



Pilot 7 Smart Cathlab Assistant

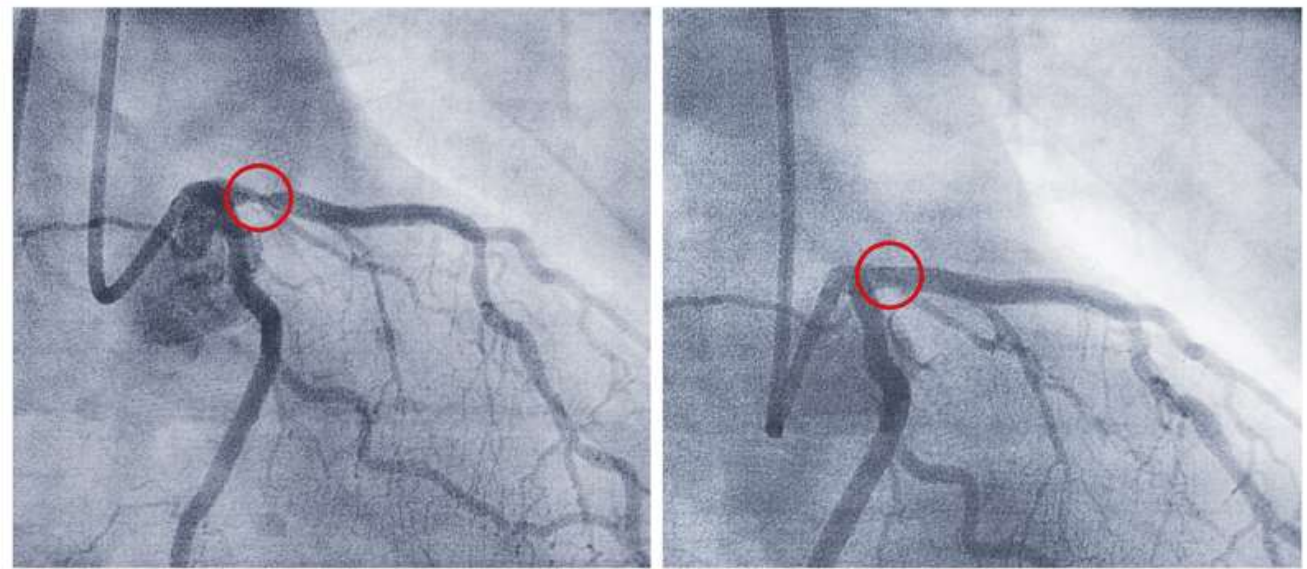
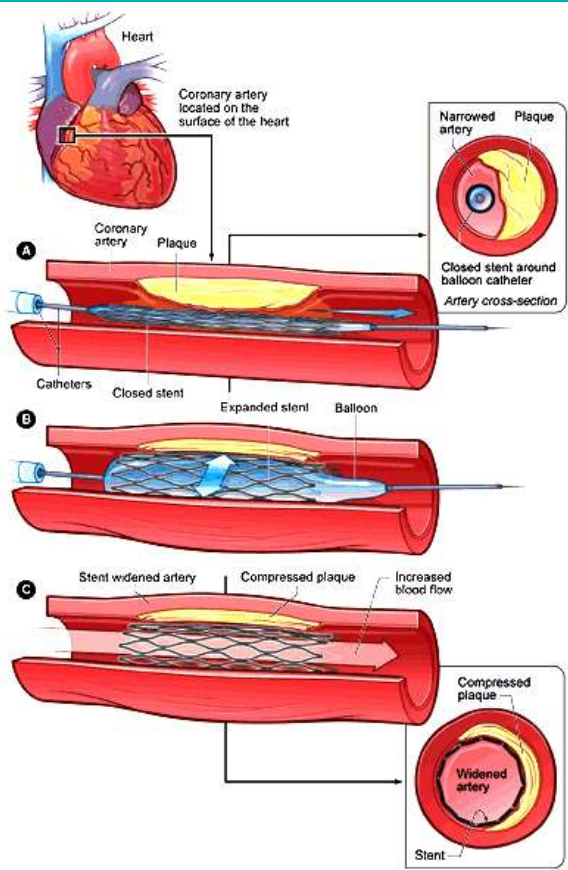
Presenter: Robert Hofsink (Philips)



Context: Interventional Cardiology



Coronary Artery Disease



Administrative burden



Most organizations aren't set up to minimize administrative burden

Disagree Neutral
Agree or Strongly Agree

My organization is set up to minimize the time
I spend on administrative tasks, so I can focus on patient care.



Source: athenahealth
Sample 799 physician respondents surveyed between October and December 2020.

- Physicians spend more time doing administrative tasks as opposed to spending that time with patients
- 27% burned out, 49% under stress
- 72% of cardiologists: documentation time is one of the factors for their burnout
- 13.5 hours per week spent on tasks other than direct patient care

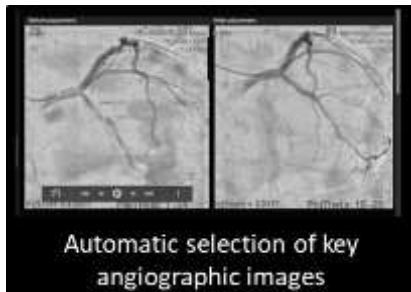
Automated logging and reporting in the Cathlab

Complete and high-quality logging for percutaneous coronary interventions

Improved operational efficiency and reduced administrative burden

- Automatic selection of pre- and post treatment angiograms
- Automatic key event detection and logging

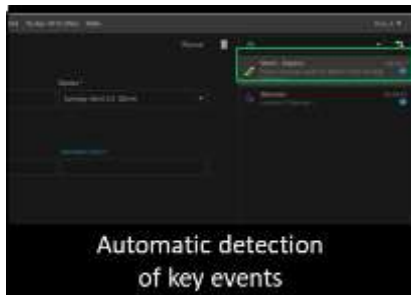
Proposed solution



Automatic selection of key angiographic images

The system will automatically identify and display key images from similar angulation for a quick comparison, e.g. automatic extraction of pre- and post-treatment images to capture in the report.

Benefits: Less time spent browsing and selecting images, more complete and accessible information for continuity of care



Automatic detection of key events

Key event detection will automatically detect important events in the procedure and make sure that the relevant information is automatically logged, e.g. automatic detection of balloon inflation and device deployment.

Benefits: Less time spent to log events, and improve the accuracy for registries and inventory management

Status

- Data collection ongoing
- First version of algorithms for key event detection

Activities

- Training of CNNs for event detection in X-ray angiography images
- Further data collection and training needed to have a version ready for off-line evaluation in 2023.
- Evaluate preliminary results with physicians

Outlook

- Demo of the key event detection and automatic pre/post treatment image selection algorithms

The background of the slide is a solid teal color. On the right side, there is a complex, abstract network diagram. It consists of numerous circles of varying sizes, some of which are concentric, connected by thin, light-colored lines. The circles and lines are in shades of teal and light blue, creating a subtle, modern pattern that suggests connectivity or a network structure.

Thank you for your attention!