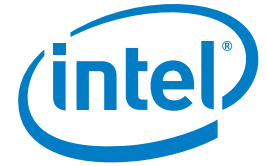


CASE STUDY

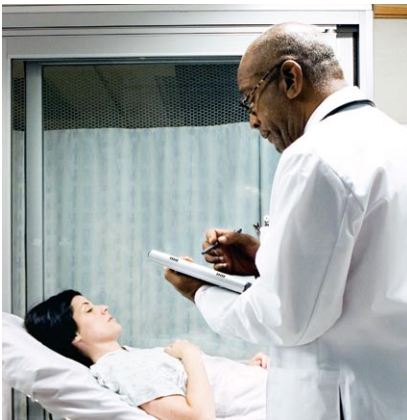
Intel® Xeon® processor 7300 series
Intel Xeon processor 5400 series
Healthcare



Technology Investments Drive Transformation of Puerto Rico's Prison Health System

Mobile clinical assistants and server refresh help Correctional Health Services deliver high-quality, efficient, cost-effective care

In 1997, healthcare services in Puerto Rico's prisons were so bad that a U.S. District Court called for creating a new, nonprofit entity to take them over. The result was the Correctional Health Services Corporation (CHSC), which today delivers high-quality healthcare services to all inmates confined under the jurisdiction of the Puerto Rico Administration of Corrections. Adopting a policy of technology innovation and a foundation of Intel and Dell technologies, CHSC transformed a substandard, violation-plagued healthcare system into a best-in-class operation where meeting inmates' health needs plays a vital role in their rehabilitation.



CORRECTIONAL HEALTH SERVICES CORP.

"We tested and reviewed multiple types of tablets, and we like the MCA very much. It is easy to use, the case is lightweight and durable, and we can wipe it clean, which helps with infection control."

— Norma Landrau-Bas
Manager of Applications Development
Correctional Health Services Corporation

CHALLENGES

- **Transform** the prison health system to meet the complex health needs of 13,000 inmates at 10 facilities throughout the island
- **Enhance efficiency** for nurses and other clinical staff

SOLUTIONS

- **Technology innovation** as a core element of the transformation strategy
- **Mobile clinical assistants (MCAs)** for information at the point of care
- **Server refresh, consolidation, and virtualization** based on the Intel® Xeon® processor

IMPACT

- **Inmates are on a healthier path** to rehabilitation
- **Nurses spend 27 percent less time** on medication administration, improving the quality and timeliness of care and enhancing productivity
- **Documentation meets** healthcare standards
- **IT has cut the number of servers in half** despite adding a development and test environment, resulting in lower operations costs and greater IT efficiency

Technology-Enabled Change

Inmates typically enter the correctional system with a wide range of undiagnosed or under-treated conditions—from diabetes, tuberculosis, and HIV/AIDS to drug addictions and mental health issues. To meet these complex health needs and remedy deficiencies in the healthcare system, CHSC took a holistic approach to patient care and aggressively adopted technologies that help care providers plan and carry out integrated treatment plans.

With CHSC delivering patient care, treatment plans address the whole patient and include prevention, addiction treatment, family health, and patient

education. Clinicians use electronic health records (EHRs), telepsychiatry, and other IT solutions to meet each patient's needs efficiently and cost-effectively. And CHSC invests in end-to-end Intel® technologies to deliver the performance and reliability its mission-critical applications demand.

Improving the Quality and Efficiency of Care

CHSC's newest IT solutions include cEMAR*, a digital medication management system, and a Pharmpro* pharmacy system that support the organization's initiative for improving healthcare. Pharmpro Terminal Services runs on a Dell PowerEdge* R900 server based on



the Intel Xeon processor 7300 series, and a PowerEdge 2950 with the Intel Xeon processor 5400 series runs the Microsoft SQL Server* database. Nurses use Motion Computing's C5* MCA to access the software. MCAs are a new type of mobile computer based on a reference architecture that Intel developed for healthcare professionals.

The combination of software, MCAs, and Intel® server technologies provides nurses with real-time access to patient data at the point of care and helps CHSC deliver great care while increasing productivity.

"Every authorized user who cares for the patient can immediately see who has accepted the medication and when it was delivered and identify any patients who are noncompliant," explains Norma Landrau-Bas, CHSC's manager of applications development. "The system helps us avoid overdose and under-delivery. We are better able to deliver the medication within the right hour and document that we have done so." The MCA displays a photo of each inmate, helping prevent identification and medication errors.

The technology-enhanced workflow enables nurses to complete their medication rounds 27 percent faster, saving two hours per day on four rounds of medication administration. "There is less repetitive work for the nurse and the patient," says Landrau-Bas. "Nurses used to have a lot of paperwork to complete

at their desks once they finished their rounds. Now, when they get back to their desks, they're done. The system runs the report for them."

Further enhancing quality of care, the solution eliminates legibility problems and transcription errors and makes data immediately available to the full care team. It also generates more complete data for quality assurance and regulatory activities.

Nurses like their MCAs. "We tested and reviewed multiple types of tablets, and we like the MCA very much," Landrau-Bas says. "It is easy to use, the case is lightweight and durable, and we can wipe it clean, which helps with infection control."

New Servers Enable Cost Savings, Better Care

CHSC standardized on server technologies from Intel and Dell early in its operations and has expanded from 3 servers in 2001 to 48 this year. The growth was necessary to support the company's growing application load, but it filled up CHSC's Guaynabo data center and pushed management and power costs upward.

Now, CHSC is reversing the trend, replacing aging servers based on single-core and dual-core processors with new Dell servers and more powerful Intel Xeon processors and using Microsoft Hyper-V* Virtual Server to virtualize them. The refresh enables the IT team to cut its

SPOTLIGHT ON CORRECTIONAL HEALTH SERVICES CORPORATION

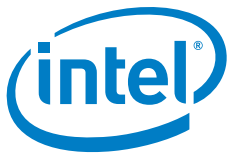
Correctional Health Services Corporation, Inc. provides integrated, cost-effective healthcare services to all inmates confined under the jurisdiction of the Administration of Corrections of Puerto Rico, including men, women, and youths who are awaiting arraignment or serving their sentences. A private, not-for-profit company, CHSC was incorporated in 1997 and began operations in 1999.

server count in half, shrinking energy and maintenance costs. It also gives clinicians a more responsive and productive experience as they interact with their digital health applications.

Adding further value, IT is repurposing some of the older servers to create a test and development environment. "This will improve programmer productivity and help us make the production environment even more robust," says Luis M. Wilkes, who manages server and network infrastructure for CHSC.

The new infrastructure also allows Wilkes to better meet the needs of CHSC's clinical and business leaders. "Norma is always pushing us to provide more capacity and more performance so she can run new applications," Wilkes says. "Now, when she asks me to support a new application, I can provision a new server quickly and virtually. She's happy and, ultimately, we can take better care of both our inmates and our nurses. You can't measure that, but that is what we're here for."

Find a solution that is right for your organization. Contact your Intel representative, visit the Reference Room at www.intel.com/references.



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