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## Omron Healthcare

### Innovation in real time ECG monitoring



# The History of Holter

- The first Holter monitoring equipment from the late 1970's was a tape based system such as this Oxford Medilog
- Limited display on very small screen
- ECG strip needed to be printed for each suspected abnormality



# Where we are now

- Current devices are
  - Expensive
  - Limited to being recorders
  - Uncomfortable for patients
  - Time consuming to fit and analyse



# Useful or still missing what we need to see?

- Do current forms of ECG catch events?
  - Cardiac events do not happen on cue
  - How to catch evening and morning events
  - Asymptomatic events can be just as risky



# Stand alone screening devices

- Hand held recorders
  - Portable and compact
  - Can have instant view screens
  - Can take multiple short measurements
  - No electrodes or skin prep needed
  - Can be downloaded and used with interpretative software



# Are smartphones the answer?

- Smartphone apps
  - Numerous available
  - Distrusted by medics
  - Some with CE and FDA approval



AliveCor Heart Monitor



# Your iPhone will see you now



A prototype of the Pulse Waveform Analysis Application running on an iPhone 4S. From left to right: iPhone 4S camera; fingertip applied to iPhone 4S camera; a representative recording from a patient in atrial fibrillation; a representative recording from a patient in normal sinus rhythm  
Ref David MacManus

# Just ECG or extra parameters

- Fitness type tracking devices
  - Some approved devices will add extra data





# Real time or more data?

## ■ Wearables

- Wearable patch ECG could offer real benefits
- Can use Bluetooth or USB to download
- Up to 3 days of data capture, or 24 hours beat to beat
- Comfortable for the patient, showerproof and easy to apply



# Final slide

- The future is wearable and very soon
- To get good ECG you need easy to use products with good patient compliance to maximise the benefits of recording data.
- Thank you
- Any questions?