

The slide features abstract green geometric shapes. On the left, a solid green triangle points downwards. On the right, a complex arrangement of overlapping translucent green triangles and polygons creates a dynamic, layered effect. A thin, light gray line extends from the bottom right towards the center of the slide.

Career Transformation from Information Professional to Informatics Professional

Presented by Soraya Assar, MLS

About me

► Pre-MLS

- Department of Defense
 - Library Assistant, Department of Defense Public School Library, Regensburg Germany
 - Library Assistant, Army Post, Hohenfels Germany
- Maricopa County Library District
 - Library Assistant, Maricopa County Library District
 - Branch Manager, , Maricopa County Library District
- Arizona Republic
 - Library Assistant, Arizona Republic, Phoenix AZ
- Library Director, Southwest College of Naturopathic Medicine

► MLS

- Indiana University, MLS
 - Information Specialist, Charles Drew University

► Post-MLS

- Johns Hopkins University, Health Sciences Informatics Fellowship

What's my job?



- ▶ Jack of all trades - Master of none!
Soraya Assar
Senior Consultant | Health and
Compliance Programs | CGI Federal
- ▶ Primary title - Consultant
- ▶ Currently focusing on Terminology
- ▶ How did I get here??

Career change

- ▶ The new normal: 4 job changes by the time you're 32*
 - ▶ Millennials
- ▶ Average of 11.7 jobs from ages 18 to 48**
 - ▶ Baby Boomers
- ▶ Career change is the new normal of working***



*<http://money.cnn.com/2016/04/12/news/economy/millennials-change-jobs-frequently/>

** Number of Jobs Held, Labor Market Activity, and Earnings Growth among the Youngest Baby Boomers: Results from a Longitudinal Survey (<https://www.bls.gov/news.release/pdf/nlsoy.pdf>)

*** <http://www.cnbc.com/2016/04/26/career-change-is-the-new-normal-of-working.html>

Information profession



- ▶ Information professional
 - ▶ Diverse foundation with transferable skills and knowledge
 - ▶ Information management
 - ▶ Highly educated
 - ▶ Technical knowledge and expertise
 - ▶ Critical thinkers
 - ▶ Creative and innovative problem solvers
 - ▶ Effective communicators

Boundary spanner

- ▶ A current perspective on medical informatics and health sciences librarianship*
- ▶ Distance between information science and informatics has decreased:
 - ▶ Broadening of medical informatics scope
 - ▶ Blurring of distinction between different types of materials
 - ▶ Increased use of digital resources in library
- ▶ Commonalities between information science and informaticians
 - ▶ Both emphasize delivery of relevant information
 - ▶ Both emphasize information at the point of need and use
 - ▶ Both utilize complex information systems

Informaticians

► Informatics

- 1977 - application of computer technology to all fields of medicine—medical care, medical teaching, and medical research
- 1984 - theoretical and practical aspects of information processing and communication, based on knowledge and experience derived from processes in medical and health care
- 1990 - scientific field dealing with the storage, retrieval, and optimal use of biomedical information, data, and knowledge for problem solving and decision making
- 2003 - interdisciplinary science dealing with biomedical information, its structure, acquisition, and use
- 2017 - interdisciplinary study of the design, development, adoption and application of IT-based innovations in healthcare services delivery, management and planning (NLM)

Informatics Education and Training

- ▶ NLM provides majority of dollars for informatics training
 - ▶ University-based Biomedical Informatics Research Training Programs
 - ▶ <https://www.nlm.nih.gov/ep/GrantTrainInstitute.html>
 - ▶ NLM Career Development Award in Biomedical Informatics and Data Science
 - ▶ Candidates for this award must have a research or health-professional doctoral degree or equivalent
 - ▶ <https://www.nlm.nih.gov/ep/GrantInformatics.html>
 - ▶ NIH Pathway to Independence (PI) Award
 - ▶ Candidates for this award should be postdoctoral
 - ▶ <https://www.nlm.nih.gov/ep/pathway.html>
- ▶ BD2K - Big Data to Knowledge - <https://datascience.nih.gov/bd2k>
 - ▶ <https://www.nlm.nih.gov/ep/BD2KGrants.html#Courses>
 - ▶ <https://grants.nih.gov/grants/guide/rfa-files/RFA-HG-14-009.html> - Training monies
 - ▶ <https://report.nih.gov/> - find monies awarded
- ▶ Most universities provide informatics training
 - ▶ Search biomedical informatics, health sciences informatics, medical informatics, biomedical informatics, pharmacy informatics
 - ▶ Accredited informatics programs
 - ▶ <https://www.amia.org/programs/academic-forum/clinical-informatics-fellowships>
 - ▶ Listing of biomedical, health and nursing informatics programs
 - ▶ <https://www.amia.org/education/programs-and-courses>
- ▶ 10X10 AMIA Informatics courses
 - ▶ <https://www.amia.org/education/10x10-courses>

Informatics Community

- ▶ AMIA - American Medical Informatics Association - academic focus
 - ▶ <https://www.amia.org/>
 - ▶ Consider attending annual conference in DC this year!
- ▶ International Medical Informatics Association
 - ▶ <http://imia-medinfo.org/wp/>
 - ▶ Interesting, but may not have the focus for resources to transition or augment career
- ▶ HIMSS - Healthcare Information and Management Systems Society - vendor focus
 - ▶ <http://www.himss.org/>
 - ▶ Amazing conference - great for networking, job searching, education
 - ▶ Pharmacy Informatics
 - ▶ <http://www.himss.org/library/pharmacy-informatics>
 - ▶ <http://www.ashp.org/informatics>
- ▶ AHIMA - American Health Information Management Association
 - ▶ <http://www.ahima.org/>
 - ▶ THE place for Health Information Management
 - ▶ Very involved in informatics, data analytics - Not just about coding!
 - ▶ Only take a AHIMA-certified class for any Health Information Management courses

Exciting and fulfilling career

- ▶ Attended Johns Hopkins University Health Sciences Informatics Fellowship program
 - ▶ First cohort
- ▶ Began informatics career working for EHR vendor
- ▶ Entered consulting world with IBM
 - ▶ Worked domestically and internationally implementing EHR systems and consulting, sales, pre-sales
- ▶ Independent consultant
 - ▶ Qatar - Created RFP for country-wide EHR
 - ▶ Reviewed data conversion plan from single vendor to best in breed systems for community hospital
 - ▶ Provided terminology expertise for start up for Personal Health Records
- ▶ Entered terminology world
 - ▶ Sales, mapping, manage terminology services, building web portals

Career development

- ▶ Like sharks - need for continual movement
- ▶ Build on what you know
 - ▶ Drug development
 - ▶ Regulatory changes in SPL, FDA, MTM
 - ▶ Information management
 - ▶ Curate, catalog, and categorize
 - ▶ Terminology gaining use in drug development and medical device use and development
 - ▶ Consider medical coding classes
 - ▶ Technical skills
 - ▶ Get some or build some!
 - ▶ Databases - SQL
 - ▶ Brush up Excel skills - used extensively for things which better tools would provide!



Opportunities - Terminology

- ▶ Terminology - natural fit for librarians - significant use of classification systems
- ▶ Meaningful Use (MU)
 - ▶ <https://www.healthit.gov/providers-professionals/meaningful-use-definition-objectives>
 - ▶ Stimulus package to improve the use of Electronic Health Records (EHR)
 - ▶ Focus on demonstrating EHRs have been used to increase use and interoperability of patient health data
 - ▶ Key to this use was introducing vocabulary standards and standardized transmission methods
 - ▶ Standardized data has increased and optimized use of patient data for drug discovery, e-prescribing, clinical trials, drug packaging (SPL), drug surveillance and safety
 - ▶ Structured Product Labeling (SPL) - HL7 standard
 - ▶ <https://www.fda.gov/ForIndustry/DataStandards/StructuredProductLabeling/ucm2005542.htm>
 - ▶ https://www.nlm.nih.gov/mesh/presentations/Smith_SPL_Overview.pptx
 - ▶ <https://dailymed.nlm.nih.gov/dailymed/index.cfm>
 - ▶ Mapping and managing data and terminologies
 - ▶ FDA works with National Cancer Institute (NCI) to use terminology
 - ▶ <https://www.cancer.gov/research/resources/terminology/fda>

Opportunities - Terminology

- ▶ Vocabularies commonly used in health sciences - pharmacy industry benefits
 - ▶ http://www.phdsc.org/standards/health-information/D_Standards.asp
 - ▶ RxNorm - normalizes names for clinical drugs and links its names to many of the drug vocabularies commonly used in pharmacy management and drug interaction software
 - ▶ <https://www.nlm.nih.gov/research/umls/rxnorm/>
 - ▶ SNOMED CT - Broad domain spanning standardized terminology used in healthcare
 - ▶ <http://www.snomed.org/>
 - ▶ Used in problem list
 - ▶ Used in HL7 messages
 - ▶ Broad use for medical conditions and procedures
 - ▶ LOINC - Covers laboratory, imaging, and clinical observations
 - ▶ Logical Observation Identifiers Names and Codes
 - ▶ <https://loinc.org/>
 - ▶ Used to standardized lab tests and diagnostic imaging names
 - ▶ Used in HL7 messages
 - ▶ ICD-10-CM/PCS - Covers diagnosis and procedures
 - ▶ International Classification of Disease - Clinical Modification / Procedure Coding System
 - ▶ Used in reimbursement and billing - Reliable discharge diagnosis and procedures
 - ▶ <https://www.cms.gov/Medicare/Coding/ICD10/Frequently-Asked-Questions.html>

Opportunities - Terminology - Resources

- ▶ Many vocabularies have open meetings
- ▶ Attend freely / Learn free!!!
- ▶ LOINC
 - ▶ Clinical LOINC meetings twice yearly Feb/March and Aug/Sept
 - ▶ Lab LOINC meetings twice yearly June and December
 - ▶ Listen or attend for free - Good introduction to LOINC and its use in both sessions
- ▶ ICD-10 Coordination and Maintenance Committee Meetings
 - ▶ <https://www.cms.gov/Medicare/Coding/ICD10/ICD-10-Coordination-and-Maintenance-Committee-Meetings.html>
 - ▶ Listen for free - may be difficult without context but opportunity to learn how sausage is made
 - ▶ <https://www.cms.gov/Medicare/Coding/ICD10/CMS-Sponsored-ICD-10-Teleconferences.html>
 - ▶ Free and easy to dip your toes in to learn about ICD-10-CM/PCS

Opportunities - Terminology - Resources

▶ SNOMED CT

- ▶ <http://www.snomed.org/participate>
- ▶ From New Zealand but easier to use than SNOMED site!
 - ▶ <https://www.health.govt.nz/nz-health-statistics/classification-and-terminology/new-zealand-snomed-ct-national-release-centre/snomed-ct-training-and-resources>
 - ▶ Take advantage of ELearning page!

▶ HL7 - Very important transmission standard - uses terminologies in messages

- ▶ <http://www.hl7.org/index.cfm>
- ▶ Wonderful welcoming community!
- ▶ Listen to committee calls for free! Join for free!
- ▶ Meetings have cost, but they have education
- ▶ Site is difficult to navigate
 - ▶ <http://www.hl7.org/Special/committees/Vocab/index.cfm>

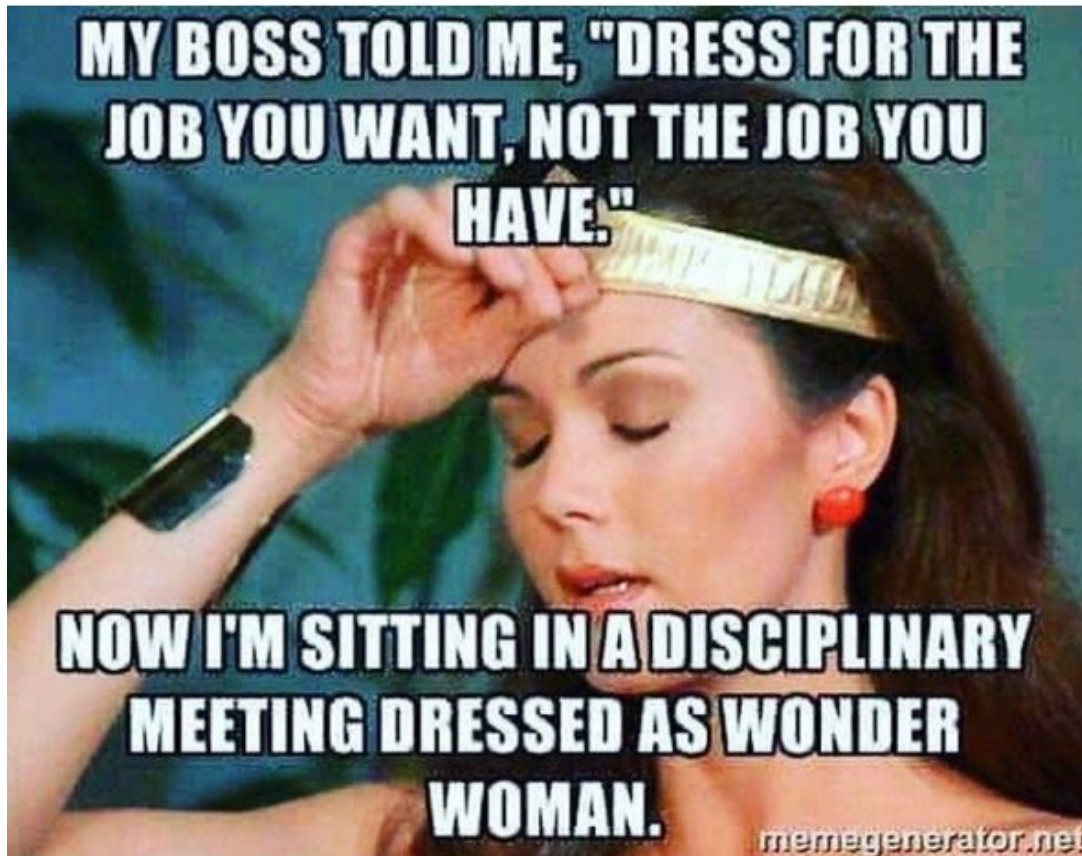
▶ Books

- ▶ Healthcare Code Sets, Clinical Terminologies, and Classification Systems - 2nd Edition
 - ▶ ISBN-13: 978-1584262251
 - ▶ ISBN-10: 1584262257
- ▶ Healthcare Code Sets, Clinical Terminologies, and Classification Systems - 3rd Edition
 - ▶ ISBN-13: 978-1584261049
 - ▶ ISBN-10: 1584261048

Opportunities - Terminology - Resources

- ▶ Major vendors
 - ▶ *Health Language - <http://www.healthlanguage.com/>
 - ▶ *Clinical Architecture - <http://clinicalarchitecture.com/>
 - ▶ Intelligent Medical Objects - <https://www.e-imo.com/>
 - ▶ Apelon - <http://www.apelon.com/>
 - ▶ 3M - <https://www.hddaccess.com/>
- ▶ Knowledge Management and Taxonomy
 - ▶ <https://fireoakstrategies.com/>
- ▶ CDISC - heavily used in research
 - ▶ <https://www.cdisc.org/>
 - ▶ <https://www.cdisc.org/about/jobs-board>

One way to transition

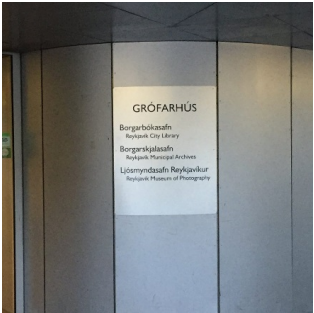


Tips for transition

- ▶ What might interest you?
 - ▶ Listen to phone calls
 - ▶ Consider attending a LOINC meeting
 - ▶ Explore AHIMA and AMIA
- ▶ Are there opportunities to become involved in informatics/terminology work in your present position?
- ▶ Could you do independent work?
 - ▶ Flexjobs.com
- ▶ What level can you commit?
 - ▶ Full-time student
 - ▶ Part-time student
 - ▶ Self-study
 - ▶ Consider medical coding classes
- ▶ Become comfortable with other titles
 - ▶ Librarian is not an asset in most cases
- ▶ Be flexible
 - ▶ Travel
 - ▶ Relocate
 - ▶ Remote work
- ▶ Look for adventures!

Tips for transition

- ▶ Forced change
 - ▶ Downsizing
 - ▶ Re-organization
- ▶ Considered change
 - ▶ Don't make a permanent decision for a temporary emotion!
 - ▶ Consider blogging, speaking, more involvement in organizations
- ▶ Consider a career or life coach - do your homework!
 - ▶ Mantis
 - ▶ mantiscounselingandcoaching.com/
- ▶ Resume review - photographs - Taxes!
 - ▶ www.linkedin.com/profinder
 - ▶ Monster





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