Genetics

-Inheritance is due to a gene/particle that codes characteristics- can’t study genes in isolation.

-When the human genome project began it cost an exorbitant amount of money, now due to the increase in technology and availability today it costs $1000. This is within the realm of what we pay for typical medical procedures. At the ten year anniversary in 2010, people were outraged because the project was supposed to map out everything regarding genetics but what was discovered was that it was more complex that originally thought.

Precision Medicine Initiative- already familiar with the idea of this- think blood type!

-Most drugs only work for 30-50% of the people who use them

-Idea of this initiative is that we can identify genetic variance-> filter the variances-> assess evidence for variant to determine clinical impact.

\*Used with rare genetic conditions->diagnosis is hard, small number of cases, clear cut benefits to the population. Also used in pharmacogenomics with warfarin and thiopurines

Translational Medicine- way in which we take the material we learn from the bench (research labs) to the bedside (clinical research) to the community to improve health.