Standardization of Subspecialty Surgical Care Provided by Trainees on the Vascular Surgery Service

Cali E. Johnson, MD, EdDc, Joyce Peralta, DNP, Sarah Wartman, MD, and Fred A. Weaver, MD, MMM

Division of Vascular Surgery, Department of Surgery
Keck Medical Center of University of Southern California
Disclosures

None
Background

- Care Delivery Redesign (CDR) launched in 2016
- Standardize care to improve:
  - Documentation and care pathways
  - Resource utilization
  - Hospital length of stay
- Vascular division engaged residents and fellows
- Trainee education through mobile resource
Background: Mobile Apps

Historical Usage

- Conversion of service manuals to online platforms
- Daily quiz questions
- Feedback to residents
- Access patient sensitive data

Al-Jundi, JSE 2017
Holtkamp, Telemedicine 2017
Rouch, JSE 2017
Purpose

To evaluate vascular and non-vascular trainee usage of internally created content, distributed via a mobile platform
Methods: App Logistics

- AgileMD (*AgileMD Inc, San Francisco*)
- Internally created content
- Ownership retained
- Available offline, but able to update in real-time
Methods: App Content

- Service organization and expectations
- Care pathways and order sets
- Documentation recommendations
- Educational material
Organization

• Personnel
• Service organization and expectations
• Schedules
• Conference expectations
Patient Care

• Preoperative and postoperative care orders

• Daily disease specific pathways
Documentation

• Guidelines from our Clinical Documentation Improvement (CDI) office

• Specific complex diseases
Education

• Internally generated material
  – General vascular
  – Disease specific

• Library online access
  – Landmark articles
  – Calculators
  – Vascular textbooks and journals
Results

July – December 2017

• Users
• Content usage
37 trainees invited
- Accessed (n = 20)
- Didn't Access (n = 17)

- 5 of 6 vascular trainees accessed
- Specialty residents were more likely to access content than general surgery residents
- 71% of non-users were general surgery residents

**Results: Users**

Other: Anesthesia, Plastics, Ortho, OMFS, Vasc Med
Results: Available Volume

Percent of Content Pages

- Service Expectations: 31%
- Patient Care: 31%
- Education: 27%
- Documentation: 11%

Available
Results: Available Volume vs Utilization

Percent of Content Pages

- **Service Expectations**
  - Available: 31%
  - Utilized: 29%

- **Patient Care**
  - Available: 31%
  - Utilized: 50%

- **Education**
  - Available: 27%
  - Utilized: 17%

- **Documentation**
  - Available: 11%
  - Utilized: 4%

- **Average**: 26.5 pages
- **Highest**: 61 pages
Results: Percent of Users

- **Service Expectations**: 75% (Users), 31% (Available), 29% (Utilized)
- **Patient Care**: 95% (Users), 31% (Available), 50% (Utilized)
- **Education**: 70% (Users), 27% (Available), 17% (Utilized)
- **Documentation**: 65% (Users), 11% (Available), 4% (Utilized)
User Survey

• Patient care pages were highly valued and appropriate in mobile format

• Improve utilization

• Future suggestions:
  – Operative steps to common procedures
  – Technical skills curriculum
Conclusions

• Mobile app was welcomed and supported by hospital administration
• Residents of a surgical subspecialty were most likely to use the app
• In mobile form, patient care content was used most frequently by trainees
Thank You
References

