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Using Analytics to Improve Personal and Population Health

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Health data can be a powerful tool in improving both personal and population health

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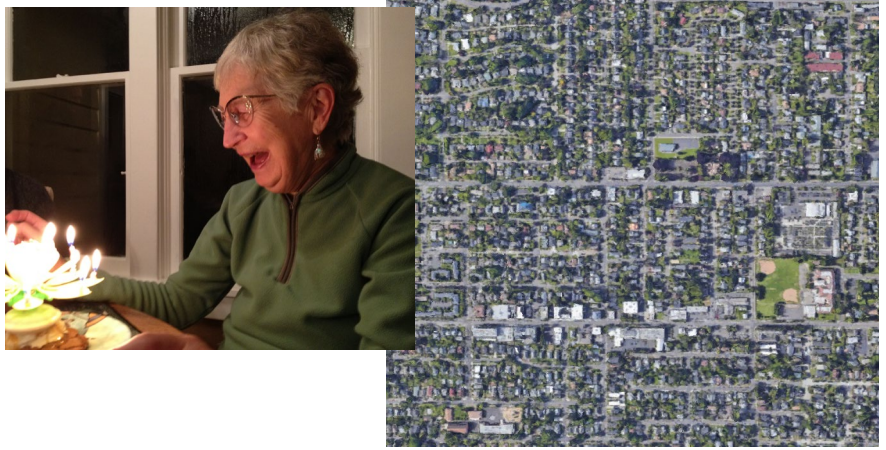
Data governance determines what data can be used for, and by whom



- Know your use case(s)
  - Is it legal?
  - Is it ethical?
  - Is it a good idea?
  - How do we know? Who decides?
- Convening (bringing partners together to solve a problem)
- Governance model

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Data quality determines whether results can be trusted

- Confirm data quality before beginning analysis
- Acceptable data quality depends on the use case(s)
  - Personal health
  - Population health
- Confirming data quality
  - Timely?
  - Complete?
  - Accurate?

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Data and analytics can help improve health equity

- Population health analytics help us ask the right questions to provide better personal health care
- Data quality
  - Who is represented / who is missing?
  - Include complete and reliable race and ethnicity data
- Responsible analytics
  - Address and prevent algorithmic bias in machine learning, artificial intelligence, and other deep learning approaches
- Role of community information exchange?

Combining data sources can increase the power of the results

- Personal health
- Population health
- Claims, clinical, and SDOH data
- Linkage / identity resolution
- Linking multiple data sources are critical to understand a fuller story

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The role of descriptive, predictive, and prescriptive analytics

- Descriptive
  - What's already happened
- Predictive
  - What could happen
- Prescriptive
  - What should happen

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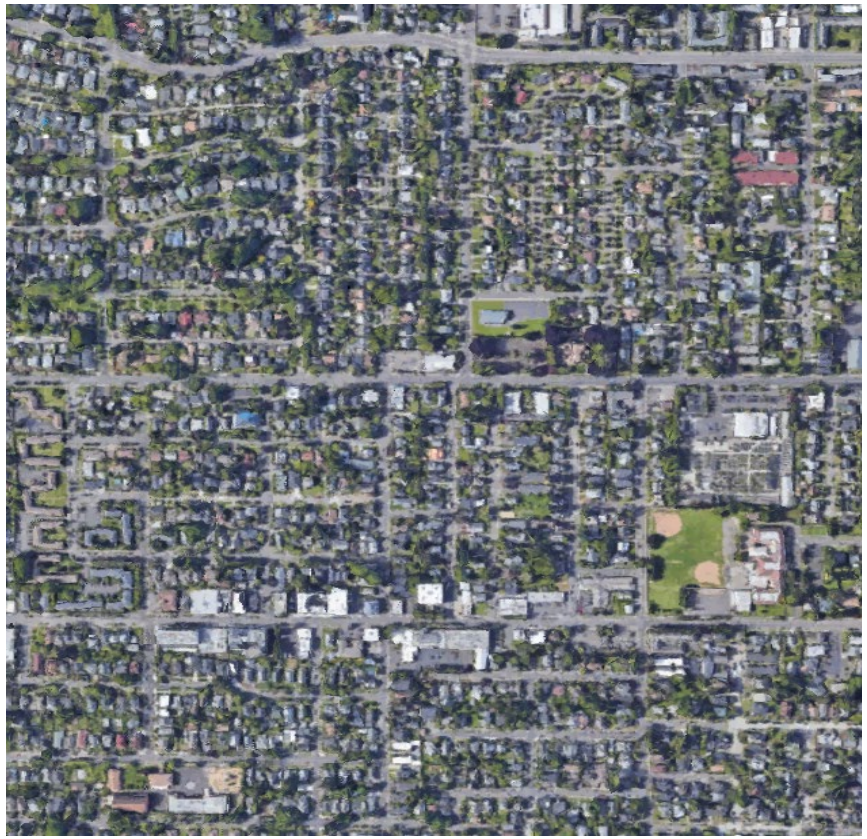
Descriptive Analytics

- Population-based, historical data used to describe what's already happened within a population
- Useful for:
  - Performance measures
  - Research
  - Program evaluation



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Predictive Analytics

- Population-based, historical data used to predict what could happen for an individual or a population
- Useful for:
  - Risk scores / risk models
  - Clinical decision support

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Prescriptive Analytics

- Population-based, historical data used to predict what should happen for an individual
- Useful for:
  - Clinical decision support

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Thank you!

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