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Health Information Management (HIM) White Paper

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▶ **HIM OVERVIEW**

Health Information Management (HIM) is the practice of acquiring, analyzing, and protecting digital and traditional medical information vital to providing quality patient care. HIM can be divided into two main areas, Health Information Technology (HIT) and Health Informatics (HI), however, the lines between the two are often blurred. HIT is the application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision making.   HI is the science that defines how health information is technically captured, transmitted and utilized.
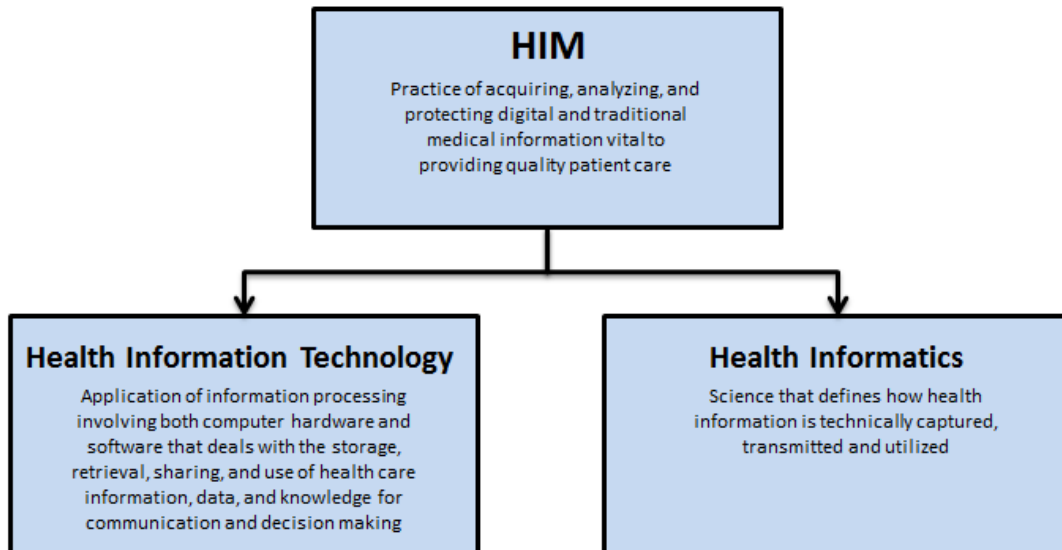
HIT supports health information management across computerized systems and the secure exchange of health information between consumers, providers, payers, and quality monitors. The electronic health record (EHR) is the central component of the health IT infrastructure. An EHR or electronic medical record is an individual's official, digital health record and is shared among multiple facilities and agencies. Health Information Exchange (HIE) is the transfer of health information electronically across multiple organizations. Exchanging health information is important to make sure that health care providers have access to the most up-to-date information about patients so they can make more informed decisions about their care. Implementation of the Affordable Care Act, the 2009 Health Information Technology for Clinical and Economic Health (HITECH) Act, and Health Insurance Portability and Accountability Act (HIPAA) are driving increased use of HIT to support the delivery of safer, high-quality, and more efficient health care.

HI is a rapidly growing field with the increased use of EHRs and HIEs. Massive amounts of patient information readily accessible electronically and in multiple areas of the healthcare industry need to be coordinated and thus have created a multidisciplinary field of HI. HI requires workers with knowledge and expertise in technology, research and healthcare.

HIM is a rapidly changing industry. In the article, *Health Information Management 2025,* by Chris Dimick, he writes, "In record time and at an unprecedented pace, the electronic health record (EHR) has spurred a revolutionary change in HIM that's modifying the profession as each day passes. EHRs and

accompanying technology like health information exchange, computer-assisted coding, voice recognition software, and patient portals—along with revamped government quality and EHR incentive programs—are modifying many aspects of HIM."

▶ HIM INDUSTRY SIZE

Kalorama Information, the healthcare market researcher, issued its yearly report, *EMR 2015: The Market for Electronic Medical Records*, and stated that the market for EHR had reached $24.9 billion in 2014. Sales have grown 10% from 2012 to 2014 and Kalorama expects the market to be $35.2 billion by 2019 (7 to 8% growth). The sales number includes revenues from EHR systems, computerized physician order entry system (CPOE), and directly related services such as installation, training, servicing and consulting, however, it does not include picture archiving and communication systems (PACS) or hardware.

Kalorama cites various factors contributing to the past and continuous growth:

- Government Incentives
- System upgrades (by physician groups and hospitals)
- Fear of penalties
- Physician adoption of EHR systems

Healthcare Informatics Magazine published an article by Rajiv Leventhal titled *Healthcare IT Outsourcing Market Worth $50.4 Billion by 2018, Report Says*. The article states that the global healthcare IT sourcing market was $35 billion in 2013 and expected to have a compounded annual growth rate of 7.6% to reach $50.4 billion in 2018 based on a new RnR Market Research report. The article goes on to say that outsourcing IT solutions has emerged as an efficient solution to mitigate rising cost, lack of in-house IT expertise, growing pressure to meet government's meaningful use criteria, conversion to ICD-10 coding, and the rise in demand for integrated solutions.

▶ HIM PROFESSIONALS

According to the American Health Information Management Association (AHIMA), HIM professionals often serve in bridge roles, connecting clinical, operational, and administrative functions. These professionals affect the quality of patient information and patient care at every touch point in the healthcare delivery cycle. HIM professionals work in a variety of different settings and job titles (see chart below).

Traditional Settings:

- Managing a HIM medical records department,
- Cancer registry
- Coding
- Trauma registry
- Transcription
- Quality improvement
- Release of information
- Patient admissions
- Compliance auditor
- Physician accreditation
- Utilization review
- Physician offices
- Risk management

Non-traditional Settings:

- Consulting firms
- Government agencies
- Law firms
- Insurance companies
- Correctional facilities
- Extended care facilities
- Pharmaceutical research
- Information technology
- Medical software companies

The outlook for HIM professionals is very robust. The U.S. Bureau of Labor Statistics projects the following for HIM professionals:

	Medical Records and Health Information Technicians	Medical and Health Services Managers
Job Outlook 2014 – 2024 (Growth)	15%	17%
Number of Jobs , 2014	188,600	217,600
Projected Employment, 2024	333,000	389,300

The U.S. Bureau of Labor Statistics projects much faster than average growth of 15% and 17% for medical records / health information technicians and medical / health service managers. It is important to note that the HIM professional will need to continue to upgrade their skills as technology continues to advance. In relation to the HIM managerial role, technological advances will change the role from managing clerical type workers to more skilled HIM knowledge workers. This idea is noted in the article *Seven Predictions for HIM Departments of Tomorrow*, by Karen Gallagher. She states that HIM professionals will need advanced skill sets in project management, technology, statistics, data analysis and data manipulation. The article also notes that there will be more HIM experts at the corporate, executive level. Ms. Gallagher states that although some HIM jobs may become obsolete because of new technologies, she sees several new roles emerging:

- Coding Editor – CAC Technology will assign codes but an Editor will validate
- Transcription Editor – Speech recognition technology will transcribe but an Editor will validate and confirm
- Data Quality Management and Analytics Specialists – Manipulate data for reports and analysis
- Patient Advocate – Educate and assist patients in patient portals, health information exchange, etc.

Another HIM professional is a case manager. In 2014, there were more than 37,000 board-certified case managers and about 40% of employers require board-certification.

▶ HISTORY OF HIM INDUSTRY

The HIM industry began in 1928 when the American College of Surgeons (ACOS) sought to improve the standards of records being created in clinical settings by creating the Association of Record Librarians of North America (now called AHIMA). The HIM industry began to change in the 1970s with the advancement of computers and software, but the cost was excessive and prohibitive. The 1980s and 90s saw the use of applications within individual healthcare departments, but data was not shared between departments. In the article, *Health Information Management History: Past, Present & Future*, author Ashley Brooks states, "Healthcare was without a communicative, cross-departmental electronic record system." This would all change in the 2000s with the EHR.

The EHR transition began when President George W. Bush called for computerized health records in his 2004 State of the Union Address. The EHR revolution has continued with President Obama's passage of the American Recovery and Reinvestment Act (ARRA) in 2009. ARRA of 2009 authorized the Centers for Medicare & Medicaid Services (CMS) to provide incentive payments to eligible professionals (EPs) and hospitals who adopted, implemented, upgraded, or demonstrated "Meaningful Use" of certified electronic health record technology.   The HealthIT.gov website defines "Meaningful Use" as using certified electronic health record technology to:

- Improve quality, safety, efficiency, and reduce health disparities
- Engage patients and family
- Improve care coordination and population/public health
- Maintain privacy and security of patient health information

Under ARRA, "Meaningful Use" set objectives that EPs and hospitals must achieve to be eligible for CMS incentive payments. The specific objectives are divided into three stages:

- Stage 1: Data capture and sharing
- Stage 2: Advance clinical processes
- Stage 3: Improved outcomes

Hospitals and EPs were eligible for CMS incentive payments starting in 2011 and subject to penalties in 2015. 2016 is the last year to initiate participation in the Medicaid EHR Incentive Program. Medicaid incentive payments cannot be received by an EP or hospital for more than 6 years and will cease in 2021. According to the HealthIT.gov website, "CMS is making available up to $27 billion in EHR incentive payments, or as much as $44,000 (through Medicare) or $63,750 (through Medicaid) per eligible health care professional. Eligible hospitals, including critical access hospitals (CAHs), can qualify for incentive payments totaling some $2 million or more."

Also in July of 2015, the US Department of Defense handed down a 10-year $4.3 billion dollar electronic health record system contract to Cerner, Leidos and Accenture.

The HIM industry will continue to grow and change with advancements in HIT and HI.

▶ HIM INDUSTRY OUTLOOK

Based on the *Health Information Management in 2016 Report* by Precyse Solutions, Inc. in collaboration with Linda Kloss and the HIM Innovation Community Thought Leaders, some top trends and observations impacting HIM in 2016 are:

1. Clinical and business leaders need to own the EHR and other technologies in order for them to be successful. HIM leaders must help clinical and business leaders integrate and buy in to the technology in order for long term success.
2. Some level of Information Management is a basic competence for most who work in healthcare.
3. HIM functions are distributed and embedded throughout the organization.
4. There is a greater recognition of the importance of managing the Records Management / Information Management aspects of digital information through its life cycle.
5. Health systems continue to work at reducing overall costs by 20% to remain financially viable. The linkage between improvements in quality and improvements in financial performance is well documented.
6. Clinicians require and use tools and information to anticipate the outcomes and cost consequences of their clinical decisions at the point of care.
7. The design of ICD-11 is being evaluated and planning for implementation is projected for 2020.
8. IT and information management (IM) competencies are not up to par. Staff use powerful tools and technologies often with insufficient and minimal training.
9. Technology is replacing clerical work in HIM services and skilled technical work such as transcription and coding is computer-assisted, leading to a need for upgraded skills.

Based on the trends listed above, it is apparent that the HIM industry will continue to affect all aspects of the healthcare life cycle. The EHRs will be touched and used by all employees in healthcare from clinicians to front, middle and back office employees. It is essential that health providers reduce cost to remain viable and improvements made by HIM systems and HIM professionals help achieve that goal.

In the article, *Seven Predictions for HIM Departments of Tomorrow*, by Karen Gallagher, she predicts that there will be more remote work which will reduce overhead costs and give employees flexibility. She also predicts increased HIM outsourcing to third parties. Outsourcing saves considerable money and physical space. "As functions are embedded throughout the organization, outsourced, or accommodated remotely, the HIM department essentially becomes one "without walls"", states Ms. Gallagher. She also states that there will be increased efficiency at the operational level due to new technologies. The new technologies will provide more productivity, accuracy and quality, however, some HIM positions will be combined or eliminated as technology automates more of the HIM paper processes.

Another trend affecting the HIM industry is population health management (PHM). PHM is defined as the proactive application of strategies and interventions to defined groups of individuals across the continuum of care in an effort to improve the health of the individuals within the group at the lowest necessary cost. In the article, *The Next HIM Frontier: Population Health Information Management (PHIM) Presents a New Opportunity for HIM*, by Bonnie Cassidy, she states, "the heart of population health information management is the understanding and governance of the sources and uses of the data, and the use of data analytics to tell the story of clinical and financial risk by converting it into

quality information." She goes on to say, "the time is now to analyze and visualize documented and undocumented intradepartmental and interdepartmental HIM functions and data flow in order to be prepared to take the lead in PHIM."

▶ HIM SECTORS - DESCRIPTIONS

A. Coding - ICD-10 Services
The Coding industry has seen a major change in the last few months. The federally-mandated switch from ICD-9, the 36-year-old system used for coding diseases, diagnoses and clinical procedures, to the implementation of the 10th revision of the International Statistical Classification of Diseases (ICD-10) which was effective Oct. 1, 2015.   On the PracticeAdmin blog titled *2015 Medical Billing Trends*, it states, "The billing management for practices is moving outside the doctor's office into the hands of professionals at a medical billing service."

B. Clinical Documentation Improvement (CDI)
As stated on the AHIMA website, "Clinical documentation is at the core of every patient encounter, in order to be meaningful it must be accurate, timely, and reflect the scope of services provided. Successful CDI programs facilitate the accurate representation of a patient's clinical status that translates into coded data. Coded data is then translated into quality report cards, physician report cards, reimbursement, public health data, and disease tracking and trending. HIM professionals provide two key roles within a CDI program as a clinical documentation improvement specialist and coding professional."

C. Computer-Assisted Coding
A computer assisted coding system (CACS) is software that analyzes healthcare documents and produces appropriate medical codes for specific phrases and terms within the document. Margaret Rouse describes the relationship between coders and CACS on the TechTarget – Health IT website, when she writes, "Traditionally such coding is performed by people called coders, but the shift toward technology-driven healthcare has increased the necessity and demand for medical coding systems -- especially with the growth in electronic health record implementation and the transition to ICD-10-CM. This has led to a hybrid system, in which CACS perform a majority of the medical coding, especially on routine procedures, and coders address more complex scenarios while auditing the CACS output."

D. Transcription
U.S. jobs for the medical transcription sector have been on a downward spiral since 2007. This has occurred for several reasons: use of voice recognition software and outsourcing of jobs to off-shore medical transcription service organizations.

E. Records Management
Records Management is defined as the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records. The AHIMA website states, "The goal is to ensure processes, systems and technologies are in line with capturing data to enable sharing and getting information "where and when it's needed"." Hospitals and physicians are

rapidly implementing the use of EHRs and there is a need for accuracy, security and efficiency as transition occurs from paper records to electronic records.

F. Case Management

According to the Case Management Society of America (CMSA), case management is a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual's and family's comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes.

G. Registry Services (Cancer, Trauma & Birth)

Registry service is the process of keeping a database on patients who share a particular characteristic such as cancer, trauma, implants or births. The data is then used to assess the quality of care, monitor trends, and do research.

H. Release of Information (ROI)

Even with the ever changing HIM environment, the release of protected health information (PHI) has remained a critical and important task of the HIM profession. According to American Health Information Management Association (AHIMA), "From the receipt of the request to the delivery and logging of the PHI disclosed, many factors must be considered and accounted for, such as federal and state laws, response times, policies and procedures, and necessity of the PHI requested." As hospitals and EPs transition from paper records to EHR, the risk of a serious breach greatly increases.

I. Audit

Medical auditing is defined as conducting internal or external reviews of coding accuracy, policies, and procedures. Accurate and complete clinical documentation is essential to providing the most efficient delivery of care. Audits are necessary to determine areas that require improvements and corrections. More physicians and hospitals will use audits as they strive to be compliant and profitable.

▶ HIM MAJOR TRANSACTIONS

According to the article *Health IT Mergers, Acquisitions Remain Robust in 2015* by Fred Bazzoli, there were 180 deals totaling nearly $6 billion in 2015 for Health IT. This was nearly double the volume of 2014.

Date	Acquirer	Target	Target Description
June 2016	Bain Capital Private Equity	Navicure	Provides claims management and payment patient solutions for physicians and hospitals
June 2016	Vertis Capital	Verisk Health	Population health, revenue, payment and quality solutions
June 2016	AMS Healthcare Services (AHS)	Peak Health Solutions	Provides remote coding and consulting solutions to hospitals and physicians groups
May 2016	Warburg Pincus	DocuTAP	Provides software for electronic medical records, practice management and revenue cycle management for urgent care and primary care clinics
April 2016	Marlin Equity Partners	Business Performance Services Division of McKesson Corp	EHR software solutions for ambulatory care market
April 2016	ABILITY Network (Bain Capital, Summit Partners)	eHealth Data Solutions	Data analytics solutions
March 2016	MedStreaming	M2S (Altaris Capital, Pfizer Venture Investments	Provides technology and services to manage clinical information
March 2016	Quantros (Francisco Partners)	Comparion Medical Analytics	Healthcare information services
Feb 2016	eviCore healthcare	QPIP Health	Developer of software that generates actionable information from electronic patient records
Feb 2016	Medsphere Systems Corporation	MBS/NET, Inc.	Provides electronic health record implementation services
Feb 2016	Medical Transcription Billing Corp (MTBC)	Gulf Coast Billing, Inc.	Provides medical billing services using ICD-9 and CPT coding practices for medical claims and third-party fees
Feb 2016	IBM	Truven Holding Corp.	Provides analytics solutions and services for healthcare industry
Feb 2016	IMS Health Holdings, Inc (IMS)	Dimensions Healthcare, LLC	Provides healthcare informatics and consulting services
Expected to Close 1st Quarter 2016	Pamplona Capital	MedAssets	Provides technology-enabled products and services for healthcare providers
Jan 2016	Digital Reasoning Systems, Inc.	Shareable Ink Corporation	Mobile clinical documentation platform data capture and exchange
Jan 2016	Computer Programs & Systems Inc. (CPSI)	Healthland, Inc. and Rycon Technologies	Provides electronic health records (EHR) and clinical information management solutions

Jan 2015	iMedX, Inc.	Amphion Medical Solutions, LLC	Provides transcription, coding and technology services
Jan 2016	iMedX, Inc.	OzeScribe	Leading medical transcription & documentation service provider in Australia
Jan 2015	WellNet Healthcare Administrators, Inc.	PopSpring Wellness, LLC	Provides many services including population health management
Dec 2015	iMedX, Inc.	G2N, Inc.	Provides medical record coding and healthcare revenue cycle consulting
Dec 2015	Bollore Participations	Gemini Health LLC	Provides health information technology and electronic health records integration solutions
Oct 2015	Welltok, Inc.	Zamzee Company	Provides a comprehensive solution for population health managers
Oct 2015	Aptean, Inc.	Medworxx Solutions Inc.	Provides health information technology solutions
Sept 2015	Marlin Equity Partners	ADP AdvancedMD, Inc.	Develops cloud-based electronic health record and other software solutions
Sept 2015	HealthPort-IOD (New Mountain Capital)	ECS	Provider of on-demand access to medical records and related services
Aug 2015	HealthPort-IOD (New Mountain Capital)	Care Communications	Offers a suite of HIM services consulting, data quality and code compliance, oncology data, and clinical research
July 2015	Anthelio	Pyramid Healthcare Solutions	Provider of HIM and RCM services
June 2015	Pamplona Capital	Precyse	Provider of health information solutions
May 2015	IBM	Phytel, Inc.	Provides population health management and improvement solutions
May 2015	Welltok, Inc.	Predilytics	Healthcare information technology company which provides healthcare data analytics solutions
May 2015	HealthPort (New Mountain Capital)	IOD	Creates the nation's leading platform for secure clinical data solutions
April 2015	The SSi Group	Provider Advantage NW, Inc.	Provider of patient access management software
March 2015	TELUS Health Solutions	Medesync	Offers EMR software
March 2015	Marlin Equity Partners	AMT Solutions	Develops and integrates EMR/EHR and practice management software solutions
March 2015	Logibec Inc.	MediaMed Technologies	Provides information technology services to the healthcare sector
Feb 2015	Cerner Corp	Siemens Medical Solutions (Siemens Health Services)	Comprises a business unit that offers healthcare information technology solutions
Feb 2015	MiraMed	On Call Consulting	Offers HIM consulting, CDI, oncology data management, coding, recruiting and case management
Jan 2015	MDnetSolutions, LLC	IVR Care Transition Systems	Develops healthcare technologies and systems
Jan 2015	Athenahealth	RazorInsights	Leader in cloud-based electronic health record (EHR) and financial solutions for rural hospitals

Dec 2014	Meridian Medical Management	Origin Healthcare Solutions LLC	Provides many services including – transcription and practice management/EMR software
Dec 2014	PopHealthCare LLC	Ubiquity LLC	Develops healthcare data management, data analytics and medical informatics technology
Nov 2014	DataBank IMX, LLC	Alpha Systems	Provides data and document management solutions
Nov 2014	HealthPort Incorporated	Supna Technologies Corporation	Offers medical transcription solutions and provides technical support services
Nov 2014	iMedX, Inc.	Medwrite Inc.	Provides revenue cycle and health information management solutions
Nov 2014	MedeAnalytics	OnFocus	Maker of enterprise performance management tools
Oct 2014	New Mountain Capital, LLC	HealthPort Incorporated	Provides release of information services and audit management and tracking technology
Oct 2014	Tenet Healthcare Corp (THC)	Springfield Service Corp	Operates as a revenue cycle management and clinical documentation improvement company
Oct 2014	Booz Allen Hamilton	Epidemico, Inc.	Offers health data collection and analytics solutions and services
Sept 2014	Golden Hour Data Systems, Inc.	emsCharts Inc.	Provides electronic data collection and management solutions
Sept 2015	Best Doctors Inc.	Rise Health, Inc.	Population health management company
Aug 2014	Beecken Petty O'Keefe & Company	Kforce Healthcare Inc.	Offers staffing, consulting, outsourcing, and medical coding services for HIT, HIM and RCM
July 2014	Allscripts Healthcare Solutions (MDRX)	Oasis Medical Solutions Limited	Offers electronic patient record system
June 2014	HealthPort Incorporated	HealthTech Services and Consulting, Inc.	Provides health information processing services
May 2014	Huron Consulting Group ((HURN)	Vonlay, LLC	Provides healthcare information technology consulting services
May 2014	ZirMed Inc.	Intelligent Healthcare LLC	Offers a population health analytics platform
April 2014	Alpha II Software Solutions	Unicor Medical, Inc.	Operates as a coding software developer and publisher of ICD coding material for medical practices
March 2014	Altegra Health, inc.	Outcomes Health Information Solutions, LLC	Provides healthcare data acquisition, auditing and analytics solutions
March 2014	TELUS Health Solutions	Med Access, Inc.	Designs, builds, and supports electronic medical records systems
Jan 2014	Indegene Lifesystems Pvt. Ltd	Total Therapeutic Management	A physician focused quality improvement company which provides HIM, research and education support services
Jan 2014	Streamline Health	Unibased Systems Architecture	Provider of patient access solutions

▶ TOP ACQUIRERS

Pamplona Capital

Pamplona Capital have done two transactions in the HIM space in the last few months (MedAssets closing 1st Quarter 2016 and Precyse closed in June 2015).

iMedX, Inc.

iMedX, Inc. have done 4 transactions in the HIM sector (Amphion Medical Solutions, LLC and OzeScribe closed Jan 2016, G2N, Inc. closed Dec 2015 and Medwrite Inc. closed Nov 2014).

Marlin Equity Partners

Marlin Equity Partners have done 3 transactions in the HIM sector (Business Performance Services – Division of McKesson Corp. closed April 2016, ADP AdvanceMD, Inc. closed Sept 2015 and AMT Solutions closed March 2015).

Welltok, Inc.

Welltok, Inc. have done two transactions in the HIM sector (Zamzee Company closed Oct 2015 and Predilytics closed May 2015)

HealthPort IOD (New Mountain Capital)

HealthPort has done 5 transactions in the HIM space (ECS closed in Sept 2015, Care Communications closed in Aug 2015, IOD closed in May 2015, Supna Technologies Corporation closed in Nov 2014 and HealthTech Services and consulting closed in June 2014). The latest 4 transactions were completed after New Mountain Capital acquired HealthPort in Nov 2014.

TELUS Health Solutions

TELUS has completed 2 transactions in the HIM space (MedAccess, Inc. closed in March 2014 and Medesync closed in March 2015).

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