GENETIC COUNSELING

IS IT A CAREER FOR YOU?

Judith L Miller, MS, LGC
April 8, 2014
What is Genetic Counseling?

- Helping individuals and families understand how genetics affects their health and lives. Most clients seek counseling due to a particular concern.

Who are Genetic Counselors?

- Health professionals with specialized graduate degrees and expertise in the areas of medical genetics and counseling.
What do Genetic Counselors do?

- Take family histories
- Analyze inheritance patterns
- Order and interpret **genetic tests**
- Provide information and support:
  - Birth defects
  - Known genetic disorders
  - Undiagnosed conditions
  - **Risks** for specific condition
  - Available options
GC: Experts in genetic testing

- Determine if genetic test is available and appropriate
- Order genetic tests (in IL, some states)
- Genetic testing can be complicated
- New genetic tests available every day
- **Interpret genetic test results**
Most Genetic Counselors provide Clinical Services

- Job descriptions and autonomy in position vary widely
- Role of genetic services typically not well understood
- Ancillary health professional
Genetics Professionals

- **Medical or Clinical Geneticist**
  - MD, Primary care residency plus fellowship or residency in Medical Genetics (Medical Genetics is a Medical Specialty)
  - Diagnose, treat and test

- **PhD Geneticist (or MS or BS)**
  - Research
  - May not diagnose, treat or test patients

- **Genetic Counselor**
  - MS degree
  - Work with patients, serve as consultant
  - May order genetic tests, but not diagnose or treat
Genetic Counselors also

- Help families cope and make decisions
- Serve as patient advocates
- Provide education to patients:
  - prevention
  - risk reduction strategies
- Serve as educators and as a resource for
  - health care professionals
  - general public
CLINICAL Genetic Counseling Specialties

- **Prenatal/Preconception**
  - Work with pregnant women, couples planning a pregnancy, couples at risk for having a baby with a genetic condition, pregnancies with a birth defect

- **Pediatric**
  - Help parents, families, children, teenagers who have, or are at risk for, genetic conditions such as sickle cell disease, deafness, mental retardation, birth defects
Clinical cont.

- Adult
  - Adults with medical and genetic conditions, or a family history of adult-onset condition such as muscular degeneration, Huntington disease, Alzheimer disease

- Cancer Genetics

- Disease specific clinics
Where do Genetic Counselors practice?

- Clinics
- Hospitals
- Doctor’s practices
- Academic centers
- Independent practice
  (have increased autonomy and flexibility)
Before the Appointment...

- Determine concern of patient or referring physician
- Obtain a detailed family history
- Obtain client’s medical history, records
- Sometimes investigate medical history of family members
During the Appointments...

- Review features and genetics of indicated specific condition or conditions
- Determine risks for client: to develop condition, complications, to have affected children
- Discuss option of genetic testing including risks and benefits
- If testing performed, analyze results
- Provide education, support and options
Follow up…

- Chart note in patient’s medical record
- Letter to patient
- Letter to referring doctor, guidelines for surveillance and care
Other Career Paths for GC

- **Public Health**
  - Raise awareness of genetics
  - Improve access to services
  - Outreach services
  - Determine public policy

- **Education**
  - Teach in genetic counseling programs, selected programs in colleges and universities

- **Research**
  - Serve as liaison between research lab and patients
  - Explore unanswered questions in genetic counseling
Many more “non-traditional” jobs

- Pharmaceutical firms
  - Provide genetic expertise

- Diagnostic Laboratory / Industry
  - Make sure appropriate test ordered
  - Interpret test results
  - General resource for health professionals

- Internet Companies (Direct to Consumer counseling and testing)
  - Work with physicians and clients, typically via phone
Education

- Master’s Degree in Genetic Counseling
- Currently 32 programs in US
- Graduate programs are intense
  – Course work
  – Clinical rotations
  – Thesis
- Pass rigorous national certification exam, maintain certification
- Licensure (many states)
The Rewards

- Combination of science and working with people
- Formal education complete two years after undergraduate degree
- Privilege to work closely with people on sensitive issues, Rewards from helping people
- Intellectual challenges of the field (always learning)
- Opportunities for personal growth

The average salary for a GC in 2012:

1 to 4 years experience: $64,000
Maximum: about $118,000
(Non-clinical and salaries on coasts slightly higher)
The Downside...

- Jobs vary widely
  - Autonomy vs little autonomy
- Can be emotionally draining – “burnout”
- Rapid advances in field mean research required for every encounter
- Few defined career ladders
- Possibly, relocation
If You are Interested in Genetic Counseling…

- **Course work**
  - Molecular biology, chemistry, statistics, research
  - Consider psychology, physiology, ethics, human development

- **Gain experience working with people**
  - Volunteer—rape crisis, pregnancy counseling, Special Olympics, working with disabled
  - Be a teaching and/or research assistant
  - Take on leadership roles

- **Obtain recommendations**
  - From faculty and community supervisors

With permission: http://www.tcc.fl.edu/dept/studentserv/images/counseling.jpg
If You are Interested in Genetic Counseling…

- Read about
  - Human genome research
  - Ethical dilemmas
  - Genetic conditions
  - Living with disabilities

- Obtain information
  - National Society of Genetic Counselors
    (web site)

- Investigate
  - Genetic counseling internships
  - Interview genetic counselors
Genetic Counseling Helps Reduce Health Disparities

- Genetic counselors from a variety of ethnic, racial and cultural backgrounds are needed to serve all people of all backgrounds.
- Genetic counselors strive to be sensitive to diverse personal, family, and community values.
- There is a special need to provide genetic counseling services to African-American, Hispanic and other underserved communities.

With Permission: http://sitemaker.umich.edu/healthdisparities/files/introhands.jpg