



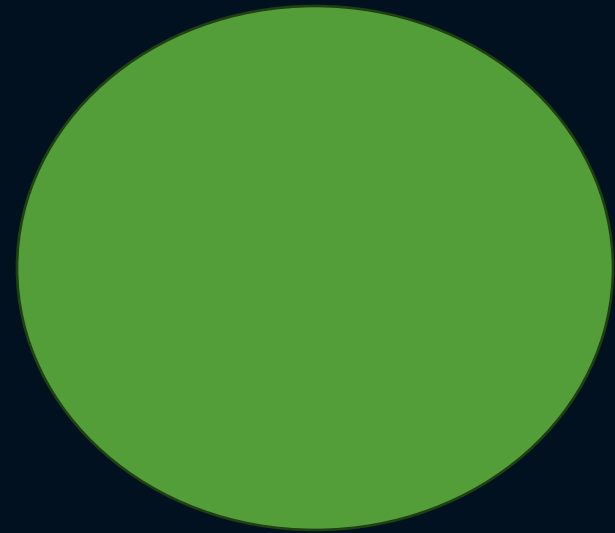
SPECIALTY PHARMACY DISTRIBUTION CENTERS

From Planning to Implementation

Health systems throughout New England are building and operating pharmacy distribution and home fulfillment centers. Our expert panel will provide their insight into the development, programming, planning, implementation, and operations of this new building typology.



SPEAKERS



**Tim Bishop, CHFM,
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Director Engineering Services
Dartmouth Hitchcock Clinics



Adam Tarfano, RA
Senior Project Manager | Facilities Design
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Yale New Haven Health



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CEO | Healthcare Studio Leader
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LEARNING OBJECTIVES

Learning Outcome 1

We will demonstrate strategies for the planning, design, and integration of all workflow and systems to promote smooth operations.

Learning Outcome 2

We will outline the unique operational needs, daily logistics plans, regulatory assessments, and security protocols.

Learning Outcome 3

We will discuss hard lessons learned, pitfalls, and opportunities to bring to future projects.



The Why?

- Operations / Centralize Pharmacy Logistics Hub
- Cost control
- Improve medication supply management across the System:
 - Centralized Purchasing and Distribution
 - Reducing waste and shortage exposure
 - Promote services such as specialty pharmacy and home delivery
 - Lower Inventory Costs
 - Economies of scale

Existing Locations

- Beth Israel Lahey Health
- Dartmouth Health
- MaineHealth
- Mass General Brigham
- Tufts Medicine
- Vanderbilt Health
- Yale New Haven Health System

Where?

- Location | Location | Location
- Access to a skilled labor pool
- Utilities
- Security
- Schedule: pros and cons of new construction vs. adaptive reuse

Lessons Learned

Early Planning

- Engaging a specialty consultant / St. Onge
- Assessment:
 - Workflows
 - Product volumes / projections

Code Compliance / Regulatory

- IBC and NFPA
 - Separated mixed occupancies
 - Hazardous Materials Quantities
- Energy Code Compliance
- Scope of licensed space
- Department of Public Health
- State Board of Pharmacy
- Drug Enforcement Administration (DEA)
- Site Permitting:
 - Zoning
 - Environmental

Lessons Learned: DEA and DCD, precast narcotics vault

Site Planning

- Traffic patterns
- Staff parking
- Security features
- Ground mounted equipment
- Future Expansion

Lessons Learned:

Specialty Pharmacy Equipment Selection

Selecting a Vendor:

- RFP solicitation
- Site visits
- Industry Vendors:
 - iA
 - McKesson
 - BD Parata
 - Capsa Healthcare

Lessons Learned: Time

Furniture and Equipment

- Parata Equipment
- Coolers and freezers
- Workstations and shelving units
- High bay racking, Storage
- Receiving
- Forklifts
- Ante Room and USP 795 / 800 Rooms
- Standard Office Furniture Equipment
- Check-in and Waiting Room
- Clinical: Exam room

Lessons Learned:

Building Planning

- Workflow, process, and adjacencies of product
- Equipment integration
- High Bay Storage
- Patient pick-up, consult, and limited patient care
- Overall security, access control, and monitoring
- Strategies for future growth

Lessons Learned:

Structural Systems

- Structural floor loading
- Lateral systems
- Roof framing

Lessons Learned:

HVAC Systems

- Wide range of space types
- Selecting an appropriate system
- N+1 Capability

Lessons Learned:

Electrical Systems

- Emergency power to protect inventory as well as allow for continuous operations
- Electrical and low voltage system pathways for automation production equipment

Lessons Learned: Emergency Power, Location of Primary Electrical Panels

Fire Protection

- Fully sprinklered
- High bay storage / in-rack system
- Pre-action at loading docks

Lessons Learned:

Materials and Finishes

- Challenge: Balancing Hard and Soft finishes for durability and acoustics.
- Flooring / Rolling loads
- Acoustics
 - Sound Isolation
 - Reduce workplace noise
 - Materials
- Wall Protection: Identifying key areas for impact resistance
- Vault Room:

Lessons Learned:

Employee Experience

- Big picture: It is a workplace environment.
- Daylighting / connection to the outdoors
- Integrating color, pattern, texture to avoid a sterile environment.
- Staff amenities
- Safety
- Courier Waiting Area

Patient Experience

- Branded Environments for confidence in care
- Connection to the System / Familiarity
- Inviting and Intuitive for use
- Privacy and Acoustic Options at patient windows
- Exam rooms

Operations and Logistics

- Workflows of product, production, distribution, and delivery
- Accounting of supply storage
- Security protocols
- Staff work shifts
- Regulatory assessment and reporting
- Emergency response teams
- Maintenance of production equipment and vehicles.
- Waste management

Lessons Learned:

Security

- Access control / workflow
- 100% camera coverage with analytics
- Intrusion systems
- Reinforced building envelope with embedded barrier mesh

Lessons Learned:

Future Proofing

- Strategies for future growth
- Systems Flexibility:
 - Structural (slab of grade)
 - HVAC capacity
 - Normal and Emergency power capacity
- Robotics
- Charging area

Lessons Learned:

Case Study: Dartmouth Health – Specialty Pharmacy and Supply Chain Distribution Center

- Adaptive Re-use: Previously a beer distribution warehouse, now leased and built to suit
- Located near interstate highway
- Size: 102,633gsf
- Program:
 - Pharmacy Distribution
 - Compounding Pharmacy / USP 797 / 800
 - Home Delivery Fulfillment Center
 - Pharmacy and Supply Chain distribution warehouse
 - Business Offices
- Sites serviced: 7 Hospitals, 5 cancer centers and >350 clinics and grant centers
- Staffing: approximately 65 staff
- Operating Hours: Monday through Friday, 1st shift
- 1.6M units distributed per year



Case Study: Yale New Haven Health System – Outpatient Specialty Pharmacy

- New Construction
- Located near an existing Region Operations Center, Interstate 95
- Size: 48,500gsf
- Program:
 - Patient facing pick-up and consultation.
 - Pharmacy distribution, automation and home fulfillment
 - Compounding pharmacy
 - Warehouse
 - Loading, receiving and operations center
 - Administrative offices
 - Support space
- Sites serviced: 7 Hospitals, 5 cancer centers and >350 clinics and grant centers
- Staffing: approximately XX staff
- Operating Hours: Monday through Friday, 1st shift
- XXX units distributed per year

