HTM Role in Effective Service Contract Management Strategies

Izabella Gieras, MS, CSSBB, CCE, AAMIF, FACCE
Cedars-Sinai Health System

Arif Subhan, MS, CCE, FACCE, AAMIF
VA Greater Los Angeles Healthcare System

April 13, 2023

MD EXPO
April 11-13, 2023 • Houston, TX

Izabella Gieras

- Currently the Director of Clinical Engineering at Huntington Health (HH) in Pasadena and Cedars-Sinai Medical Center (CSMC) in Beverly Hills, CA – part of the Cedars-Sinai Health System
- Worked as the Director of Clinical Engineering with ARAMARK Healthcare/ Mount Sinai Medical Center, New York, NY; Director of Technology Management at William Beaumont Hospital in Royal Oak, MI
- Past President of ACCE (American College of Clinical Engineering)
- Fellow of ACCE, AAMI

- Certified Clinical Engineer (CCE)
- Holds a B.S. in Electrical Engineering from the University of Cape Town in South Africa, M.S. in Biomedical Engineering from the University of Connecticut and an MBA from Walsh College in MI

Arif Subhan

- Chief Biomedical Engineer, VA Greater Los Angeles Healthcare System
- Former Senior Clinical Engineer, Masterplan (national ISO with 1400 accounts in 30 states)
- Former President, American College of Clinical Engineering
- Adjunct Professor, Biomedical Engineering, University of Connecticut
- Columnist, Journal of Clinical Engineering
- Member Editorial Boards – AAMI BI&T journal, 24x7 magazine, Journal of Clinical Engineering
- Author of Book chapters for the "Clinical Engineering Handbook", "Encyclopedia of Medical Devices and Instrumentation" and "A Practicum for Biomedical Engineering and Management Issues"
- Recipient:
  - 2022 ACCE Tom O'Dea Advocacy Award
  - 2013 ACCE Professional Development/Managerial Excellence Award
  - 2012 AAMI Clinical/Biomedical Engineering Achievement Award

Session Overview

The session will address effective and efficient service contract management strategies. The presenters will dive into the critical roles HTM plays in the contract management as well as the necessary relationship building with impacted healthcare stakeholders, including vendors.

Examples and case studies will be provided on the developed workflow.

Lessons Learned

1. Develop an efficient process to triage new service contracts and renewals

2. Learn how to develop strong partnerships with healthcare stakeholders and vendors

3. Design a service contract checklist to support effective contract management

Agenda

- Perspectives from two healthcare institutions
  - Cedars-Sinai Health System (CSMC and HH)
  - VA Greater Los Angeles Healthcare System
    - Process for contract management
    - Stakeholders
    - Resources and Tools
- Discussion
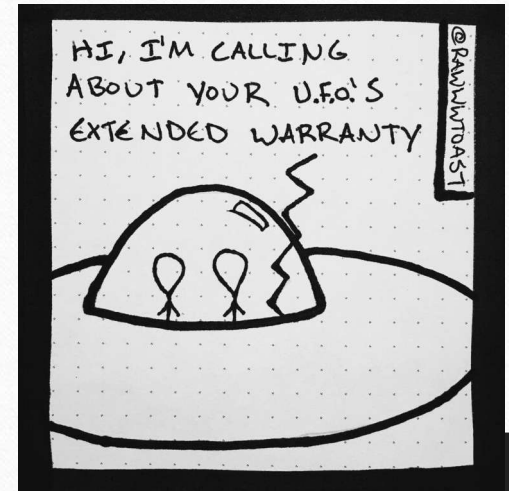
Poll – warm up exercise

- Owners of Service Contracts
- Co-owners with
  - Supply Chain/Purchasing/Materials Management
  - Nursing
  - IT
  - Other
- Consulted as needed
- Not involved at all

Cedars-Sinai Health System

Cedars-Sinai Medical Center

(CSMC)

Huntington Health (HH)
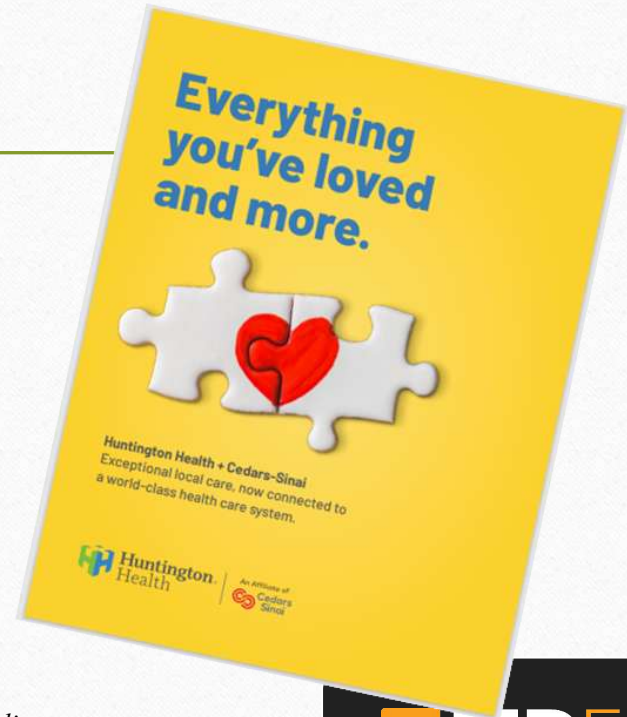
Affiliation – Huntington Health/Cedars-Sinai

Extract from Pasadena Now, online

Cedars-Sinai: Clinical Engineering

- Located in Beverly Hills, part of LA
- Licensed for 889 beds
- Over 14,000 employees
- 91,014 patients seen in the ED annually
- Over 6000 births annually
- Estimated 32,000 surgeries annually
- Over 105 anesthesia locations
- Clinical Engineering staffing:
  - 33 members
  - Over 33,000 devices
  - Reports to Enterprise Information Services

Huntington Health: Clinical Technology

- Level II Trauma Center with 619 licensed beds
- Bariatric & Stroke Center
- 18 Operating Rooms
- 3 DaVinci Robotic Systems
- 6 Cath Labs & IR Suites
- 6500+ personnel
- 300+ applications
- 4500+ end user computing devices
- Affiliate of the Cedars-Sinai Health System
- Clinical Technology staffing:
  - 12 members
  - Over 10,500 devices
  - Reports to Enterprise Information Services (Cedars-Sinai)

Background

- CSMC – owners/co-owners
- HH – mostly owners
  - Exceptions in Lab

"It's an offer to purchase extended warranty coverage for our vehicle."

Why should HTM be involved?

- Subject matter expertise
- Financial benefits
- Legal benefits
- One approach
  - MSAs are becoming more popular, especially with multi-site agreeme
  - Standardization in T and C
  - Standardization in SLAs, where possible
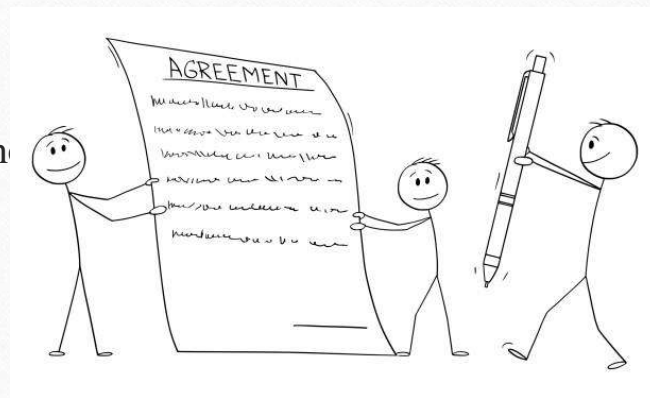
Type of Contracts

- OEM vs Third Party
  - Multi-vendor
  - Full Service
  - PM only
  - Parts only
  - Partnerships
  - Technical support
  - Capitalize equipment through operating contracts
  - Contracts with training
- Post warranty vs POS

When to do service contracts?

- Critical high-end equipment
  - Requires 24/7
  - Quick response (phone, onsite)
  - Do not want to take any or minimal risk
- Staffing challenges
  - Short term vs long term
  - Staffing levels not appropriate
  - Staffing levels have changed
- Completed exercise in ROI
  - Training vs Service contract
- Customer requests
- Start thinking during capital process

During review and negotiations

- Cost
- SLAs
- T and C
- Biomed training, testing equipment
- Parts on site
- Potential partnership opportunities
- Response time
- Penalties
- Service reports (timely)
- And the list goes on…..

Service Contract Process

Collaborative Approach

- Some contracts kept in database, some still manual spreadsheets ☹
  - Automatic reminders
- Meetings:
  - Weekly with Supply Chain
  - Biweekly with Legal
  - Customers as needed
- Usual renewal process starts at 3 months but based on current trends adapted to 6-9 months in advance of the expiration
  - Clinical Tech/Supply Chain initiate emails to vendors on proposal requests
  - Ask vendors for service history with cost for the duration of the current contract
  - Do we need to consider an MSA?
  - Similar to equipment coming off warranty

Service Contract Process cont.

Collaborative Approach

- Clinical Tech review
  - Consult with the customer as needed
  - Review service history
  - Any EOS?
  - Any changes in SLAs?
  - Any IT components?
- Financial review
  - Consult with ECRI – Benchmarking
  - Negotiations
  - Multi-year options?
  - Do we need to consider an MSA?
- Legal review: final terms and cost
- Signed agreement
- Purchase Order issued
- Log the contract into the database/spreadsheet

Overview Page

- Customer
  - Review
  - Approval

OVERVIEW – INTEGRA

1. **Background and Description**

   This is a renewal of our existing contract for one year. This contract covers one year of service of our Integra CRW system. At the end of this contract year, the equipment will be end of support and thus no longer eligible for service.

2. **Competitive Bidding**

   OEM only/Sole sourced

3. **Cost impact**

   The cost of this contract is $29,200.50. The previous contract was a three-year contract which cost $61,797.36 ($20,599.12 annually). This is approximately a 42% increase in annual cost.

4. **Recommendation**

   Surgery (742000) and Clinical Technology recommend we move forward in order to limit downtimes and interruptions to patient care.

5. **Supporting Documentation**

   1. Service Agreement
   2. Current Quote
   3. Previous PO (1414172-SVC)

APPROVAL AND AUTHORITY TO PROCEED

We approve the project as described above, and authorize the team to proceed.

Name	Title	Date
	Manager (Geo Dulay)	
	Director (Liz Sweeney Villavicencio)	
	VP (Gail Cinexi)	

Tools – Service Contract Checklist

Clinical Technology   2
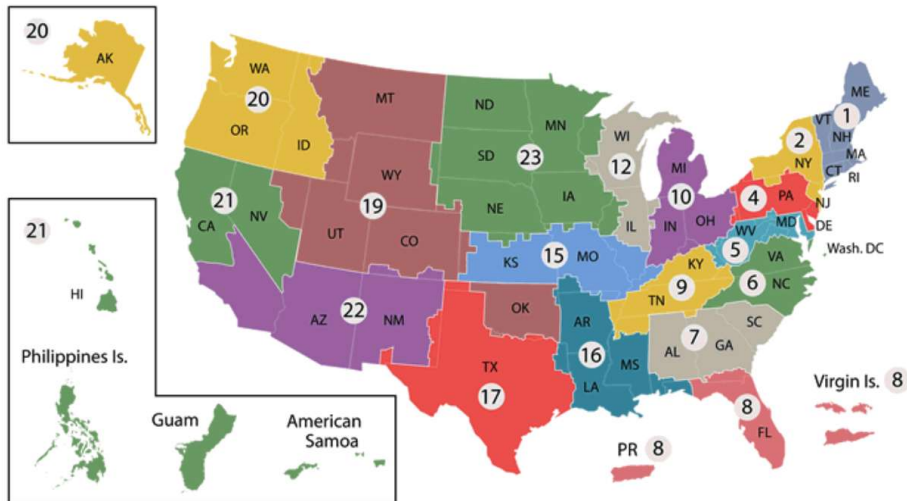
Service Contract Review Checklist			
Service Contract:_____			
Date:_____			
Tasks	**Responses**	**Follow-Up required**	**Completed ✓**
Is this a renewal or a new contract?			
Previous cost fo rthe contract if renewal			
For the Agreement no. for proposal			
Annual cost for proposal			
Type of service offered for proposal (other options available)			
Review T & C (cancellation clause)			
Medassets GPO or other discounts			
Review current service reports on the device			
Cost center(s)			
Is there SW involved? If so, contact IT.			
Does this device integrate with any other devices/systems/applications? Such as Cerner			
Terms of the contract			
Is the PM included?			
Wha tis the PM frequency?			
Response time			
Business hours			
Review the contract with the clinical dept. / Clinical contact			
Is the vendor VCS credentialed?			

Service Contract Tracker

EQUIPMENT LOCATION/ DEPARTMENT	Cost Center	VENDOR	MODEL	BEC#	SN	EQUIPMENT DESCRIPTION	SERVICE COVERAGE	GLASSWARE /CRYOGEN/ PROBE COVERAGE	UPTIME GUARANTEE	REMOTE SUPPORT	ONSITE RESPONSE TIME	COST	TERM	DEPT CONTACT	Agreement No.	PO#	COMMENTS

Veterans Health Administration

- Largest integrated health care system in USA
- Serving 9 million enrolled Veterans each year
- 171 medical centers
- 1,113 outpatient sites

VA Greater Los Angeles Healthcare System

- Serves the health care needs of ~ 86,000 Veterans.
- 11 locations in the 5-county southern CA area.
- One of the largest research programs in the VA.
- Affiliated - UCLA & USC Schools of Medicine, & 45 colleges, universities, and vocational schools that provide training in 17 allied health fields like nursing, paramedical, and administrative programs.
- Trains 500 university residents, interns, and students every year.
- 16 medical residencies and associated health residencies and internships.
- 1.3 million outpatient visits each year
- 8,000 inpatient visits each year
- 716 total operational beds

GLA - Biomedical Engineering

- ~13,000 medical devices
- MEAV - $155 million
- 10 Operating Rooms
- 2 DaVinci Robots
- 3 Cath, EP and IR Suites
- 4 CTs, 3 MRIs, 3 Linear Accelerators, 2 PET/CTs
- Affiliated with University of CT (MS Biomedical Engineering internship - 21 months)
- VA TCF Biomedical Engineering training site (2 yrs.)

Medical Equipment Service Options

- In-house
- Time and Materials (T&M) - OEM or ISO
- Service Contract (OEM or ISO)
- Multi-Vendor Service Contract (non OEM)

Service Determining Factors

- Cost (budget)
- Expertise (in-house capabilities - first level/on-call support)
- Downtime Impact
- Patient Impact
- Institutional Reputation (Customer Satisfaction)
- Risk
- Backup/Spare Equipment (redundancy and proximity of transfer)
- Exam volumes (8 hrs/day vs 12 hrs/day vs 24 hrs/day)
- Equipment type/procedures performed
- Age of system/probability of malfunction

Service Determination Matrix

	Cost	Expertise	Downtime Impact	Patient Impact	Institutional Reputation	Risk	Examples
In-house	Low	Low	None/Low	None/Low	None	None/ Low	VSMs, Pumps, Patient Monitors
Time & Material (T&M)	Medium	Medium	Low/Medium	Medium	Medium/ High	Medium/ High	Ventilators, Anesthesia Machines
Service Contract	High	High	Medium/ High	High	High	High	CT, MRI, PET, LINAC

Patient delay & Loss of revenue

- How to measure?
    $$ vs reputation/customer satisfaction

- Number of cases cancelled/rescheduled/diverted

- Impact on inpatients - risk of transfer, or delay in diagnosis (CT for head trauma, Patient Monitoring System in ICU, Anesthesia Machine in OR)

- Impact on outpatients - customer satisfaction, delay in diagnosis/monitoring/treatment (VSMs, thermometer, Oto/Ophthalmoscope, Pumps)

Service Contract - Factors to consider

- Can the vendor perform "remote repairs" - What percentage?
- Does the vendor offer "remote monitoring"; "remote diagnostics"?
- Technical and Clinical telephone support (24/7 or Coverage Period)
- Expertise of the vendor - references, experience/number of service staff, installed base
- Coverage Period 8a-5p (Mon-Fri); 8a-8p (Mon-Fri); 24/7 (Mon-Fri), etc.
- On-site Response time (2 hours, 4 hours, 24 hours/next business day or longer)
- Planned Maintenance (during or after coverage period)
- Software and Hardware updates
- Software and Hardware upgrades
- Cybersecurity patching

Service Contract - Factors to consider

- Uptime guarantee (none, 90%, 95%, 98%, 99%)
- Ultrasound transducer coverage
- Accidental damage coverage (transducer, detector, etc.)
- Termination Clause
- Multi-Year Service Contract
- Parts Coverage
  - Any exclusions (batteries, damage, etc.)
  - OEM-manufactured or third party or refurbished or OEM-approved
  - Availability (with the service engineer) or later
  - Delivery – same day or next day
  - Cap on the $ amount on parts
  - Special parts (x-ray tubes, II, detectors, Crystals, PMTs, Cryogen, etc.)

How to Start?

- Start early 3-6 months before the contract expiration date/warranty expiration

- Accurate listing of equipment under contract/need to be on contract

- Be familiar with hospital's Purchasing/Contracting deadlines

- Involve the users (nurses, clinicians who use equipment)

- Develop a Comprehensive Statement of Work

Equipment to be considered for a Contract

- CT, MRI, Cath/EP, IR that is used 24/7 or 8-12 hrs a day

- Unique equipment (e.g. one CT used 24/7)

- Age of equipment (older single CT or MRI)

- Round the clock support (Patient Monitoring system, PACS, ECG Management System)
- High Risk/Low Volume equipment (Ventilators, Anesthesia Machines, IABPs, Heart Lung Machines)

Resources Needed

- Dedicated staff responsible for managing (tracking, renewing, adding, updating) the contracts
- Knowledge of variety of medical equipment and their components/subsystems
- Be able to keep a current equipment inventory
- Know the status of all current warranties
- Knowledge of government contract procedures (COR 1) and contracting knowledge
- Ability to develop statements of work
- Ability to write sole source justifications
- Other documentation (VA Form 6550, Independent Government Cost Estimate (IGCE), etc.)
- Ability to oversee vendor work and understand the work performed
- Maintains service documentation (service reports, etc.)
- Manage support after hours (issuing POs, access to equipment, etc.)
- Knowledge of what to do if contractor does not meet the terms of the contract

How to Manage Service Contracts Effectively

1. Call for service promptly (Have contract /site informations, obtain ticket #, ETA, etc)
2. Require Check-in/Check-out
3. Monitor progress
4. Communicate progress of repair to end user
5. If repair takes longer - determine the cause of delay and new timeline; ask for a specialist/factory support
6. Obtain complete written service reports.
7. Ensure if work is outside the coverage period appropriate PO is issued.

Resources

1. Service Contract Checklist, Jonathan A. Gaev https://www.jhconline.com/service-contract-checklist.html
2. Service Contracts Management: A Guide for an Effective Process, Jillyan Morano,and Mariana Hu https://24x7mag.com/maintenance-strategies/asset-management/contracts/service-contracts-management-a-guide-for-an-effective-process/
3. Six Steps to Managing Service Contracts Effectively, BI&T, Judy A. Kujawa and Jeffery R. Short, May 1, 2005

Thank You!