

PHPM 631 Online

- How is everyone doing adjusting to learning online
- Getting comfortable with zoom
- Much more use of gdrive: collaborating online
 - <https://pinformatics.org/phpm631/Participate>
- FAQ
- Syllabus addendum
- Gradings posted for assignments 3 & 4

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Questions: type into chat box on zoom

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Next week

- Read Chapter 9
- Quiz 8
- Assignment 6: due next week (3/29)
 - Outside readings for week after
 - Worksheet: group
 - Flyer: individual

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Assignment 6: Security & Privacy Worksheet and Flyer

- Readings:
 - CH 9
 - Outside readings on the website/assignment 6
- Worksheet: Group
 - Work on the activities and discuss answers and submit one per group
 - Use gdocs to work remotely together to co-edit. Submit by sharing the gdocs with Michelle and Dr. Kum (we will look at history of the document)
- Flyer : Individual
 - Based on what you learned, make a flyer individually and submit

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Outside readings

- [A] Goth G. Running on EMPI. Health information exchanges and the ONC keep trying to find the secret sauce of patient matching. Health data management. February 2014;22(2):52-52, 54, 56 passim.
- [L] FAQ & Tutorial on Privacy Preserving Interactive Record Linkage.
 - [FAQ](#)
 - [Tutorial](#)
- [A] Weitzner DJ, Abelson H, Berners-Lee T, Feigenbaum J, Hendler J, Sussman GJ. Information accountability. Communications of the ACM. 2008 Jun 1;51(6):82-7
- [A] S. Fienberg, Confidentiality, Privacy and Disclosure Limitation, Encyclopedia of Social Measurement, Academic Press, 2005, pp. 463-469.
- [A/L] Institute of Medicine (US) Committee on Health Research and the Privacy of Health Information: The HIPAA Privacy Rule Summary; Nass SJ, Levit LA, Gostin LO, editors. [Beyond the HIPAA Privacy Rule: Enhancing Privacy, Improving Health Through Research](#). Washington (DC): National Academies Press (US); 2009. Summary. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK9581/>
- [A] Arvind Narayanan and Vitaly Shmatikov. Myths and fallacies of personally identifiable information. Communications of the ACM, 53(6):24-26, 2010.
- [L] [Zero Day Attack](#)

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Standards and Codes

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Standard

- A common language to communicate
- Why?
 - interoperability, portability, and data exchange
- What
 - Agree to what are relevant elements
 - Agree to coding system
 - Sometimes, agree to classification system
- Health Care in the US
 - HIPAA, HITECH
 - Office of the National Coordinator for Health Information Technology (ONC)
 - CMS: E-prescribing & EHR Incentive Programs
 - Texas State Laws


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Standards Development Process

- Ad hoc: a group of interested people agree without a formal adoption process (medical images: DICOM)
- De facto: a vendor controls such a large segment of the market, that its product becomes the recognized norm (SQL)
- Government mandate: government mandates the adoption (HIPAA)
- Consensus: representatives from various interest groups come together to reach a formal agreement of specifications (HL7, ANSI)


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Type of Standards

- Vocabulary & Terminology Standards
 - Code sets required by HIPAA
 - ICD-10 (ICD9-CM): diagnosis & procedures (inpatient)
 - CPT: physicians procedures (outpatient)
 - NDC: national drug codes
 - CDT: dental terminology
 - HCPCS: ancillary services and procedures
 - Uniform Data Standard for patient medical record information (PMRI)
 - Systematized nomenclature of medicine - clinical terms (SNOMED CT)
 - Logical Observation identifiers Names and Codes (LOINC) laboratory subset
 - Unified Medical Language (UMLS): RxNorm
- Data Interchange Standards
 - HL7: messaging standard
 - DICOM: digital images (CT scans, MRIs)
 - NCPDP: prescription drug
 - ANSI ASC X12N: health insurance (claims)

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ICD-10-CM

- Specific improvements from ICD 9 CM & ICD 10 include:
 - the addition of information relevant to ambulatory and managed care encounters;
 - expanded injury codes;
 - the creation of combination diagnosis/symptom codes to reduce the number of codes needed to fully describe a condition;
 - the addition of sixth and seventh characters;
 - incorporation of common 4th and 5th digit subclassifications;
 - Laterality: (side of the body affected) is a new coding convention added to relevant ICD-10 codes to increase specificity
 - and greater specificity in code assignment.
- The new structure will allow further expansion than was possible with ICD-9-CM.

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Standard billing forms

- One of two standard billing forms are submitted to a third-party payer
- UB-04: uniform bill (or CMS-1450)
 - For inpatient, hospital-based outpatient, home health care, and long-term care services
 - Institutional care
- CMS-1500
 - Health care provider services (physician services)
 - non-institutional provider claims

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CPT

- Standard for physician's office, outpatient, ambulatory care coding for reimbursement purposes
- HCPCS Level 1
- Copyrighted with all rights to publication and distribution held by the AMA (American medical association)
- There are official guidelines for accurate coding, and health care facilities that do not adhere to these guidelines are liable to charges of fraudulent coding practices

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ICD



- coding of both diagnosis and procedures
- **Moved to ICD-10-CM: diagnosis**
 - Based on ICD-10: statistical classification of disease published by the WHO
 - Approved by AHA, AHIMA, CMS, NCHS
- **Moved to ICD-10-PCS: procedures (only for inpatient)**
- used for determining the diagnosis related group (DRG) into which patients are assigned.
- DRG are the basis for determining appropriate inpatient reimbursements for Medicare, Medicaid, and many other health care insurance beneficiaries
- Thus, accurate ICD coding is vital to accurate reimbursement
- <http://www.cdc.gov/nchs/icd/icd10cm.htm>

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ICD-10-CM Official Guidelines for Coding and Reporting



- A joint effort between the healthcare provider and the coder is essential to achieve **complete and accurate documentation, code assignment, and reporting** of diagnoses and procedures.
- The importance of consistent, complete documentation in the medical record cannot be overemphasized.
- Without such documentation accurate coding cannot be achieved. **The entire record should be reviewed to determine the specific reason for the encounter and the conditions treated.**
- http://www.cdc.gov/nchs/data/icd/10cmguidelines_2016_final.pdf

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ICD-10-CM Code Structure

<http://www.roadto10.org/icd-10-basics/>



- Codes with three characters are included in ICD-10-CM as the heading of a category of codes that may be further subdivided by the use of any or all of the 4th, 5th, and 6th characters.
- Digits 4-6 provide greater detail of etiology, anatomical site, and severity.
- A code using only the first three digits is to be used only if it is not further subdivided.
- A code is invalid if it has not been coded to the full number of characters required. This does not mean that all ICD-10 codes must have 7 characters. The 7th character is only used in certain chapters to provide data about the characteristic of the encounter.



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ICD-10-CM Indexes

A summary of the chapters found in the Tabular List



Chapter	Code Range	Estimated # of Codes	Description
1	A00-B99	1,056	Certain infectious and parasitic diseases
2	C00-D49	1,620	Neoplasms
3	D50-D89	238	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
4	E00-E89	675	Endocrine, nutritional and metabolic diseases
5	F01-F99	724	Mental, Behavioral and Neurodevelopmental disorders
6	G00-G99	591	Diseases of the nervous system
7	H00-H59	2,452	Diseases of the eye and adnexa
8	H60-H95	642	Diseases of the ear and mastoid process
9	I00-I99	1,254	Diseases of the circulatory system
10	J00-J99	336	Diseases of the respiratory system
11	K00-K95	706	Diseases of the digestive system
12	L00-L99	769	Diseases of the skin and subcutaneous tissue
13	M00-M99	6,339	Diseases of the musculoskeletal system and connective tissue
14	N00-N99	591	Diseases of the genitourinary system
15	O00-O9A	2,155	Pregnancy, childbirth and the puerperium
16	P00-P96	417	Certain conditions originating in the perinatal period
17	Q00-Q99	790	Congenital malformations, deformations and chromosomal abnormalities
18	R00-R99	639	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified
19	S00-T88	39,869	Injury, poisoning and certain other consequences of external causes
20	V00-Y99	6,812	External causes of morbidity
21	Z00-Z99	1,178	Factors influencing health status and contact with health services

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Example: Laterality

- laterality code descriptions include right (1), left (2), bilateral (3), or unspecified designations (0 or 9)
- CONDITIONS: CENTRAL CORNEAL ULCER AND MALIGNANT NEOPLASM OF LOWER-OUTER QUADRANT OF FEMALE BREAST

Condition: Central Corneal Ulcer

ICD-9 coding table	ICD-10 coding table
•370.03 Central corneal ulcer	<ul style="list-style-type: none"> •H16.01 1 Central corneal ulcer, right eye OR •H16.01 2 Central corneal ulcer, left eye OR •H16.01 3 Central corneal ulcer, bilateral OR •H16.01 9 Central corneal ulcer, unspecified

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