

Impact of remote pulmonology case observations on cost and time expenditures for providers

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Background

- Physician shortages, clinician burnout, and a global health crisis have impacted the ability to broadly disseminate specialized knowledge to deliver effective, global interventional pulmonology care.
- Compounding this demand is the speed at which novel, evolving technologies come to market.
- We evaluated the role of remote case observation in untethering physicians and clinical teams from traditional scheduling constraints, limited provider access, and travel burdens when introducing a new medical technology within a health system.

Methods

- Retrospective analysis after launching the ILLUMISITE™ (Medtronic, Minneapolis, MN, USA) peripheral lung navigation platform
- Explorer Surgical (Global Healthcare Exchange, Louisville, CO, USA) digital case management platform utilized to remotely broadcast procedures and enable physician collaboration
- Analyzed impact on travel costs and time away from practice

Results

- 10 ILLUMISITE™ remote case observations with 18 physicians from April to November 2021
- U.S. cost estimates were \$2,000 per case observer, including airfare, lodging, transportation, and meals
- Estimated time expenditure was 72 hours away from a visiting physician's practice
- U. S. estimated total cost savings were \$36,000
- Estimated total time savings were 1,296 hours (54 days) away from a provider's practice

Table 1: Overview of Explorer Surgical Remote Observation Platform Features

Feature	Explorer Surgical a GHX company
Connectivity	Hardwire & WiFi/LTE
Workflow & Data Integration	Yes
Audiovisual Integrations (n)	Unlimited
Multiple Hardware Configurations*	No
Portability**	Yes
Procedural Guidance Tool***	Yes
Augmented Reality/Virtual Reality Functionality	Yes
Protected Health Information Masking	Yes

LTE = Long-Term Evolution 4G wireless technology, n = number

*hardware configurations = modalities/offering by which the application can be launched and used

**portability = ability to move the hardware configuration in its entirety from one site to another

***procedural guidance tool = fully customizable tool that creates step-by-step, detailed instructions with procedure guidance for remote viewers

Figure 1: Bronchoscopy Suite Configured for Explorer Surgical



Representative view of Explorer Surgical digital case management platform configured for use during a bronchoscopy procedure. Note the position of one Explorer Surgical tablet (yellow rectangle) mounted in the direction of the bronchoscopist and the lack of any physical footprint of the technology within the procedure suite.

<https://www.explorersurgical.com/>

Conclusions

- Remote interactive case observations offer a unique opportunity to increase access to procedural expertise, while saving money and time for observing physicians
- Avoiding travel leads to additional time that may be utilized to perform more procedures and to treat more patients
- Cost savings may be reallocated as investments in procedural training and product innovation
- This technology has the potential to create a paradigm shift in medical education and procedural training given its global application across other specialties in addition to interventional pulmonology

Disclosures

BSB and JSK report consulting fees from Explorer Surgical, a GHX company.

