Navigating Telemedicine Services & Platform Selection

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Disclosures

We have no conflicts of interest to disclose.

Realizing the Value of Telehealth

Speaker: Marc Zubrow, MD

Extended Clinical Reach

Reduction in Unnecessary Admissions or Readmissions

Improved Outcomes

Timely Patient Care

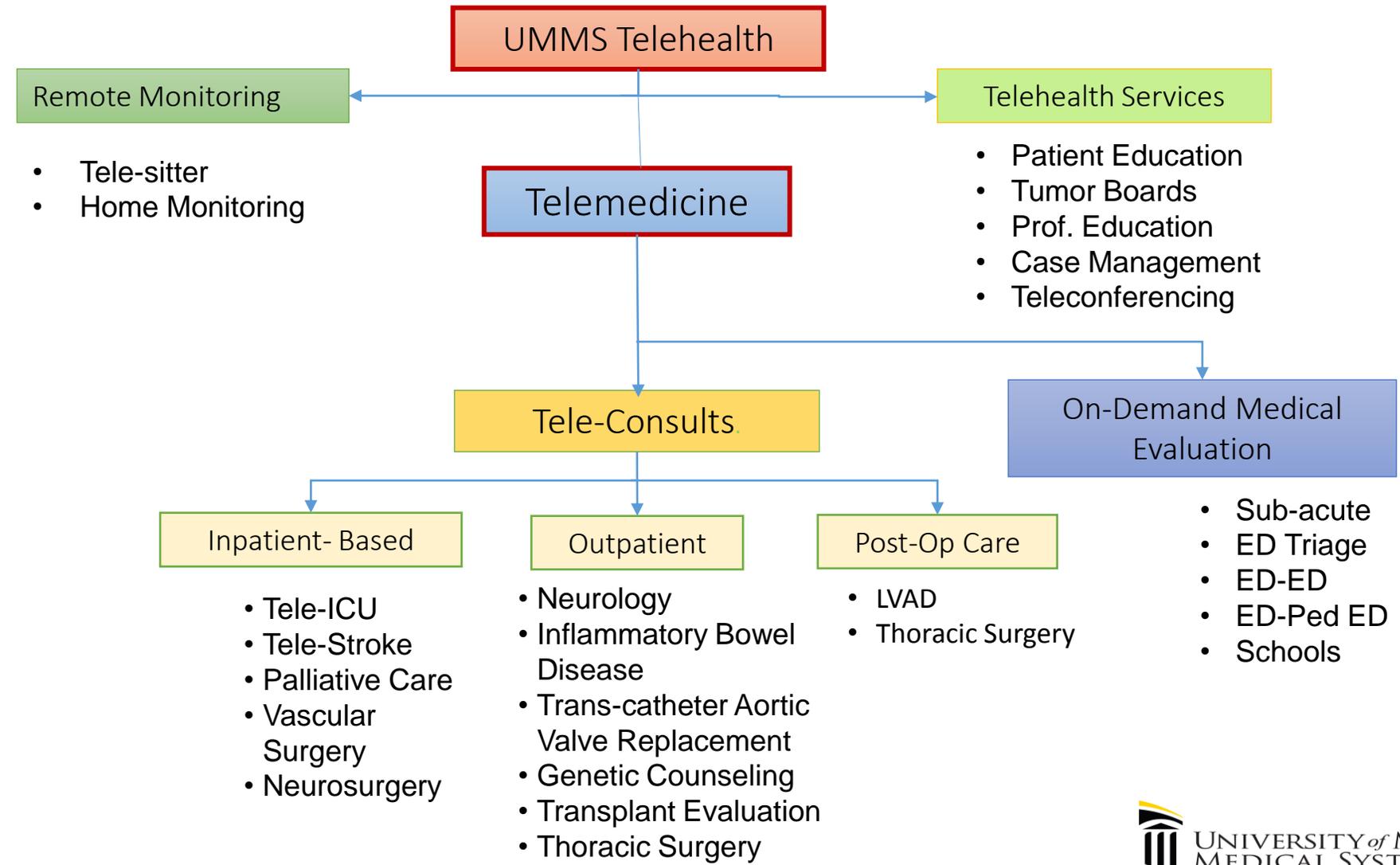**Avoidance of Unnecessary Transfers**

Reduction in Missed Appointments

Patient Accountability & Education

Access to Specialists Regardless of Location

Improved Outcomes

Coordinated Patient Care

Patient Satisfaction

Patient Cost Reduced

Increased Physician Revenue

Physician Satisfaction
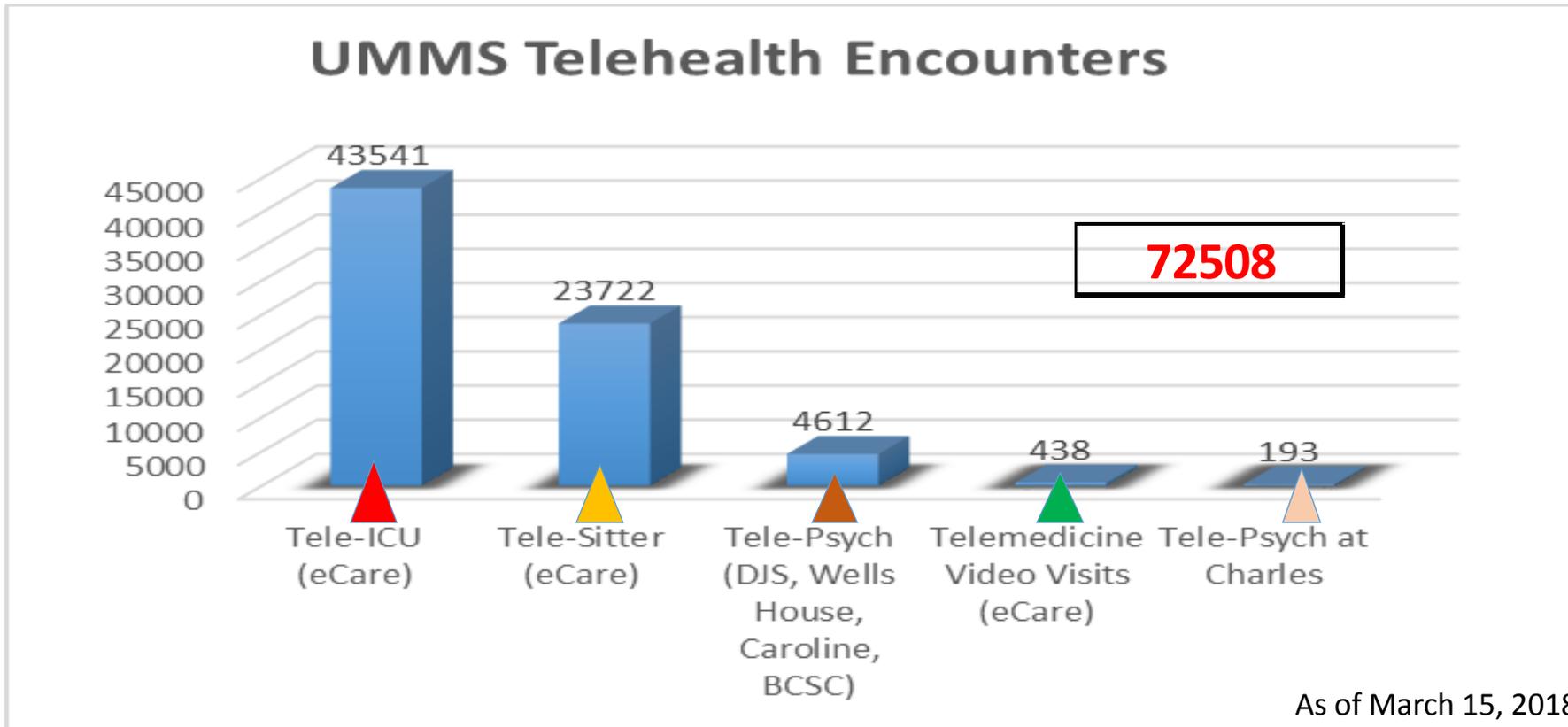
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Definitions & Programs

Speaker: Marc Zubrow, MD

UMMS Telehealth

Remote Monitoring
- Tele-sitter
- Home Monitoring

Telemedicine

Telehealth Services
- Patient Education
- Tumor Boards
- Prof. Education
- Case Management
- Teleconferencing

Tele-Consults

On-Demand Medical Evaluation
- Sub-acute
- ED Triage
- ED-ED
- ED-Ped ED
- Schools

Inpatient- Based
- Tele-ICU
- Tele-Stroke
- Palliative Care
- Vascular Surgery
- Neurosurgery

Outpatient
- Neurology
- Inflammatory Bowel Disease
- Trans-catheter Aortic Valve Replacement
- Genetic Counseling
- Transplant Evaluation
- Thoracic Surgery

Post-Op Care
- LVAD
- Thoracic Surgery

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UMMS Telehealth At a Glance

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UMMS Telehealth Encounters

72508

Category	Encounters
Tele-ICU (eCare)	43541
Tele-Sitter (eCare)	23722
Tele-Psych (DJS, Wells House, Caroline, BCSC)	4612
Telemedicine Video Visits (eCare)	438
Tele-Psych at Charles	193

As of March 15, 2018

Encounters (since program inception)

- ▲ (red) Patient Admissions – *Since Apr. 2013*
- ▲ (yellow) Patients Monitored – *Since Dec. 2016*
- ▲ (brown) Patient Consults – *Since Sep. 2015*
- ▲ (green) Video Consults/Follow Ups – *Since Aug. 2016*
- ▲ (light) Patient Consults – *Since Aug. 2017*

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Telemedicine Care Delivery Model

Speaker: Marc Zubrow, MD

CLINICAL CARE DELIVERY

PEOPLE
Highly leveraged, Physician led care team

TECHNOLOGY
Enabling tools for intermittent or continuous monitoring

PROCESS
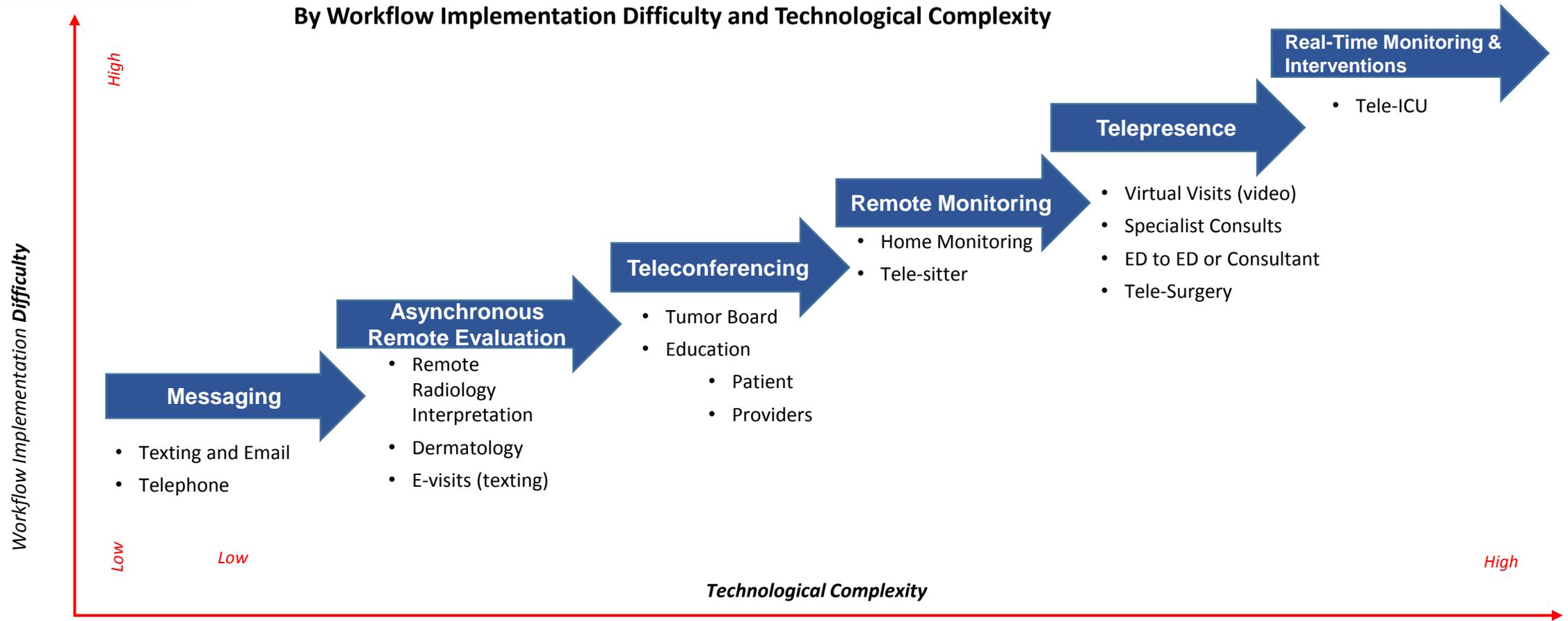**System-wide approach to the new care delivery models**

Telehealth Modalities

Speaker: Marc Zubrow, MD

By Workflow Implementation Difficulty and Technological Complexity

- **Messaging**
  - Texting and Email
  - Telephone

- **Asynchronous Remote Evaluation**
  - Remote Radiology Interpretation
  - Dermatology
  - E-visits (texting)

- **Teleconferencing**
  - Tumor Board
  - Education
    - Patient
    - Providers

- **Remote Monitoring**
  - Home Monitoring
  - Tele-sitter

- **Telepresence**
  - Virtual Visits (video)
  - Specialist Consults
  - ED to ED or Consultant
  - Tele-Surgery

- **Real-Time Monitoring & Interventions**
  - Tele-ICU

Workflow Implementation Difficulty — High / Low

Technological Complexity — Low / High

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Remote Physical Examination

(Plug in devices)

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Remote Physical Examination-Ultrasound

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Telehealth Technologies
(Carts and Desktops)

PTZ Camera – Pan-Tilt-Zoom camera that can be remotely controlled by care provider.

Basic cart
tele-psychiatry/behavior health,
Family Conferencing

High-end cart for multi-specialty use cases, typically used in ER setting.

Typical Telemedicine (Provider) Room

Tele-stroke program setup

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Always start with <u>CLINICAL USE CASE:</u>
Clinical workflow drives hardware/software decisions

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The Challenge

Speaker: Irfan Kasumovic

- Aging legacy hardware and software across the system connecting satellite clinics, nursing homes, ERs and other specialties across the state
- Low user adoption
- Limited support resources
- Raising cost

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Directly Impacted Programs

Speaker: Irfan Kasumovic

Telemedicine "Virtual Visits"

Total Programs………………   24
- Total Active (=>1y):   13
- Total In Development: 11

Active programs with highest volume of encounters:
- Inflammatory Bowel Disease
- UM Shore Behavioral Health
- UM Shore Palliative Care
- UMMC ER-FutureCare SNF
- Thoracic Surgery Consults

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Where Do We Start?

Speaker: Irfan Kasumovic

- Define baseline requirements
- Use Case/s
    - Patient Location
    - Remote Physical Examination
    - Ultrasound
    - Far-End-Camera-Control
- Hosting Decision (on-site or cloud)
- EMR Integration
- API to connect other tools

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Where Do We Go Next?

Speaker: Irfan Kasumovic

- Gather feedback from other in-house Telemedicine providers
- RFPs
- Create Vendor Evaluation Metrics
  - Metrics Focused on Three Areas:
    - General Assessment Out of Vendor Presentation
    - Interface Ease & Versatility
    - Value of Partnership
- Agree migration strategy for live and very active programs

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Vendor Evaluation Metrics-Sample

Speaker: Irfan Kasumovic

Vendor Evaluation - SuperNova

Instructions:
Score each vendor on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree) on each of the evaluation metrics listed below. Use the blank rows at the bottom of each vendor evaluation sheet to include pertinent narrative feedback on the vendor's presentation.

Overall Scoring Summary

Presentation and Demo
Stakeholder evaluation of presentation/demo quality and relevance, ease & versatility of platform, and value of partnership (100 points total)

Cumulative Avg.
72.6

Evaluation Metrics - Presentation, Demo and Reference Checks

	Stakeholder 1	Stakeholder 2
General Assessment (20 points)		
1. *Quality:* The presentation was clear and complete. Questions were answered in a satisfactory, straightforward manner.	3 (Neutral)	5 (Strongly Agree)
Section Average:	3.7	4.7
Ease & Versatility of Platform (50 points)		
4. The platform user interface (desktop and handheld) is intuitive and user-friendly for providers. (i.e., streamlined access to patient information with minimal switching between windows)	3 (Neutral)	5 (Strongly Agree)
Section Average:	3.3	3.5
Value of Partnership (30 points)		
7. The vendor showed a clear desire and enthusiasm to partner with UMMS.	4 (Moderately Agree)	5 (Strongly Agree)
Section Average:	3.6	3.8
Total Score out of 100 Possible (Weighted Average):	68.8	76.5

Note: The tool was developed in cooperation with Advisory Board Consulting.

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Solution

Speaker: Irfan Kasumovic

- Evaluate & rank vendors
- Select a vendor w/highest score
- Replace legacy AV platform
- Upgrade aging hardware where necessary
- Run legacy and new AV platform in parallel for 45 days
- Better understand future end user needs by enabling analytics and utilizing satisfaction surveys
- Branding

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Speaker: Irfan Kasumovic

- 75% cost reduction
- Migrated dual-homed programs off internal servers
- Reduced bandwidth requirements
- User friendly interface
- Significantly improved adoption across the system by providers and patients
- Reduced day-day support needs
- Added flexibility for any future integration w/EMR and other clinical tools.

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Lessons Learned

Speaker: Irfan Kasumovic

- Take time for due diligence
- Base your evaluation and buying decisions on clinical use case/s
- Never underestimate value of testing, including peripherals prior to purchase or deployment
- <u>Plan for personnel turnover and ongoing education</u>
- Use polling and or user satisfaction surveys to gather feedback and act on it.

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Questions & Discussion?