Case Study: Implementing Enterprise Mobility Solutions for Patient Care

Industry: Healthcare & Emergency Medical Services

Technology Used: Motion Computing Rugged Tablet PC & Mico Digital Data Collection Form

Objective:

To enhance emergency medical services (EMS) efficiency by implementing an enterprise mobility solution that enables real-time patient data collection and seamless transfer from the accident site to the hospital.

Background

Emergency Medical Services (EMS) providers face significant challenges in collecting, managing, and transferring patient data accurately and efficiently. The traditional paper-based system often leads to delays, errors, and inefficiencies, which can impact patient outcomes.

To address this, a leading EMS provider implemented an enterprise mobility solution using **Motion Computing's Rugged Tablet PC** integrated with **Mico Digital Data Collection Form** to digitize and streamline patient care from the accident site to the hospital.

Challenges

1. **Delayed Data Entry**: Paper-based forms caused delays in patient information relay to hospitals.
2. **Data Inaccuracy**: Handwritten notes led to misinterpretation and medical errors.
3. **Inefficiency in Handoff**: Transferring patient information manually between EMS teams and hospitals resulted in miscommunication.
4. **Device Durability**: EMS teams required rugged and reliable devices that could withstand rough environments.
5. **Compliance & Security**: Patient data needed to be captured securely to comply with HIPAA and other healthcare regulations.

Solution Implemented

The EMS provider deployed **Motion Computing's Medical-Grade Rugged Tablet PCs** equipped with the **Mico Digital Data Collection Form**, enabling:

1. Real-Time Digital Data Collection

- EMS personnel used the **rugged tablet PC** to fill out digital patient care forms at the accident site.
- The **Mico digital form** automatically captured patient vitals, symptoms, and treatment provided.

2. Wireless Data Transmission to Hospitals

- Patient data was transmitted securely via **4G/5G or Wi-Fi** to the receiving hospital.
- Emergency Room (ER) teams received real-time updates before the patient arrived.

3. Integration with Hospital Systems

- The digital form was linked to the hospital's **Electronic Health Records (EHR)** system, reducing manual data entry.
- Doctors accessed patient history and pre-hospital treatment data immediately upon arrival.

4. Rugged & Medical-Grade Device

- The **Motion Computing Tablet** was **shockproof, waterproof, and disinfectant-resistant**, making it ideal for EMS use.
- It supported **glove-friendly touch operation**, allowing medics to input data in emergency conditions.

5. Compliance & Security

- The system complied with **HIPAA** regulations, ensuring **end-to-end encryption** of patient data.
- Secure **user authentication** prevented unauthorized access.

Results & Benefits

Metric	Before Implementation	After Implementation
Patient Data Entry Time	15-20 minutes	< 5 minutes
Error Rate in Medical Reports	10-15%	< 2%
Data Handoff Time to ER	10 minutes	**Instant**
Device Downtime in Field	High (fragile devices)	**Minimal (rugged tablet)**
Compliance & Security Risk	High	**Low (Encrypted Data)**

Key Benefits

✓ **Faster Patient Care** – Hospitals received critical patient data before arrival.
✓ **Improved Accuracy** – Eliminated manual errors in patient data collection.
✓ **Enhanced EMS Efficiency** – Reduced paperwork and allowed medics to focus on patient

care.
✓ **Seamless Integration** – Synchronized with hospital systems for better treatment coordination.
✓ **Durability & Reliability** – Motion Computing Tablets operated efficiently in harsh EMS conditions.

Conclusion

The implementation of **Motion Computing's Rugged Tablet PC** and **Mico Digital Data Collection Form** significantly transformed EMS operations. By digitizing patient care documentation and enabling real-time hospital data transmission, EMS providers improved response times, accuracy, and overall patient outcomes.

This enterprise mobility solution set a new benchmark for **efficient, secure, and accurate** emergency medical services, ensuring **better patient survival rates and streamlined hospital workflows**.

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