

# DISCRETE DATA FOR BETTER PATIENT RECORDS



How HIT professionals are using HL7® standards to improve and advance modern healthcare

Published by HL7®, an international not-for-profit organization that develops standards for exchanging healthcare information electronically.

## PENN STATE HEALTH MILTON S. HERSHEY MEDICAL CENTER

Founded in 1963 through a gift from The Milton S. Hershey Foundation, Penn State Health Milton S. Hershey Medical Center is a leading academic medical center located in Hershey, Pennsylvania, USA. The 548-bed medical center is a provider of high-level, patient-focused medical care. As a Magnet-designated hospital since 2007, Hershey Medical Center employs caregivers who are dedicated to excellence and achieving superior patient and community outcomes. The Hershey Medical Center campus includes Penn State College of Medicine (Penn State's medical school), Penn State Cancer Institute and Penn State Children's Hospital—the region's only children's hospital.

## MILTON HERSHEY SCHOOL

Milton Hershey School is a private, cost-free, live-on-campus prep school for income-eligible students. Free medical care is provided to more than 2,000 Pre-K through 12th grade students.

### Goal

- Provide clinicians with the ability to electronically analyze and track patient health care data over time

### Opportunity

- To use HL7® standards to transfer laboratory results in a format the school's electronic health records (EHR) can consume



## CASE STUDY



**We use HL7® standards to electronically repackage lab results into a more useable format that ultimately saves staff time, reduces human error and leads to better medical care for the students.**

— Tony Douventzidis, manager, laboratory information systems, Milton S. Hershey Medical Center

## Project

The laboratory information systems team at Hershey Medical Center worked with MaxMD, one of CIO Review's 50 Most Promising Healthcare Solution Providers-2019, to develop and implement an interface that allows medical lab results of Milton Hershey School students to be electronically and securely transferred to the school's EHR in a discrete data format.

The data is sent using Direct and contains an HL7® ORU (observation result) message that the school's EHR can easily receive and digest.

Data that is collected discretely is stored in a database table at the lowest level of granularity. The charts here illustrate the difference.

When the data is stored with separate fields for each discrete value, it can be queried by any of the data fields to produce meaningful results. It is both measurable and reportable.

## Progress

Implementation of the discrete data project allows clinical staff at Milton Hershey School to view results seamlessly within the EHR. Additionally, the medical team can query the data by any of the data fields to pull meaningful results they can use to plan and improve patient care.

Further, students' medical histories can be tracked longitudinally more effectively to provide caregivers important historical information and context to guide treatment.

Lastly, the project laid the groundwork for Hershey Medical Center's laboratory information systems to scale up by using the developed channel to send data to multiple users.

### NON-DISCRETE DATA EXAMPLE:

<b>Medication Name:</b>	Prilosec
<b>Dosage Instructions:</b>	1 20mg tablet twice daily for three days

### DISCRETE DATA EXAMPLE:

<b>Medication Name:</b>	Prilosec
<b>Dosage Qty:</b>	1
<b>Dosage Strength:</b>	20
<b>Dosage Units:</b>	mg
<b>Dosage Form:</b>	Tablet
<b>Frequency:</b>	BID
<b>Duration Number:</b>	3
<b>Duration Length:</b>	Days



This protocol can be further leveraged to save time and money by using HL7® CDA as the structure and Direct as the transport layer.

— Scott Finlay, CEO, MaxMD

