate Alternate Means of Delivering Care Process Flow



The business requires the flexibility to develop a range of effective delivery methods that are convenient to Veterans and their families in order to augment traditional services.

3.6.5.5 Coordinate Medical Records (5E)

Figure 25 - Coordinate Medical Records Process Flow



VHA requires integrated access to electronic healthcare records across VA and between partners to support near-real-time decision-making.

3.7 Manage Encounter of Care

3.7.1 Process Overview for Manage Encounter of Care

The Manage Encounter of Care capability culminates the life cycle of an appointment and merges it with the medical treatment information. These activities contribute to the spectrum of metrics used in wait-time reporting, capacity and resource planning, and follow-up activities to reach continuity of care goals.

The Manage Encounter of Care capability describes the entire process from check in to check out including the Veteran's arrival and departure times.

Part of the encounter includes processing medical-related activities that provide care and services for the Veteran. However, the specific information about services provided is not entered by the scheduler, but by the provider and is captured in the specific encounter documentation programs such as CPRS, Event Capture, Surgery Package, Radiology, Laboratory, and Veteran Care Encounter.

After the Veteran is checked-in and receives care, the next step is to complete checkout activities. Checkout activities include: scheduling future appointments for follow-up care, updating information, and administratively closing of the encounter to enable it to be processed by downstream systems such as billing and workload analysis.

3.7.2 Unique/High Priority Business Needs

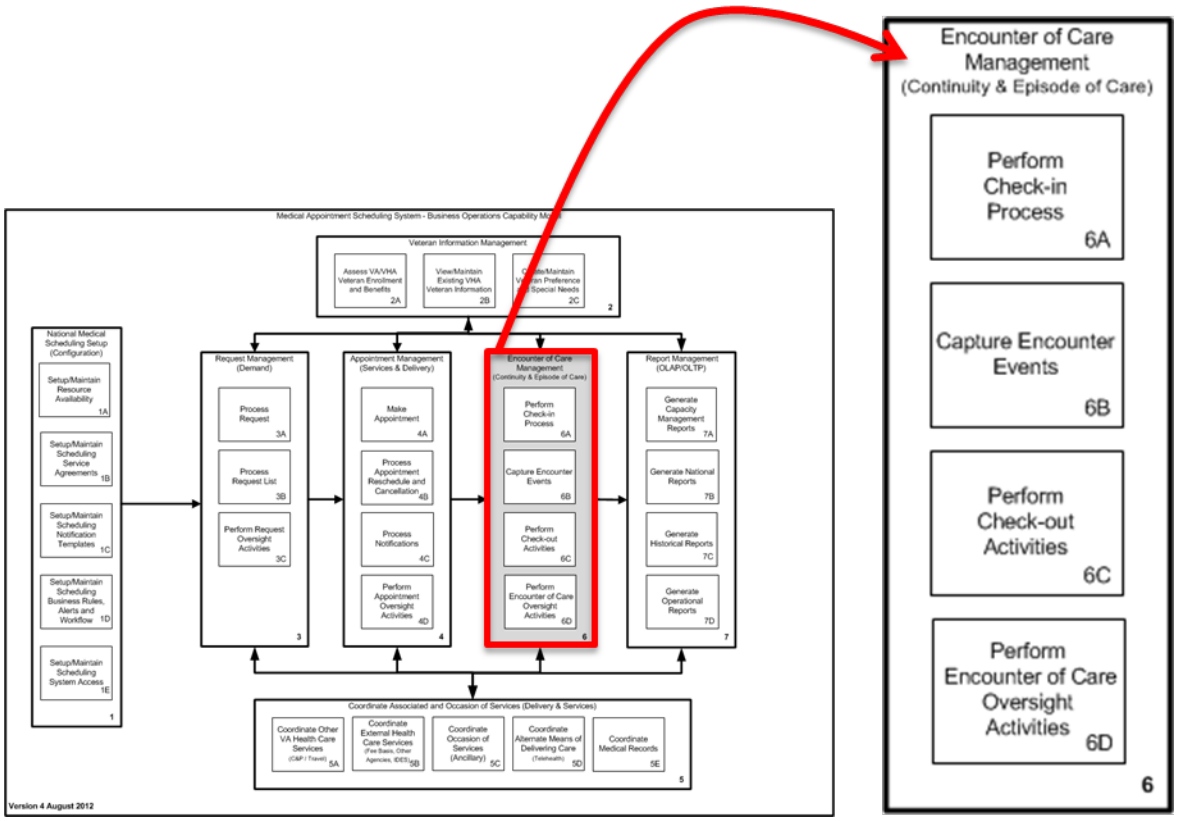
Manage Encounter of Care		
ID	***Feature or Characteristic***	***Measure of success***
UHP 6.1	Current VistA reporting and DSS coding must continue to support non-scheduling business processes as it currently does today	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHP 6.2	Timestamps to capture Veteran cycle of care and episode of care, starting from first contact with VA	Veteran contact date / wait time or care cycle can be tracked by type of services received, time to complete requested service or segment of services received
UHP 6.3	Efficiently exchange scheduling data with encounter data throughout scheduling process	Data is not lost and data quality is improved because of decreased manual entry of data

Table 17 Manage Encounter of Care

3.7.3 Capability Model Description

There are four sub-capabilities that describe the function for Encounter of care. They are outlined in *Figure 26 - Encounter Management (Framework View)*.

Figure 26 - Encounter Management (Framework View)



MANAGE ENCOUNTER OF CARE - SUB-CAPABILITIES		
BN6 The Manage Encounter of Care capability culminates the life cycle of an appointment and merges it with the medical treatment information. These activities contribute to the spectrum of metrics used in wait-time reporting, capacity and resource planning, and follow-up activities to reach continuity of care goals.		
BN6A	Perform Check-in Process	The Perform Check-in Activities sub-capability provides the flexibility to view a list of scheduled appointments in preparation for the daily workload. The process provides the ability to perform check-in activities for appointments utilizing multiple formats such as a list view, a calendar view, a patient view, or a provider view for schedulers; at kiosks and other innovative options for Veterans.
BN6B	Capture Encounter Events	The Capture Encounter Events sub-capability captures information pertaining to events of the encounter and metrics for wait-time studies.
BN6C	Perform Check-out Activities	The Perform Check-out Activities sub-capability completes the episode of care by matching and dispositioning appointments that resulted in an encounter and concludes the wait-time range of metrics. The checkout captures any orders for new care or services and/or follow-up care.
BN6D	Perform Encounter of Care Oversight Activities	The Perform Encounter of Care Oversight Activities sub-capability encompasses a variety of proactive management tools and techniques to monitor and report operational efficiencies or deficiencies in near real-time from service line to national level.

Table 18 Manage Encounter of Care Sub-Capabilities

3.7.4 Examples of Common Encounter of Care Situations

The situations noted in *Table 19 Common Encounter of Care Situations* describe examples of how the encounter of care is used in VHA.

EXAMPLES OF COMMON ENCOUNTER OF CARE SITUATIONS	
Administrative Activities: Once an appointment is made, daily operational activities ensue to support the coordination of committed resources. Generation of reports and lists from the scheduling application helps to maintain an efficient operation by providing the necessary information for daily operational planning and just-in time decision-making. Whether a Veteran was a no-show or the encounter of care completed, a series of administrative activities take place to disposition the appointment.	
Generate various operational reports and lists	Generation of operational reports and lists is performed throughout the process to help ensure an efficient coordination of activities and resources.
Disposition Appointment and Encounter	Coordination of appointment and encounter information is essential in capturing and monitoring resource workflow and utilization.
Daily Appointment Check-in/Check-out: Many activities take place during check-in and check-out processes. In some cases, a Veteran might check-in at a kiosk provided by the facility, but in many cases the Veteran checks in at a receptionist type set-up at the clinic. Various scenarios of the process include: basic appointment walk-ins, cancelations, no shows, checked in but left without being seen (LWBS), coordination of same day appointments and special needs, special alerts to clerks and providers, and hand-off between provider and check-out process.	
Appointment Check-in/Check-out: Financial/Non-Financial	Two scenarios not necessarily handled in the scheduling practices of the check-in and checkout process but are triggered by these activities include co-pay and travel reimbursement. To date, most of the co-pay activities are included in the billing activities outside of scheduling; however, since the co-pay is associated with the type of service and a Veteran's eligibility, it seems logical for the Encounter Management process to include steps to validate the association and business rules that govern the final billing and communication with the Veteran. Another scenario with a financial component is the travel reimbursement agreement with the Veteran. It is the confirmation and validation that the Veteran fulfilled their obligation in the appointment and encounter process that enables the issuance of a travel voucher by the Travel Office (also known as Beneficiary Travel). Service must ensure workflow occurs in a standardized manner to include Veteran check-in with scheduling staff, nurse interviews, provider visits, and check-out processes
Itinerary of Multiple Same Day Appointments and Veteran with Special Needs	An efficient operation is one that coordinates all activities affecting timely service of care. Tracking a Veteran's check-in/check-out status from one appointment to the next on days with multiple same day appointments would significantly improve the ability for

EXAMPLES OF COMMON ENCOUNTER OF CARE SITUATIONS	
	a service to monitor, coordinate, and manage Veteran movement and provide a just-in-time need for a resource to attend to Veterans with special needs.
Walk-ins, No-shows, and LWBS	Although walk-ins help to fill the gaps in the daily schedule, no-shows and LWBS trigger other processes and reporting criteria concerning effectiveness of service.

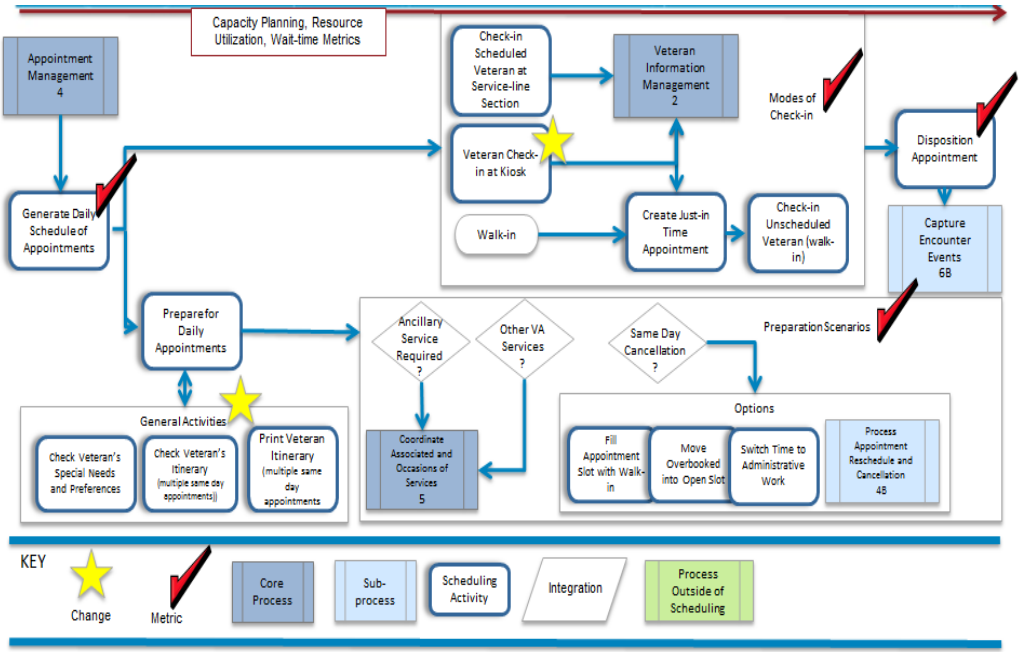
Table 19 Common Encounter of Care Situations

3.7.5 Encounter of Care Management (Continuity of Care) (6)

VHA requires the ability to view, prepare, and manage information about daily appointments, coordination with other services, patients with special needs, and check-in activities. The business requires the ability to monitor a patient's progress though the events of an encounter, and capture any orders for new services or follow-up care during the checkout process. The business requires that encounter of care activities be tracked and date/time stamped.

3.7.5.1 Perform Check-in Process (6A)

Figure 27 – Perform Check-in Process Flow (6A)

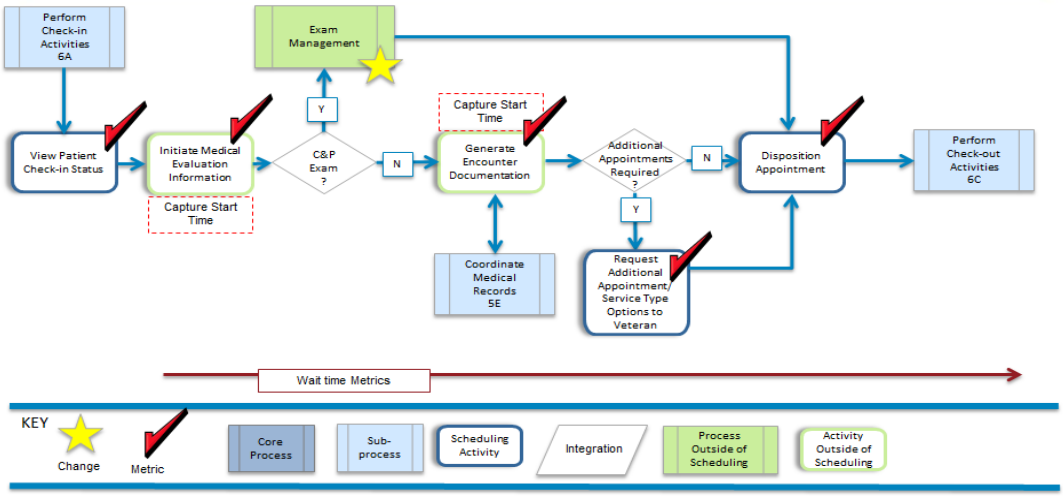


VHA requires the flexibility to view a list of scheduled appointments in preparation for the daily workload, and the ability to perform check-in activities for appointments utilizing multiple

formats such as a list view, a calendar view, a patient view, or a provider view for schedulers; or kiosks and other innovative options.

3.7.5.2 Capture Encounter Events Process Flow (6B)

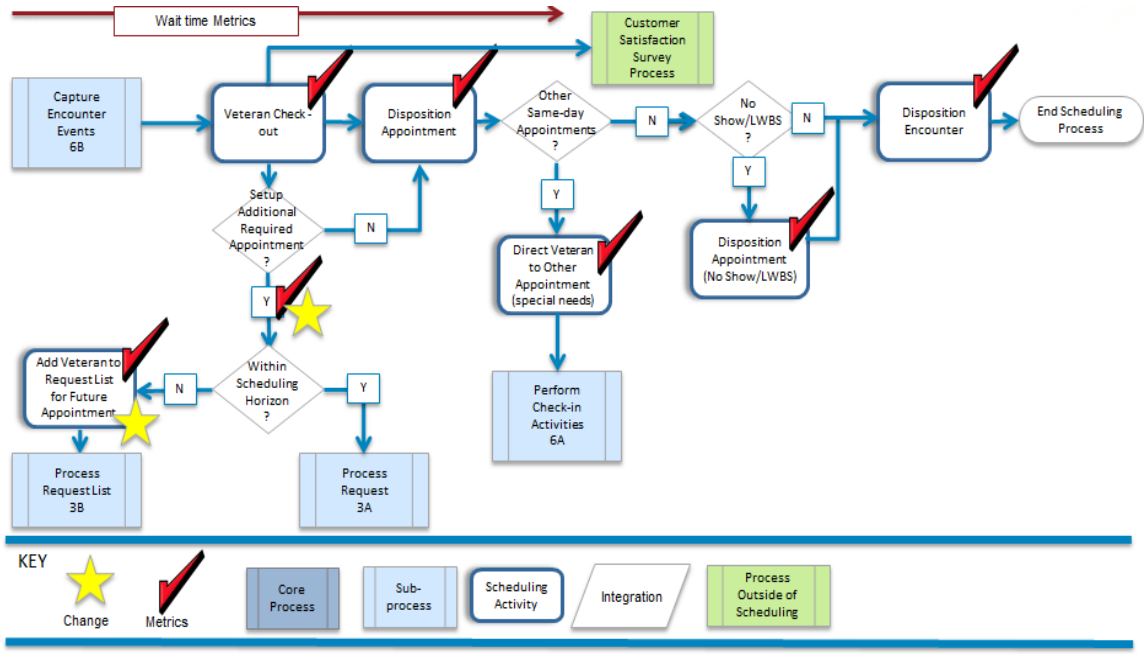
Figure 28 - Capture Encounter Events Process Flow (6B)



VHA requires the ability to capture, track, and date/time stamp the events of the encounter related to scheduling.

3.7.5.3 Perform Check-out Activities Process Flow (6C)

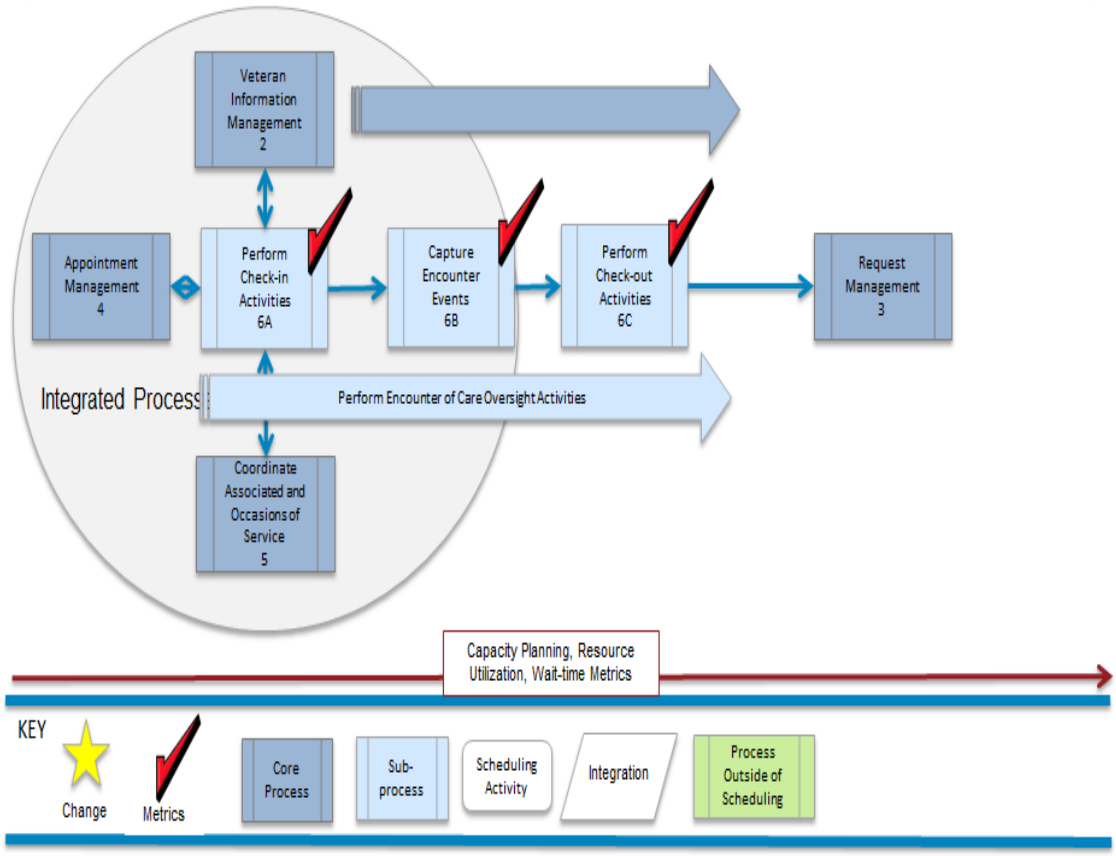
Figure 29 - Perform Check-out Activities Process Flow (6C)



VHA requires the ability to match and disposition appointments that resulted in an encounter and capture the wait-time range of metrics. The business requires the ability to capture any orders for new care or services and/or follow-up care during checkout.

3.7.5.4 Perform Encounter of Care Oversight Activities Process Flow (6D)

Figure 30 - Perform Encounter of Care Oversight Activities Process Flow (6D)



The business requires the ability to monitor the check-in process, encounter events, and checkout activities for rapid decision-making and issue resolution, as well as, the ability to report (structured, user defined, and ad-hoc) operational efficiencies or deficiencies in near-real time. Processing encounter of care activities will be tracked and date/time stamped.

3.8 Report Management

3.8.1 Process Overview for Report Management

Report Management is an overarching business capability that uses data from the application and/or interfacing systems. Reports are produced from data captured at the service line,

through facility and VISN rollups and up to national level. These reports may be exported and shared with various partners. The vision for Report Management is that aggregation of data obtained from the scheduling solution will enable VHA management to better analyze its operations at any level across the VHA landscape on current performance, performance measures and predictive analytics for future direction.

Sources for current legacy reporting will need to be maintained as VHA moves forward with the future setup of MASS. Sources of historical reports and data include, but are not limited to:

- Veteran's Service Support Center (VSSC)
- Austin Information Technology Center (AITC)
- Corporate Data Warehouse (CDW)
- Facility database instances

3.8.2 Unique/High Priority

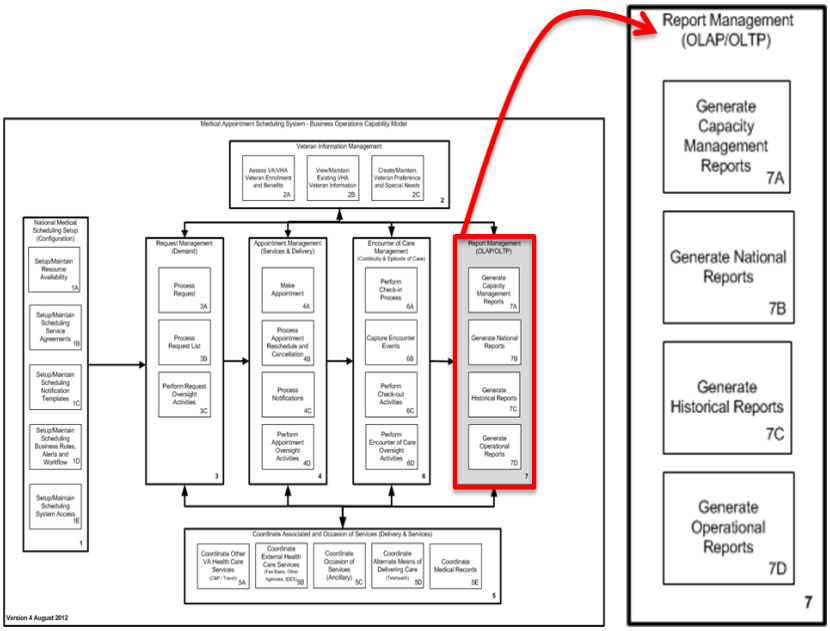
Report Management		
ID	***Feature or Characteristic***	***Measure of success***
UHP 7.1	VistA scheduling data must continue to support current VistA reporting, DSS coding and other non-scheduling business processes as it currently does today	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHP 7.2	Robust data analysis features and capability based on consistent, standard data	Veteran contact date / wait time or care cycle can be tracked by type of services received, time to complete requested service or segment of services received
UHP 7.3	Additional data elements captured to provide more detailed wait time and patient care measures	Data is not lost and data quality is improved because of decreased manual entry of data
UHP 7.4	Capture data to report resource and capacity utilization	All scheduling data extracts continue to support other non-scheduling processes without disruption
UHP 7.5	Visual display of data throughout scheduling process (calendar view or other)	Veteran contact date / wait time or care cycle can be tracked by type of services received, time to complete requested service or segment of services received
UHP 7.6	Easily accessible reporting capability allowing for broader analysis (across VHA) and deeper analysis (category of patient, condition, era, etc.) of scheduling performance	Data is not lost and data quality is improved because of decreased manual entry of data

Table 20 Report Management Unique/High Priority Business Needs

3.8.3 Capability Model Description

Figure 31 - Reporting (Framework View) describes VHA report management needs for each of the sub-capabilities necessary to perform strategic, tactical and operational insight and decision-making.

Figure 31 - Reporting (Framework View)



REPORT MANAGEMENT - SUB-CAPABILITIES		
BN7 Report Management is an overarching business capability that uses data from the scheduling application and/or interfacing systems. Data is used to produce reports from the service line level to the national level and may be exported/shared with various partners.		
BN7A	Generate Capacity Management	The Generate Capacity Management sub-capability concentrates on capacity planning of resources and work force utilization throughout the scheduling operation. As a planning tool, resource availability and utilization is compared to projected demand, actual demand, and fulfilled appointments; and aims to provide available resources where care is needed. Data is used to produce reports from the service-line level to the national level.
BN7B	Generate National Report	The Generate National Report sub-capability allows information from scheduling and non-scheduling sources (such as clinical information, patient cost, insurance, and benefits) to be aggregated and consolidated to a national data center from various service-lines and facilities across VHA that contains information gathered from scheduling and non-scheduling sources (such as clinical information, patient cost, insurance, and benefits). These reports are used to present the efficiencies or inefficiencies of the healthcare line of business to VA leadership,

REPORT MANAGEMENT - SUB-CAPABILITIES		
		Congress and other organizations.
BN7C	Generate Historical Reports	The Generate Historical Reports sub-capability allows information to be aggregated and consolidated to a national data center from new and legacy systems. These reports provide both a summary and detailed view of historical data that must be maintained in accordance with public laws and VA policies. Data is used to produce reports to determine trends, to plan for future activities, and to present the information at the national level to VA leadership, Congress, and other organizations
BN7D	Generate Operational Reports	The Generate Operational Reports sub-capability provides a variety of operational performance and audit reports of daily healthcare scheduling activities which are aggregated and consolidated from the service-line level to the national level in order to track and monitor activity based costing, performance against plan, access to care (such as missed opportunities and wait time), quantity and quality of care received (such as return visit rate), clinical outcome goals including continuity of care and adherence to various levels of policy.

Table 21 Report Management Sub-Capabilities

3.8.4 Examples of Common Reports Generated During Report Management

The situations noted in *Table 22 Common Reports Generated during Report Management* describes examples when reports are used in VHA.

COMMON REPORTS GENERATED DURING REPORT MANAGEMENT	
Capacity Management Reports: The business requires the capability to produce capacity planning reports for demand, available resources, and work force utilization throughout the scheduling operation to support the ability to forecast changes in demand and resource needs through predictive analytics. The business requires tools (such as a dashboards) to support workload forecasting, planning, and leveling; and to monitor 'just-in-time' utilization of staff and resources to meet demand (such as backlogged, current, and future requests). The business requires the ability to reconcile unmatched demand and supply.	
Real Time Capacity Management	The need to manage resources at the local level is paramount in achieving equilibrium between demand and available resources at the point these two factors become out of balance. Clinic managers need real time feedback regarding wait times, ability to meet demand based upon available resources over a specified time period. Current feedback is in arrears thus providing no ability to adjust real time.
Workload and Utilization Management	Workload and utilization management is an example of how other program areas use data within the scheduling processes. There are currently over 50 workload and utilization reports available from VSSC and include trends for unique patients, top outpatient procedures, top diagnosis, patient cost and workload, outpatient visits and first time users, disbursed amounts for various non-VA care categories, and various inpatient type concerns. The National Patient Care Database (NPCD) reports provide tools to assist sites reviewing in-house outpatient workload and demographics at the clinic stop level for outpatient Veteran patient population. Analysis of outpatient visits; encounters and

COMMON REPORTS GENERATED DURING REPORT MANAGEMENT	
	unique patients are available at the National, VISN, Facility and Division level, for a multitude of demographics (including Rural areas). These reports need to continue to receive scheduling information for their analysis and reporting needs.
National Reports: National reports are populated by aggregating information from clinics and facilities across VHA. The business requires current national reporting requirements be maintained (such as specified information, algorithms, and formatting). The reports must accurately reflect the data being aggregated and consolidated to a national data center from various service lines and facilities across VHA. These standard national reports contain information gathered from scheduling and non-scheduling sources (such as clinical information, patient cost, insurance, and benefits), and are used to present the efficiencies or inefficiencies of the healthcare line of business to VA leadership, Congress and other organizations.	
Congressional Reports	Currently, there are three key reports within VSSC for reporting clinic wait time performance to Congress; however, throughout the year, Congress presents requests for just-in-time information on a myriad of issues involving the national footprint down to an individual network/VISN or facility. Examples of reports: • New and Established Patients and Wait Times for Completed Appointments - Top 50 Clinics summarizes performance within 14 days of the appointment desire date in both Primary and Specialty Care services. It also rates within 30 days of desire date for all Compensation & Pension appointments. • Access List (built on FY11 logic) focuses entirely on the preferred date of the Veteran as the default option, although it allows the user to see the original appointment creation date method if so desired. The Top 50 Clinic listing remains unchanged from FY2010, but this new version divides list of 50 into 2 sub-categories (Primary Care & Specialty Care). Each group will have its own unique target in FY2012.
ACAP Reports	ACAP uses reports from VSSC which focus on two major areas of performance: • Clinic Wait Time and Performance Reports - Both are used to work with network directors to assess, monitor and react to performance issues. • Network Director Performance Reports - are used to assess performance including access measures, clinical measures and scheduling measures. The critical scheduling pulls vary by year with new criteria depending on the kinds of measure that needs to be tracked. This capability will require that the system is able to present ad-hoc sets of information in the form of scorecards and dashboards with drill down functionality to the root data source. • Wait Time Reports - were created to monitor performance against two of the three VA's strategic objectives, '*Make it easier for Veterans and their families to receive the right benefits, meeting their expectations for quality, timeliness and responsiveness' and 'Build our internal capacity to serve Veterans, their families, our employees, and other stakeholders efficiently and effectively.'* The span of analysis involves pending appointments, completed appointments (new enrollee and established patients), Veterans on the Electronic Wait Time List that are over/under 30 days, missed opportunities due to cancellations, provider detail history, Veteran classification, top 50 clinics, various call center metrics, pending future appointments, patient appointment and encounter history, "no Vet left behind", new and established patients linked to consult wait times, no show missed opportunities, mental health non show and cancellation by patient follow up, clinical utilization and capacity, appointment cancellation and reschedule rates, and access list national trends segregated by primary care, specialty care and C&P trends.

COMMON REPORTS GENERATED DURING REPORT MANAGEMENT	
	• These reports are also used throughout the VHA.
Clinical Care	There are over 30 clinical care reports available from VSSC. Information available in this domain supports some components of the MASS setup, manage Veteran information, and coordinate associated and occasions of service capabilities. Some examples of the information presented in the clinical care area includes: Primary care staffing ratios, primary care staffing and room utilization, provider/capacity/modeled panel and active panel list, primary care almanac, patient aligned care teams, PACT program, PCMM coordinator list and referral case manager list, various mental health, telehealth workload and care coordination home telehealth outcome briefings, care coordination home telepath visits, vendors and outcome briefing books, amputations, after hours mental health.
Capital and Planning	Capital and Planning reports tend to be more prescriptive and project utilization by treating facilities, market, and enrollment by Veteran population, Special Conflict and gender. Projections from the VA National Center for Veterans Analysis and Statistics and the VHA Office of the ADUSH for Policy and Planning for enrollee OEF/OIF status and Gender for years 2010-2031 by VISN, is utilized to assess demand and supports workload/utilization planning decisions.
Special Focus	The majority of the special focus reports convey factors involving Operation Enduring Freedom (OEF)/Operation Iraqi Freedom (OIF)/Operation New Dawn (OND) and Non-VA Care – PHI concerns that are currently being monitored. Trends in rural health and a report developed as a joint incentive fund initiative regarding purchased care information are also associated with this report category.
Historical Reports: Historical reports are generated from a variety of legacy sources in order to see what happened in the past and to compare that to what is happening today. This provides VHA the ability to determine trends and gauge present activities versus past activities and to plan for future activities. Historical reports are also generated to review the logic and reporting format used in years past, as well as review data generated in past years reporting. Sources of historical reports and reporting data include, but are not limited to: • Veteran's Service Support Center (VSSC) • Austin Information Technology Center (AITC) • Corporate Data Warehouse (CDW) • Facility database instances The business requires the capability to maintain an archive of summary and detailed historical data from new and legacy systems, in accordance with public law and VA policy. The business requires the ability to maintain continuity of reporting as measures and metrics change. The business requires the ability to produce reports to determine trends, to plan for future activities, and to present the information at the national level to VA leadership, Congress, and other organizations.	
Legacy and Historical Reports	Federal and VA regulations and VHA policy require that information pertaining to past metrics must be maintained per record management regulations. Some examples of historical reports include past performance of facilities for appointments made and kept, appointments cancelled and rescheduled.
Operational Reports: The business requires the capability to produce a variety of operational performance and audit reports of daily healthcare scheduling activities which are aggregated and consolidated from the service-line level to the national level in order to track and monitor activity based costing, performance against plans, access to care (such as missed opportunities and wait time), quantity and quality of care received (such as return visit rate), and clinical outcome goals including continuity of care. The business requires the ability to capture and track request date, Veteran/Provider preferred date/agreed upon date, create date of an appointment, and location of available care.	

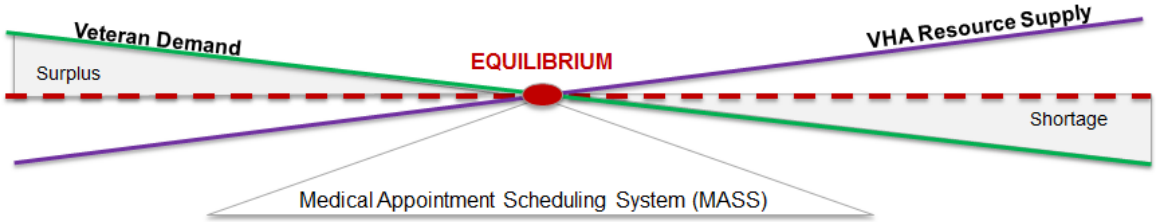
COMMON REPORTS GENERATED DURING REPORT MANAGEMENT	
Patients	There are many situations when a patient's information is required within a given report. Currently, patient reports at the operational level generate activity by frequency, patient appointment statistics, care encounter lists, problem lists, patient profiles and routing slips. The new solution needs the capability to generate information relevant to supporting the encounter of care, the continuity of care, and missed opportunities of all Veterans.
Appointment/Clinic	There are over 20 operational reports that pull information on appointments and clinics. The information is a mix of availability and utilization, caseload, cancellations, check-ins, general/random appointment information, notifications and letters, and audits by supervisors. These reports need to be generated throughout the scheduling process to support common activities and prepare for daily routines.
Encounters	Operationally, reports generated with encounter information are used administratively to ensure the disposition of incomplete information and to ensure that the encounter is properly associated to a stop code for co-pay and other financial concerns. These reports are generally not included in the scheduling process, but are often performed by the scheduling staff.

Table 22 Common Reports Generated During Report Management

3.9 Report Management Concepts and Business Needs (7)

VHA requires the capability to produce robust reports at the national, VISN, facility and service line levels to ensure policy compliance, and operational effectiveness, to monitor the quantity and quality of care received, and to achieve clinical outcome goals. The business requires that reports containing personally identifiable information that are required to be transmitted, retrieved, viewed, or printed meet all VA Handbook 6500 requirements. The business requires the ability to produce structured, ad-hoc, and user defined reports in a variety of output formats in near real-time.

3.9.1 Capacity Management (7A)



Capacity Management is the balance of demand and supply from predictive analytics for future direction, monitored by daily operational appointment activities, and concluded with successful encounters.

VHA requires the capability to produce capacity planning reports for demand, available resources, and work force utilization throughout the scheduling operation to support predictive

analytics and ability to forecast changes in demand and resource needs. The business requires tools (such as a dashboards and other types of formats) to support workload forecasting, planning, and leveling; and to monitor 'just-in-time' utilization of staff and resources to meet demand (such as backlogged, current, and future requests). The business requires the ability to reconcile unmatched demand and supply.

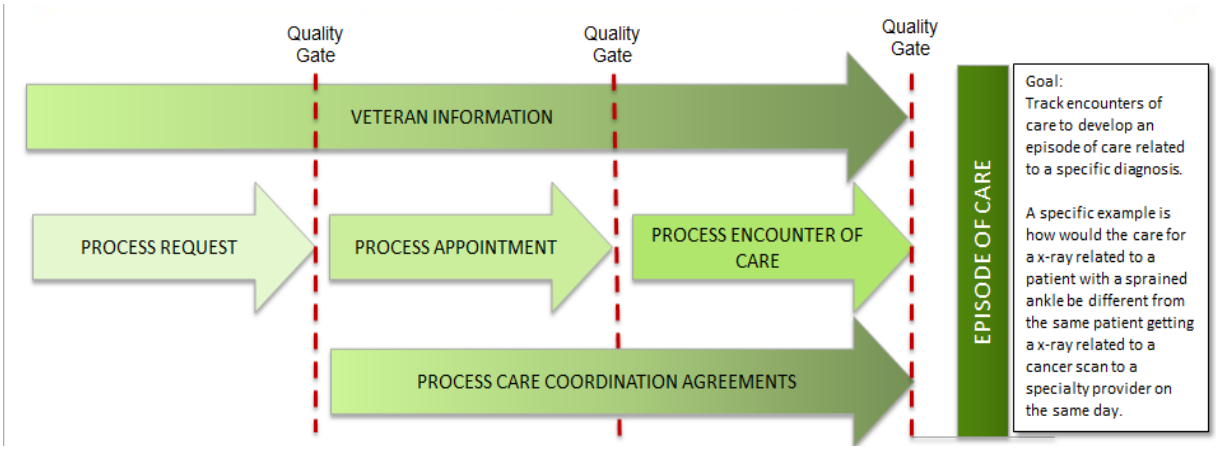
3.9.2 National Reports (7B)

VHA requires current national reporting requirements be maintained (such as specified information, algorithms, and formatting). The reports must accurately reflect the data being aggregated and consolidated to a national data center from various service lines and facilities across VHA in near real-time. These standard national reports contain information gathered from scheduling and non-scheduling sources (such as clinical information, patient cost, insurance, and benefits), and are used to present the efficiencies or inefficiencies of the healthcare line of business to VA leadership, Congress and other organizations.

3.9.3 Historical Reports (7C)

VHA requires the capability to maintain an archive of summary and detailed historical data from new and legacy systems, in accordance with public law and VA policy. The business requires the ability to maintain continuity of reporting as measures and metrics change. The business requires the ability to produce reports to determine trends, to plan for future activities, and to present the information at the national level to VA leadership, Congress, and other organizations.

3.9.4 Operational Reports (7D)



VHA requires the capability to produce a variety of operational performance and audit reports of daily healthcare scheduling activities which are aggregated and consolidated from the

service-line level to the national level in order to track and monitor activity based costing, performance against plans, access to care (such as missed opportunities and wait time), quantity and quality of care received (such as return visit rate), and clinical outcome goals including continuity of care. The business requires the ability to capture and track request date, Veteran/Provider preferred date/agreed upon date; create date of an appointment, and location of available care.

4 Functional Integration Points in VistA

VHA scheduling is comprised of a complicated mix of stand-alone occurrences (instances) of the scheduling software, with data necessary to run that instance and a series of modules that transmit different data to other systems and repositories. As a new scheduling solution is implemented, the existing data exchanges and interfaces must be evaluated and supported to ensure other VHA systems and data are not adversely affected.

Systems that integrate with the existing scheduling package are noted below as are potential integration touch points in the future system. Data are exchanged in a variety of manners such as APIs, RPCs, HL7, etc. Also, business rules are embedded as part of the exchanges and will need to be examined as part of the transition from the VistA environment to a new scheduling solution. This list is not intended to be complete, but rather an initial view of potential functional integration points to be considered in the development of any future medical appointment scheduling system.

Potential Future State Integration Touch Points	
Enterprise Identity and Access Management (IAM) for user provisioning, authentication, authorization, and single sign on	Customer Relationship Management Systems supporting VA call centers and case management systems to include: VBA National Call Centers (CRM/UD), Health Resource Center (HRC), VistA/VISN Call Centers (FTP), Health Administration Call Center (PC/HAC), Federal Case Management (FCMT)
VistA Kernel Package	VistA Lab package
VistA Scheduling Package	VistA Medicine package
Print/mail services	VistA radiology package
Enterprise correspondence and notification services	VistA General Medical Record Vitals Package
VistA Registration package	VistA Order Entry and Result Reporting package
Preferences Service	VistA Consult/Request package
Veteran Access Preferences	VHA Corporate Data Warehouse

Health Enrollment and Eligibility System (ESR) via the Eligibility and Enrollment Service (E&E)	Disability Exam Assessment Program system
VA Master Veteran Index (MVI)	VistA AMIE package
Business Event Notification Service	Benefits Gateway Services
VistA PCMM Package	Enterprise Health Management Platform (eHMP)
PCMMR system	eHealth Gateway
Veteran Military Information Service	VA Data Access Service
Veteran Contact Information Service	VistA Exchange Services
My HealtheVet Portal	Enterprise Messaging Infrastructure
MHV Secure Messaging	VA Authentication Federation Infrastructure (VAAFI)
eBenefits Portal	Veteran Point of Service Kiosk
Stakeholder Enterprise Portal	VistA Beneficiary Travel Package
Mobile Application Environment	Enterprise Contact History
MUMPS AudioCare	

VistA Scheduling Dependencies & Dependents Summary

- *VistA Scheduling has over 1,000 distinct integration points*
- *FileMan Files – 73*
  - *Information is accessed via calls to FileMan*
- *Non-FileMan Globals – 49*
  - *Information is accessed via "Globals" – direct database calls*
- *Routines – 961*
  - *Calls are made to initiate routines within other VistA packages*

Current VistA Scheduling Dependencies[1]		
VA FileMan [655(R):153(G):2(F):4(D)]	Registration[269(R):351(G):19(F):94(D)]	Kernel [417(R):180(G):30(F):76(D)]
Uncategorized [8(R):449(G)]	List Manager [123(R):3(G):1(D)]	MailMan [92(R):11(G):1(F):1(D)]
PCE Patient Care Encounter[29(R):26(G):1(F):12(D)]	Toolkit [5(R):45(G)]	Health Level Seven[19(R):7(G):1(F):5(D)]
CPT HCPCS Codes[16(R):3(G):1(F):1(D)]	DRG Grouper [12(R):2(G):2(F):2(D)]	Authorization Subscription[3(R):6(G):3(F):2(D)]
Consult Request	Income Verification Match [11(R)]	Integrated Billing [8(R):1(G):1(F)]

[1] OIT Medical Appointment Scheduling System (MASS) VistA scheduling Integration Overview dated 30 June 2014

Tracking [2(R):8(G):1(F):1(D)]		
HINQ [8(G):2(D)]	Enrollment Application System[6(R):4(G)]	Record Tracking [2(R):3(G):1(F)]
Master Patient Index VistA [3(R)]	Mental Health [2(R):1(G)]	Outpatient Pharmacy [1(R):1(F)]
DSS Extracts [1(R):1(G)]	Clinical Reminders [1(G)]	Order Entry Results Reporting [1(G)]
Automated Information Collection System[1(G)]	Text Integration Utility [1(R)]	Oncology [1(F)]
Accounts Receivable [1(R)]	Problem List [1(D)]	Fee Basis [1(R)]
Social Work [1(R)]		

Current Packages Dependent on Scheduling[1]		
Order Entry Results Reporting[26(R):88(G):7(F):2(D)]	Registration[61(R):36(G):8(F):6(D)]	Integrated Billing [36(R):46(G):7(F):4(D)]
PCE Patient Care Encounter[19(R):64(G):2(F):7(D)]	Radiology Nuclear Medicine[5(R):60(G):5(F):11(D)]	Lab Service [7(R):32(G):10(F):19(D)]
Outpatient Pharmacy[12(R):36(G):6(F):10(D)]	Surgery [4(R):45(G):4(F):4(D)]	Automated Information Collection System[9(R):40(G):4(F):3(D)]
DSS Extracts [4(R):17(G):18(F):11(D)]	Text Integration Utility[5(R):33(G):4(F):3(D)]	Inpatient Medications[5(R):24(G):4(F):8(D)]
Event Capture [5(R):20(G):3(F):9(D)]	Clinical Reminders[9(R):13(G):2(F):4(D)]	Medicine [16(G):9(F):2(D)]
Record Tracking [2(R):19(G):2(F):3(D)]	General Medical Record - Vitals[1(R):9(G):1(F):15(D)]	Consult Request Tracking[2(R):14(G):2(F):4(D)]
Nursing Service [14(G):3(F):4(D)]	Spinal Cord Dysfunction[5(R):13(G):3(D)]	Automated Medical Information Exchange[10(R):8(G):1(F):2(D)]
Clinical Procedures [4(R):6(G):2(F):8(D)]	Virtual Patient Record[4(R):12(G):3(D)]	Clinical Case Registries [4(R):6(G):8(D)]
Health Summary [5(R):7(G):1(F):3(D)]	Imaging [5(G):7(F):4(D)]	Quasar [2(G):3(F):10(D)]
National Health Information Network[2(R):7(G):2(D)]	Dietetics [1(R):8(G):2(F)]	Occurrence Screen [10(G):1(F)]
Problem List [1(R):6(G):2(F):2(D)]	Adverse Reaction Tracking[1(R):8(G):1(D)]	Automated Lab Instruments[1(R):1(G):2(F):5(D)]
Clinical Information Resource Network[3(R):3(G):1(F):2(D)]	Income Verification Match [7(R):1(G)]	Enrollment Application System[5(R):1(G):2(D)]
Hospital Based Home Care[2(R):3(G):3(F)]	Incomplete Records Tracking[6(G):1(F)]	Incident Reporting [6(G):1(F)]
Mental Health [3(G):2(F):2(D)]	General Medical Record - IO[4(G):1(F):2(D)]	Emergency Department Integration Software [4(G):2(F)]
Womens Health [1(R):2(G):2(F):1(D)]	My HealtheVet [3(R):1(G):1(D)]	PAID [1(G):4(D)]
Auto Replenishment Ward Stock[3(G):1(F)]	Social Work [1(R):2(G):1(F)]	VBECS [1(R):3(G)]
Patient Representative [2(G):1(F)]	Beneficiary Travel[1(R):1(G):1(D)]	Lexicon Utility [2(G):1(D)]
Pharmacy Data Management [2(G):1(F)]	Accounts Receivable [2(G):1(D)]	Barcode Medication Administration[2(G)]
Patient Assessment Documentation[1(R):1(F)]	VA Point of Service [1(R):1(G)]	Shift Handoff Tool [1(R):1(F)]

Prosthetics [2(F)]	Controlled Substances [2(G)]	Patient Data Exchange [1(R)]
Care Management [1(G)]	CMOP [1(G)]	Uncategorized [1(G)]
Functional Independence [1(D)]	IFCAP [1(G)]	Pharmacy Benefits Management [1(R)]
Quality Assurance Integration [1(F)]	Kernel [1(F)]	Oncology [1(G)]
Toolkit [1(F)]	Clinical Monitoring System [1(G)]	1.1.1.1

5 Acronyms

AAC	Austin Automation Center
ACAP	Access and Clinic Administration Program
ADA	Americans with Disabilities Act
ADPAC	Automated Data Processing Application Coordinator
ADUSH	Assistant Deputy Under Secretary for Health
AMIE	Automated Medical Information Exchange
API	Application Program Interface
ASCII	American Standard Code for Information Interchange
ASP	Application Service Provider
BN	Business Need
BPR	Business Process Reengineering
BRD	Business Requirements Document
C&P	Compensation and Pension
CA	Certification and Accreditation
CBO	Chief Business Office
CBOC	Community Based Outpatient Clinic
CBPM	Current Business Process Model
CDC	Center for Disease Control
CGI	Common Gateway Interface
CORBA	Common Object Request Broker Architecture
COTS	Commercial Off-The-Shelf
CPLCAM	Customer Program Life Cycle Assessment Methodology
CPRS	Computerized Record System
CVT	Clinical Video Telehealth
DCOM	Distributed Component Object Model
DEERS	Defense Enrollment Eligibility Reporting System
DSS	Decision Support Service
DSS	Decision Support Services
ERM	Enterprise Requirements Management
ESM	Enterprise Systems Management
EWL	Electronic Wait List
EWS	Enterprise-Wide Scheduling
FBPM	Future Business Process Model
FIPS	Federal Information Processing Standard
FTE	Full Time Equivalent
FTEE	Full-Time Equivalent Employee
FTP	File Transfer Protocol
FU	Follow-up

GAO	Government Accounting Office
GAO	Government Accountability Office
GCPR	Government Computer-based Patient Record
GSM	Global Session Manager
GUI	Graphic User Interface
GUI	Graphical User Interface
HINQ	Hospital Inquiry
HIPAA	The Health Insurance Portability and Accountability Act of 1996
HIS	Health Information Service
HL7	Health Level 7
HTML	Hypertext Markup Language
IAA	Interagency Agreement
IBM	International Business Machines Corporation
ID	Identification
IDES	Integrated Disability Evaluation System
IE	Microsoft Internet Explorer
IHI	Institute for Healthcare Improvement
IHS	Indian Health Service
IIS	Internet Information Server
IMAP	Integrating Medicine and Public Health
IT	Information Technology
IT/IRM	Information Technology/Information Resource Management
LDAP	Lightweight Directory Access Protocol
MASS	Medical Appointment Scheduling
MPI	Master Patient Index
MTF	Medical Treatment Facilities
MUMPS	Massachusetts General Hospital Utility Multi-Programming System
NIH	National Institute of Health
NIST	National Institute of Standards and Technology
NOD	Notification of Death
NSR	New Service Request
NwHIN	Nation-wide Health Information Network
ODBC	Open Database Connectivity
OEF	Operation Enduring Freedom
OI&T	Office of Information and Technology
OIF	Operation Iraqi Freedom
OIG	Office of Inspector General
OIT	Office of Information and Technology
OLAP	On Line Analytical Processing

OLTP	On Line Transaction Processing
OMG	Object Management Group
OND	Operation New Dawn
ORB	Object Request Broker
OWNR	Owner Requirement
PACT	Patient Aligned Care Team
PCC	Primary Care Clinic
PCMM	Primary Care Management Module
PCP	Primary Care Practitioner
PDF	Portable Document Format
PIMS	Patient Information Management System
PKI	Public Key Infrastructure
PRF	Patient Record Flag
RAD	Resource Access Decision
RAEM	Requirements Analysis and Engineering Management
RAID	Redundant Array of Independent Disks
RO	Regional Office
RTF	Rich Text Format
SGML	Standard Generalized Markup Language
SME	Subject Matter Expert
SMTP	Simple Mail Transfer Protocol
SOAP	Simple Object Access Protocol
SQL	Structured Query Language
SR	Systems Redesign
SS	System Specification
SSL	Secure Sockets Layer
TCP/IP	Transmission Control Protocol / Internet Protocol
TIU	Text Integration Utilities
USERID	User Identification
USPS	U.S. Postal Services
VA	Department of Veterans Affairs
VAAC	Veteran Affairs Appointment Clerk
VACO	Veterans Affairs Central Office
VAMC	Veterans Affairs Medical Center
VAR	Veteran Appointment Request
VB	Visual Basic
VBA	Veterans Benefits Administration
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
VistA	Veterans Health Information Systems and Technology Architecture

VLER	Virtual Lifetime Electronic Record
VSSC	VHA Support Service Center
XMI	XML Metadata Interchange
XML	E**x**tensible Markup Language
XSL	Extensible Style-sheet Language

6 Descriptions of Terms

Advanced Access	An appointment scheduling carve-out strategy that emphasizes scheduling nearly all appointments on a same day basis and minimal appointment types. Most of a section's appointment slots remain open until the start of the day. Very few slots are scheduled in advance of 24 hours. This is effectively open access taken to the logical extreme.
Ambulatory Care Reporting Project	Process of collecting and storing encounter-based clinical, diagnostic, and administrative outpatient data for daily transmission to the Austin Automation Center.
Ancillary Service	Now known as "Occasion of Service," a specified identifiable instance of an act of technical and administrative service involved in the care of a patient or consumer, which is not an encounter and does not require independent clinical judgment in the overall diagnosing, evaluating, and treating the patient's condition(s).
Ancillary Test	Diagnostic testing performed by the laboratory, radiology, or EKG sections.
Ancillary Test Results	Diagnostic results of performed ancillary tests.
Ancillary Test Results Notification	Information concerning the completion and the results of ancillary tests.
Appointment (APPT)	An Appointment is the generic term used to refer to the association of one or more patients and/or named groups to one or more time intervals that are associated with one or more resources in a specific timeslot for the purpose of recording a scheduled or unscheduled health care encounter.
Appointment Dependencies	need use cases/user stories/examples, such as when a lab must be completed prior to an appointment
Appointment List	List of appointments, by physician, clinic, etc.
Appointment Metrics	Summary of statistics related to appointments.
Appointment Notification	A notification about a patient's scheduled appointment(s) normally delivered to the patient via mail or telephone.
Appointment Record	Information regarding a patient's appointment history. Includes information such as appointment date and time, appointment status, etc.
Appointment Request	A request for a reserved date and time period to be reserved with a medical resource. Appointment requests are normally initiated by a patient or provider. Currently NOT captured in the computer process.
Appointment Slot	The available time with available resources, during which an appointment may be scheduled.
Appointment Type	1.2 Appointment Types are a CODE SET by Central Office that is determine by the Patient's Eligibility and determines billing process for the appointment. Current VHA examples of appointment types (VISTA File 409.1, Appointment Type File) are regular, prima-fascia, and research.

Architecture	The style or method of design and construction that comprises the elements of an information system and defines the purpose and interrelationships of those elements.
Business Process	A group of activities that takes input, transforms it, and provides output to an internal/external user.
Business Process Reengineering (BPR)	The fundamental analysis and redesign of business processes and management systems, job definitions, organizational structures and beliefs and behaviors to achieve dramatic performance improvements to meet contemporary requirements. IT is a key enabler in this process.
Business Rule	A statement that defines or constrains some aspect of the business that includes directives that influence the human activity and guides the business behavior.
Business Rule Statement	A declarative statement of structure or constraint for which the business places upon it.
Capability	A Capability is satisfied by business process and performed by a role, i.e. an individual or team in the organization. Capabilities can be broken down into supporting capabilities (sub-capabilities), if necessary.
Capacity Planning	Process of determining the provider capability need by VA to meet changing demands for care.
Care Coordination Agreement	A Care Coordination Agreement is a written agreement defining workflow rules between any two or more services that send work to one another. Ideally, this document is developed based on discussion and consensus between the two or more involved services.
Carve-Out	The practice of holding certain types of appointments for specific purposes. This method accepts the presumption that demand for medical appointments can be measured and predicted. Once estimated, the number of appointments of a certain type can be carved-out to satisfy the demand for that particular appointment type.
CCOW	CCOW-compliant applications coordinate with each other via a behind-the-scenes context manager that enables them to work together in ways that behave like a single system from the caregiver's perspective. The context manager notifies the CCOW-compliant applications whenever the identity of the user, the patient selected, or the specific clinical observation selected changes. As the caregiver moves between applications, they are able to view the appropriate information without re-identifying the patient or observation desired.
Client/Server	Client/server describes the relationship between two computer programs in which one program, the client, makes a service request from another program, the server, which fulfills the request. Computer transactions using the client/server model are very common.
Clinic	A Clinic is a location and resource where a Veteran can seek care.

Compensation And Pension Evaluation Results	The recorded results of a C&P medical evaluation accomplished by the provider and provided to the VBA.
Compensation and Pension Request	A request for a C&P appointment at a VA medical facility for a patient needing a Compensation and Pension medical evaluation. Normally received from the VBA.
Component Administrator	The individual that performs installation, initial setup, and configuration management of the scheduling component.
Computer Off-The-Shelf (COTS) Software	An item of software that has been produced by a vendor and is available for general purchase. Such items are at the unit level or higher. Such items must have been sold and delivered to government or commercial users, must have passed user's acceptance testing, be operating under user's control, and within the user environment. Further, such items must have meaningful reliability, maintainability, and logistics historical data.
Computerized Patient Record System (CPRS)	The V*ist*A package (in both GUI and character-based formats) that provides access to components of the patient chart.
Configure Patient Notification Requests	Configure the means for communication regarding appointments to accommodate the desires of the patient and the needs of the clinic, to include pre appointment instruction language, timing of notifications and delivery mechanism (text, email, phone, etc.).
Consult	A Consult is defined as a request for a specialty clinic or a provider to attend a Veteran on a consultation basis. Since providers sometimes consult without an appointment, the services must still be tracked and tied to the Veteran and the encounter. In addition to the basic consult request, orders are provided for coordination of associated and other occasions of service in conjunction with the specialty consult appointment request.
Consult Tracking	Consult/Request Tracking is a V*ist*A product that is also part of CPRS (it can function as part of CPRS, independently as a standalone package, or as part of TIU). It's used to request and track consultations or procedures from one clinician to another clinician or service.
Count v. Non-count clinics	In the creation of Clinic Profiles, clinics are designated as either Count Clinics or Non-Count Clinics. Count Clinics are transmitted to PCE as encounters. Non-Count Clinics are not transmitted to PCE. There are generally two reasons why a clinic might be designated as non-count: 1) if the clinic is administrative in nature and therefore not providing patient care and, 2) if the workload associated with the clinic is transmitted to PCE automatically through another means (a VistA package other than Scheduling) then the clinic is setup as non-count to avoid sending duplicate workload to PCE (for example, occasions of service).
CVT appointment pair	Patient and provider appointments to fulfill Clinical Video Telehealth care delivery
Dates	create date, preferred date, scheduled appointment date, completed date
Preferred Date	The preferred appointment date is the date the patient or the

	provider wants the patient to be seen.
Discharge	The process of checking out patients once they have completed their treatment with a provider for a particular appointment and visit.
DSS Identifier	A DSS Identifier, also referred to as a stop code, is a VHA term that was effective on October 1, 1996, which characterizes VHA Ambulatory Care Clinics by a six-character descriptor. The DSS Identifier value is transmitted to the National Patient Care Database with each separate outpatient encounter into the NPCD field "DSS Identifier." A primary stop code and a secondary stop code compose the DSS Identifier.
DSS Identifier	DSS Identifiers are used to measure workload for all outpatient encounters. They are the single designation by which VHA defines clinical work units for costing purposes.
Electronic Wait List (EWL)	The EWL is the official VHA wait list. The EWL is used to list of NEW patients waiting to be scheduled, or waiting for a panel assignment. In general, the EWL is used to keep track of patients with whom the clinic does not have an established relationship (e.g., the patient has not been seen before in the clinic).
Eligibility	Eligibility is information concerning a patient's entitlement to receive VHA care.
Eligibility Determination	The act of qualifying a presenting patient for VHA medical care, usually involves researching available military records presented by the patient or received from other trusted sources.
Eligibility Verification	The act of verifying that a positive eligibility determination has been made. Usually involves checking information available from a reliable source (e.g., HINQ).
Emergent Care	Emergent or emergency care is the resuscitative or stabilizing treatment needed for any acute medical or psychiatric illness or condition that poses a threat of serious jeopardy to life, serious impairment of bodily functions, or serious dysfunction of any bodily organ or part.
Encounter	An encounter is a professional contact between a patient and a provider vested with responsibility for diagnosing, evaluating, and treating the patient's condition.
Enrollment	The Health Eligibility Center (HEC) is responsible for determining eligibility of Veterans for VHA medical care. The HEC is the authoritative source for Veteran eligibility and subsequent enrollment priority. To be enrolled, a Veteran must meet basic eligibility criteria. The HEC gathers all the information needed to make eligibility decisions and records and processes the information using the HEC System.
Framework	Graphic view of the activities and functions of outpatient scheduling, grouped in modules of related activities.

Full-Time Equivalent Employee (FTEE)	Employment figures expressed as a computed statistic representing the number of full-time employees that could have been employed if the reported number of hours worked by part-time employees had been worked by full-time employees. This statistic is calculated by dividing the "part-time hours paid" by the standard number of hours for full-time employees in the particular government and then adding the resulting quotient to the number of full-time employees.
High Priority Reschedule List	A "tickler" list of high priority patients (e.g., those that pose potential threats to themselves or society if not closely managed). This list ensures that when these patients miss scheduled appointments, it does not go unnoticed and they receive priority for rescheduling.
Hospital Inquiry (HINQ)	The Hospital Inquiry (HINQ) module allows VAMC to obtain veteran eligibility information from four remote VBA computer systems. Returned HINQ data may be loaded directly into the local Patient file through various screens.
Individual Appointment Cancellation Request	Information used to cancel an individual appointment.
Individual Schedule Information	Contains information related to the scheduled availability of a specific resource. It may indicate specific times the resource will and will not be available.
Link consults to appointments	Business process whereby appointment is linked to the consult request.
Long Term Waiting List	A holding area for appointment requests that fall outside the planning horizon which may also have a reminder system in place to re-activate appointment requests at a prescribed time (e.g., one month prior to the preferred appointment date/time).
Management Level	Refers to either a Veterans Integrated Service Network or a group of medical treatment facilities integrated as a Health Care System with a single V*ist*A installation. Within this document it may also be used to denote a level of management that defines resources, establishes standards, and establishes policy.
MyHealtheVet	My HealtheVet (MHV) is a web-based product that gives veterans information and tools to improve their health.
New Enrollee	A new enrollee is a previously non-enrolled Veteran who applies for VA health care benefits and enrollment by submitting VA Form 10-10EZ, Application for Health Benefits, is determined to be eligible, and is enrolled.
New Enrollee Appointment Request (NEAR) Call List	The NEAR Call List is a tool to be used by enrollment staff to communicate to Primary Care Management Module (PCMM) Coordinators or scheduler, at the Veteran's designated preferred location, that a newly enrolled Veteran has requested an appointment during the enrollment process.
New Patient	For VHA Wait Time Measurement purposes, a "new patient" is any patient not seen by a qualifying provider type within a defined stop code or stop code group at that facility, within the past 24 months.

Non-Service Connected (NSC)	NSC refers to a condition or disability VA has not determined was incurred in, or has been aggravated by, military service. A 'Non-Service Connected Veteran' is an eligible veteran with NO rated service connected conditions.
No-Show	Used to describe patients who do not arrive for scheduled appointments that were not canceled. No-show is also used as an "appointment status" designator that is associated with patients that do not arrive for their scheduled appointments.
Notification of Cancelled Appointment	Information about a patient's canceled appointment(s)
Occasion of Service	Formerly known as ancillary service, an "occasion of service" is a specified identifiable instance of an act of technical and administrative service involved in the care of a patient or consumer, which is not an encounter and does not require independent clinical judgment in the overall diagnosing, evaluating, and treating the patient's condition(s).
Office of Information and Technology (OIT) 1.2.1.1	The Office of Information and Technology (OI&T) provides strategic and technical direction, guidance, and policy to ensure that the Department of Veterans Affairs' IT resources are acquired and managed in a manner that abides by Federal laws and regulations. OI&T delivers available, adaptable, secure, and cost-effective technology to VA and acts as a steward for most of VA's IT assets and resources.
Open Access	An appointment scheduling carve-out strategy that emphasizes scheduling a significant portion of appointments on a same day basis and minimal appointment types. A set percentage (generally 30-50% [20]) of a section's appointment slots remain open until the start of the day.
Operating System (OS)	An operating system (sometimes abbreviated as "OS") is the program that, after being initially loaded into the computer by a boot program, manages all the other programs in a computer.
Patient	A patient is the person being treated at the Medical Center. A patient can be a Veteran, an employee, a sharing agreement, a Humanitarian Emergency, and others requesting treatment from the VHA medical facility.
Patient Appointments	Patient's appointments for a specified time range.
Patient Aligned Care Team (PACT)	A Patient Aligned Care Team (PACT) is each Veteran working together with health care professionals to plan for the whole-person care and life-long health and wellness.
Patient Check-In Status	Information as to whether a patient has checked in for an appointment or not.
Patient Demographics Record	Information about the patient's demographics such as the patient's name, date of birth, address, phone number(s) and insurance information.
Patient Eligibility	Information concerning the eligibility status of the patient.
Patient Eligibility Record Verification	Information that the patient's eligibility information has been verified.

Patient Information	Patient-centric information such as demographic information.
Patient Means Test Status Record	Information concerning the means test status of the patient.
Patient Notifications	Communications with patients regarding care, to include appointment reminders
Patient Scheduling Preferences	Patient preferences to be considered when scheduling appointments, such as preferred day/time of day for appointments.
Patient Special Needs	Special needs for the patient such as need for wheelchair, use of DAV van, translator, security concern, etc.
Policy	Policy can be defined as a general statement of direction for an organization or enterprise
Primary Care	Providing Primary Care makes available to Veterans the full continuum of care that VHA offers. Primary Care addresses the daily, routine medical needs (i.e., initial diagnoses, annual exams and continual treatment of illness and preventive care). Through Primary Care, Veterans are encouraged to promote their health and well-being, prevent disease; receive treatment for existing acute illnesses; recover function to its highest level and utilize the long-term care when it is needed.
Primary Care Management Module (PCMM)	PCMM allows users to set up and define a health care team, assign staff to positions within the team, assign patients to the team, and assign patients to practitioners. The PCP and primary care team information captured in PCMM is transmitted and stored at the Austin Corporate Franchise Datacenter (CFD), and is used for national reporting and performance measurement.
Primary Care Provider (PCP)	PCPs manage the overall care provided to a majority of veterans in the Department of Veterans Affairs (VA) health care system. Their workload capacity is an important factor in determining the total number of patients that can be cared for in the system.
Priority group	A priority grouping for veterans. Once enrollment has been established, the veteran's eligibility will be verified. Based on their specific eligibility status a Priority Group will be assigned. The Priority Groups range from 1-8 with 1 being the highest priority for enrollment. Some Veterans may have to agree to pay copay to be placed in certain Priority Groups.
Process Improvement Feature	A feature of the replacement scheduling system that, when implemented, should improve the scheduling appointment process.
Profile	A profile is a group of standard parameters and attributes used to configure scheduling system elements such as management hierarchical structures, medical treatment facilities, divisions, departments, sections, users, appointment types, resources, etc.
Provider	A provider is an individual licensed to deliver health care and services to patients. (Also known as practitioner)
Recurring Appointments	Set of appointments that repeat on a defined schedule. Recurring Appointments start with a preferred date for the FIRST appointment made and then consecutive appointments made

	from there do not require a desire date
Registration	Enrolled Veterans must be able to seek care at any VA facility without being required to reestablish eligibility for VA health care enrollment purposes. A Veteran needs the ability to attend different facilities to register for the current encounter and not need to duplicate the entire "new Veteran" process.
Resource	A resource is an entity that provides a service during the course of a patient's treatment. A resource can be a physician, therapist, assistant, exam room, treatment room, operating room, or a piece of equipment.
Resource	A Resource is generally a room, equipment or provider.
Resource Management	The efficient and effective deployment of an organization's resources when they are needed.
Resource Set	Any combination of provider, facility, equipment needed to satisfy an appointment
Scenario Diagram	A diagram that shows interaction between objects with an emphasis on the sequence in which the objects pass information or actions between themselves. The objects could be people, computer systems, locations, etc.
Schedule Administrator	The individual responsible for the definition, creation, and maintenance of schedules for a medical section in accordance with service/section-level defined configuration settings.
Section	The organizational structure within the Medical Center below Service Level such as Primary Care (323), Optometry (408), Physical Therapy (205), etc. These locations may have resources with associated schedules. This representation would replace the current V*ist*A clinic configuration. Within this document a section may also denote the level at which schedules are actually created, monitored, and maintained.
Service	Identifies the major service categories that are assigned to hospital locations, such as Medicine, Surgery, Mental Health, etc. Within this document it may also be used to denote a level of management.
Service Connected (SC)	Service connection or "service-connected" means that VA has determined that a condition or disability was incurred in, or has been aggravated by, military service. Veterans are grouped into two groups according to their service connected percentage total (SC >50% and SC<50%)
Short Term Waiting List (new term/new functionality)	A list used for patients that wish to be seen sooner than available resources allowed when initially selecting an appointment date/time. This list flags patients as candidates for earlier appointment slots if resources become available (e.g., through cancellations) prior to the scheduled appointment date/time.
Short-term Pending List (new term/new functionality)	This feature provides a "ready list" of patients available to fill an open slot on short notice.

Specialty Care	Specialty Care is a term currently being used to define the providers that focus on particular areas of care in which they have extensive training and education. Example Dermatology, Infectious Disease, Spinal Cord Injury, Mental Health, etc. Specialty care consists of two types: Consultative Care and Highly Specialized Care. Consults are used regularly to request specialist care, evaluation and treatment for a Veteran. A consult is a document which facilitates and communicates consultative and non-consultative service requests and subsequent activities.
Stop Code (also known as DSS ID)	A three-digit number corresponding to an additional stop/service a patient received in conjunction with a clinic visit. Stop code entries are used so that medical facilities may receive credit for the services rendered during a patient visit.
System Administrator	The individual that configures, maintains, and manages the information system on which the scheduling component resides.
Target Date	The preferred, ideal appointment date.
Telehealth (CVT)	Scheduling a telehealth session requires coordinating multiple sites, multiple providers and equipment. Telehealth generally involves multiple sites, and multiple providers.
Text Integration Utility (TIU)	A package for document handling, that includes Consults, Discharge Summary, and Progress Notes, and will later add other document types such as surgical pathology reports. TIU components can be accessed for individual patients through the CPRS, or for multiple patients through the TIU interface.
Traditional Appointment Scheduling	Traditionally appointment scheduling involves making appointments available for any purpose as soon as the scheduling window of opportunity opens. Appointments are scheduled on a first come-first served basis and can be scheduled weeks or months in advance. It is currently the most widely used approach to schedule creation within the VHA today.
Travel Reimbursement	VA benefit applied to specific appointment conditions
Triage	The sorting or screening of patients seeking hospital care to determine which service (e.g., medical, surgical, or non-physician) is initially required and with what priority.
Urgent Care	Urgent Care is care for an acute medical or psychiatric illness or for minor injuries for which there is a pressing need for treatment to manage pain or to prevent deterioration of a condition where delay might impair recovery.
Veterans Health Information Systems And Technology Architecture (VistA)	The VA's health care information system, which encompasses in-house-developed applications developed by VHA staff, office automation applications, locally developed applications and COTS applications.
Visit	An outpatient visit is the physical presence of a person (at or away from the facility) who has obtained outpatient services during a single 24-hour period.

VistA	Veterans Health Information Systems and Technology Architecture (VistA) of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA). VistA software, developed by the VA, is used to support clinical and administrative functions at VHA sites nationwide. It is both roll-and-scroll- and GUI-based software that undergoes a quality assurance process to ensure conformity with name spacing and other VistA standards and conventions (see SAC). Server-side code is written in Mumps (M), and via Kernel, runs on all major M implementations regardless of vendor. Client-side code is written in Java or Borland Delphi and runs on the Microsoft operating system.
Wait Time	The time between when an appointment is requested or preferred and when the appointment is scheduled.
Waiting List	A holding area for appointment requests that fall outside the planning horizon which may also have a reminder system in place to re-activate appointment requests at a prescribed time (e.g., one month prior to the preferred appointment date/time).
Workflow	A sequenced series of events, generally an automated process where each step follows the preceding ones without delay.

7 Anticipated Configured Items

CONFIGURED ITEMS	
Request Types	In order to capture the origin of an appointment, requests (source of input) need to be tracked. VHA can then determine where demand is generated, control workflow routing, and reduce backlog. Request types will allow VHA to determine where resources should be allocated (toward internet resources or for additional schedulers). Some request types include: • Consults • MyHealtheVet • Telephone • Secure Message • In-person • Orders via provider
Appointment Types	The VHA's governance structure will define the appointment types to assign and track. Appointment types currently tied to clinic profiles include: • Compensation & Pension (C&P) • Mental Health Clinic • Primary Care Clinic • New Appointment • Follow-up Appointment • Pre-operative Appointment • Post-operative Appointment
Service Types	Service types will be defined and made available to the VISNs and facilities. Service types currently tied to clinic profiles include: • National Service • Ambulatory Care Services • Anesthesia Service • Blind Rehabilitation • Chaplains Service • Dental Service • Dermatology Service • Dialysis Service • Domiciliary Service • Geriatric Extended Care Service • Laboratory Service • MASS Veteran Contact Service • Medicine Service • Neurology Service • Nuclear Medicine Service • Nursing Service • Nutrition Service • Optometry/Ophthalmology Service • Pharmacy Service • Podiatry Service • Prosthetics Service • Psychiatry (PSI) Service • Psychology (PSO) Service • Radiation Therapy Service • Radiology Service • Recreational Therapy Service • Rehab Medicine Service • Social Work Service • Speech Pathology/Audiology Service

CONFIGURED ITEMS	
	• Spinal Cord Injury Service • Surgery Service
Facility Types	Initial system setup will have a group of basic facility types. These are a generic listing and may expand to include entities such as Veteran home. A partial list include: • VAMC • Veteran Center • Outpatient Clinic • CBOCs • Independent Outpatient Centers Facility types are a relatively small data set. At the VISN or facility level, those venues may have additional values to add to the national definitions as long as they meet naming conventions and other standards.
Equipment Types	Facilities, service lines, clinics will determine equipment to be scheduled. • MRI • Portable X-Ray • EKG • Phlebotomy chairs • Dental equipment • Tele-health equipment Facilities, service lines, clinics will determine equipment to be scheduled. Data will be added in accordance national naming conventions and standards.
Room Types	Facilities will define room types depending on unique facility attributes. For example: • General treatment room • Dental room • OB/GYN room
Health care Delivery Types	Health care Delivery Types describe how the service is delivered. Most of the health care delivery types will be available and facilities can choose the entities that apply to them. Health care Delivery Types include: • Tele health • Home-Care • Outpatient • Internet Secure Messaging • Phone
Types of Providers	Sample Provider Types include: • Cardiologist • Dermatologist • Physical Therapist • LPN • Primary Care Physician
Veteran Types	Veteran types establish and categorize the Veteran. Veteran types are defined nationally for policy monitoring and reporting purposes. Veteran types define Veterans such as OEF/OIF, WWII, etc. It is anticipated that facilities will have very few additions to this category but would be able to add Veteran types to meet local needs.
Master Templates/Letters/Forms Notifications	Establishes consistent and standard ways to communicate to the Veteran. The communication methods should be standardized throughout all VA facilities. For example: • No-Show Letter • Pre-Appointment Letter • Clinic Cancellation Letter • Appt. Cancellation Letter These communications may be tailored to meet unique facility operations and preferences. As long as facilities meet VHA standards they may elect to send notifications farther in advance, or send an additional follow-up reminder, or to include the facility

CONFIGURED ITEMS	
	name and map, etc.
Alerts	VHA will define a core set of alerts and subsequent actions to be taken by scheduling personnel. For example, one alert at the national level is that scheduling personnel must verify Veteran demographics at certain times in the scheduling and encounter processes and use a specific protocol. An example of a facility level alert is a message to scheduling personnel to remind Veterans that the bus stop moved recently. Examples of other alerts are: • The need to schedule special VA transportation services for a Veteran • Upon cancelation of an appointment for a patient that is a suicide risk, alert clinic staff of the need for immediate follow up action Provide message to scheduler when scheduling a repeat no show patient
Workflow	Scheduling workflow will use an automated series of events to enhance efficiency and assist with decision-making. While basic alerts and workflow are established nationally, facilities have individual workflow for processing Veterans through scheduling and the encounter. Facilities and service lines will be able to tailor standard workflows to enable a smooth path from scheduling to completion of care. Examples of workflow: • Creation of request to creation of appointment and follow up notification/confirmation • Requesting care/consultation between practices • Support national clinical practice guidelines Facilities may wish to tailor their workflow based on physical layout of the facility. In some instances, check-in and checkout might be in the same area while at other facilities, they may be in different areas.

8 Business Needs Matrix

See file named MASS Business Needs Matrix_Nov 2014

9 End to End Scheduling Process

See file named MASS_Scheduling_Framework_E2E Capability Process_final.pdf

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