Definitions:
Telemedicine/Telehealth

- The remote diagnosis and treatment of patients through the use of telecommunications technologies
  - Live interactive videoconferencing
  - Store and forward
  - Remote patient monitoring
  - m-Health

Services

- Specialty care
- Primary care
  - DTC
- Emergency services
- ICU services
- Collaborative care models
- Remote patient monitoring
- Health professional education
- Patient education
- Health workforce training
Value for a broad range of stakeholders

**PATIENTS**

- **Improves Access** by reducing the burdens of time, distance and cost of travel
- **Access to Locally Unavailable Specialties**
- **Better outcomes** through timely interventions, chronic disease management and self-management tools

**HEALTH PROFESSIONALS**

- **Broader Reach** by providing consultative services
- **Increased Capacity** through team-based delivery models
- **Improved Community Provider** knowledge

**HOSPITAL SYSTEMS**

- **Expands Network capabilities**
- **Decreases Readmissions** through remote patient monitoring tools and population health models of care delivery
- **Improves Transfer Coordination** and triage, keeping patients local when appropriate

**COMMUNITIES**

- **Helps to Improve** local healthcare facility viability
- **Supports community workforce** capacity
- **Expands broadband** adoption
UVA Center for Telehealth
Overcoming the barriers of distance and time to improve access and quality

Services:
• Live Interactive Telemedicine
• Store and Forward Services
• Remote Patient Monitoring
• Health Professional & Patient Education
• Health Workforce Training
• International Program Support
• Technical Assistance (MATRC)

Volumes:
48,036 Encounters
1,793 Additional patients enrolled in RPM
14.5M Miles of driving avoided
152 Partner sites across Virginia
63 Clinical Specialties

Program Growth:

Clinical Encounters
<table>
<thead>
<tr>
<th>Participating clinical services</th>
<th>Telemedicine Specialty Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Center</td>
<td>Language Assistance</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Mobile Mammography</td>
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<tr>
<td>Cardiology: Heart Health @ Home (3H)</td>
<td>Nephrology</td>
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<tr>
<td>Children’s Fitness Clinic</td>
<td>Neurology – ALS</td>
</tr>
<tr>
<td>Dentistry</td>
<td>Neurology – Child Neurology</td>
</tr>
<tr>
<td>Dermatology</td>
<td>Neurology – General</td>
</tr>
<tr>
<td>Diabetes Education</td>
<td>Neurology – Stroke</td>
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<tr>
<td>Diabetes Care</td>
<td>Neurology – Stroke (SOC)</td>
</tr>
<tr>
<td>Digestive Health</td>
<td>Neurosurgery</td>
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<tr>
<td>Emergency Medicine</td>
<td>Nutrition</td>
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<tr>
<td>Endocrinology</td>
<td>Obstetrics – Colposcopy</td>
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<tr>
<td>ENT</td>
<td>Obstetrics – High Risk</td>
</tr>
<tr>
<td>Faculty &amp; Employee Assistance</td>
<td>Obstetrics – Genetic Counseling</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>Ophthalmology – Retinopathy</td>
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<tr>
<td>Genetic Counseling</td>
<td>Ostomy</td>
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<tr>
<td>Geriatrics</td>
<td>Pain Management</td>
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<tr>
<td>Gynecology</td>
<td>Pediatric – Critical Care</td>
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<tr>
<td>Hematology</td>
<td>Pediatrics – Developmental</td>
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<tr>
<td>Hepatology</td>
<td>Pediatrics – Endocrinology</td>
</tr>
<tr>
<td>Home Monitoring</td>
<td>Pediatrics – GI</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>Pediatric – Infectious Disease</td>
</tr>
</tbody>
</table>

| Pediatrics – Neonatology       |
| Pediatrics – Orthopedics       |
| Pediatrics – Rheumatology      |
| Pediatrics – Transplant        |
| Pediatric Cardiology – Echo   |
| Pediatric Cardiology – EP      |
| Plastic Surgery               |
| Psychiatry – Adult            |
| Psychiatry – Child & Family   |
| Psychiatry – Emergency        |
| Pulmonology – Cystic Fibrosis |
| Pulmonology – ICU             |
| Special Pathogen Response     |
| Surgery                       |
| Surgery – Trauma              |
| Thoracic Cardiovascular Surgery |
| Toxicology / Poison Control  |
| Transplant                    |
| Urology                       |
| Urology: Bladder Cancer       |
| Wound Care                    |
Accelerating reach

Continued growth driven by demand

**Encounters**

- FY10: 0
- FY11: 2K
- FY12: 4K
- FY13: 6K
- FY14: 8K
- FY15: 10K

**Current Partner Sites**

- FY12: 82
- FY13: 109
- FY14: 124
- FY15: 152

**New Projects in Development**

- 62
Tracking quality outcomes

**Tele-Stroke**
- 537 patients evaluated; Use of TPA in 19.4%

**High Risk Obstetrics**
- 586 Unique Patients; 3,377 Clinical Encounters
- 62% reduction in missed appointments
- Pre-term deliveries avoided; 38% reduction in NICU Hospital days

**Screening for Diabetic Retinopathy**
- 2,166 patients screened since 2011; 40% abnormal diagnosis
- 80 patients identified and referred for ophthalmic intervention

**Remote Patient Monitoring**
- Decreased UVA readmission rates for all payer penalty condition patients by 40%
- CHF, AMI, COPD, Pneumonia, CABG, TJR, CVA

**Tele-Psychiatry**
- 22,351 Tele-Psychiatry Clinical Patient Encounters
- Adult; Child & Family; Emergency (24 hour On-Call)
Advancing the field

Research collaborations

- Federally funded health services research initiatives
- Device development and trials
- Interdisciplinary workforce development grants
- VCHI contract: SIM planning grant

State and federal policy development

- Virginia Medicaid coverage of both urban and rural telemedicine since 2003
- Virginia 12th state to pass parity reimbursement legislation (now 29 states)
- Virginia Telehealth Network (501c3)
- Home of the federally funded Mid Atlantic Telehealth Resource Center (9 states)
- Virginia Board of Medicine guidance document
- National Academy of Medicine (IOM) Workshop on Telehealth

Training the next generation of health professionals

- Cross grounds Student Telemedicine Organization
- Integration within SOM and SON Curricula both at UVA and in partnership with ODU
- STAR Telehealth Training - 850 professionals to be trained in FY16
Challenges and Opportunities

**Federal**
- Limited Medicare reimbursement ($14 million *nationwide* in 2014)
- Statutory challenges within Medicare remain, including in alternative payment models
- Originating site restrictions (Floyd, Scott, Giles, Buckingham, Washington Counties and the Grand Canyon are “urban”)
- FCC Rural Healthcare program still remains underutilized
- Licensure restrictions – FSMB “compact”
- Veterans Health Administration

**State**

**Virginia’s “A” rating by the ATA**
- Strong tradition of support from four consecutive Virginia Governors
- VDH, DMAS, VHWDA, DOC, DOE, DHP, DBHDS support
- Virginia Medicaid is a national CMS pilot for expanded telemedicine to include coverage of dual eligibles for urban telemedicine, store forward and RPM
- General Assembly and the Joint Commission on Healthcare
- Virginia Healthcare Foundation, TIC, CIT
- Close the coverage gap – infrastructure in place
- Advancing collaborative care delivery models – scope of practice

**Non-governmental/Private sector**
- Corporate and private philanthropy
- State association support
- Employers
- Telemedicine businesses in the Commonwealth
Q&A