

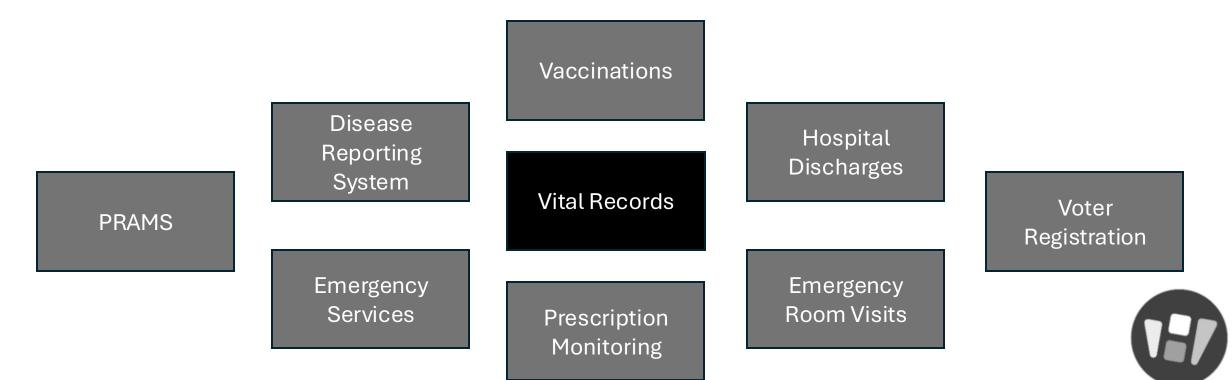
## Vital Information Person-Event Repository

Washington State Organizate of HEALTH

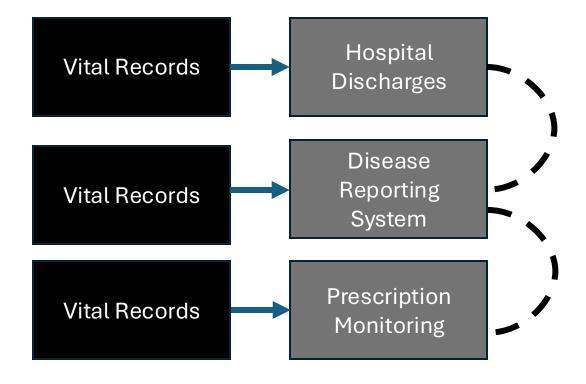
Sean Coffinger, Health Statistics Manager, WA State DOH

### Vital Information Person-Event Repository

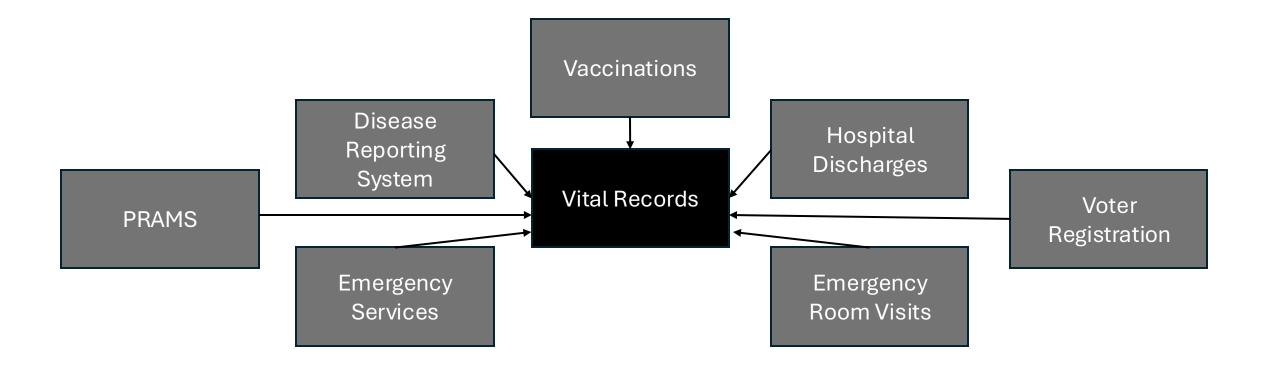
- What is VIPER?
  - VIPER is a master person index (MPI) that leverages a vital records (VR)-based "spine"
- What is an MPI?
  - An MPI is an individual entity-level (person) data structure that links multiple data systems
  - VR data is the root of identity, making it a perfect MPI spine candidate



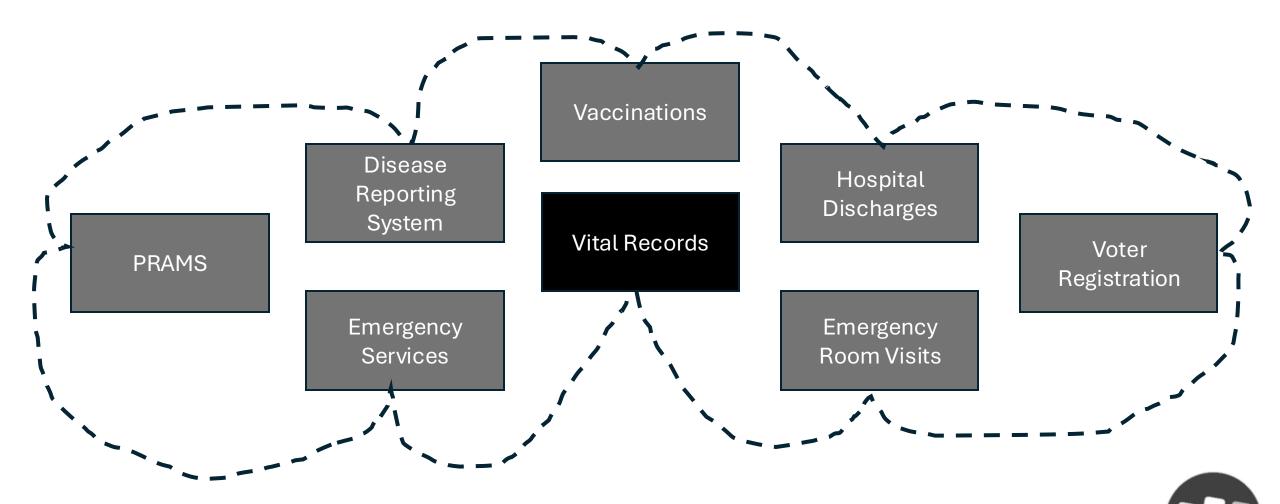
• Before MPI...

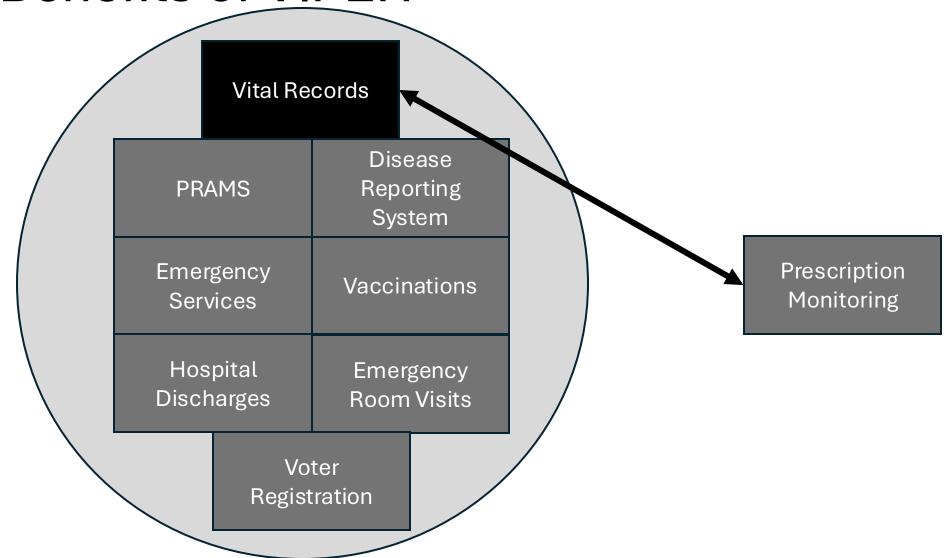














PRAMS

Disease Reporting System

Emergency Services Vaccinations

Vital Records

Prescription Monitoring

Hospital Discharges

Emergency Room Visits Voter Registration



MPI ID: 1221554 VRID: 5698462 IMZID: 512462 PRAMSID: 3684151 PMPID: 621312 CHARSID: 889524

Married to

MPI ID: 1235654 VRID: 564984632 IMZID: 56498462 PRAMSID: NA PMPID: 6549812 CHARSID: 8798454

MPI ID: 14154 Divorced from VRID: 5424632

IMZID: 56498462 PRAMSID: 358951 PMPID: 6549812 CHARSID: 8425854

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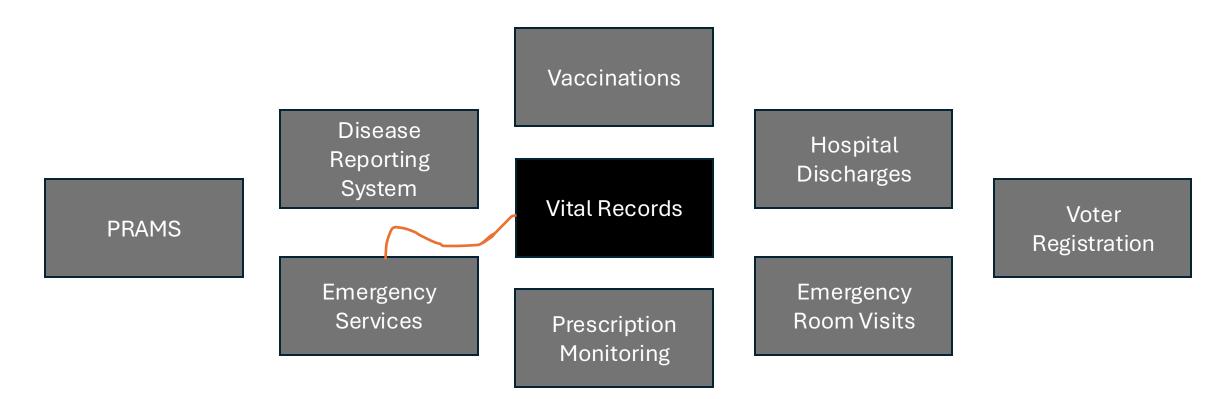
MPI ID: 1235654 VRID: 564984632 IMZID: 56498462 PRAMSID: NA PMPID: 6549812 CHARSID: 8798454

MPI ID: 129864 VRID: 86741632 IMZID: 789562 PRAMSID: NA PMPID: 6549812 CHARSID: 8888454

MPI ID: 12147654 VRID: 56485632 IMZID: 564932 PRAMSID: 3624151 PMPID: 6549812 CHARSID: 8724454

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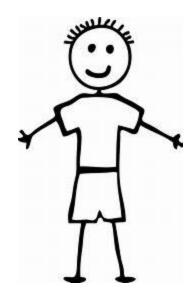


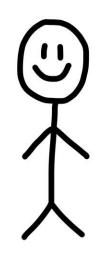


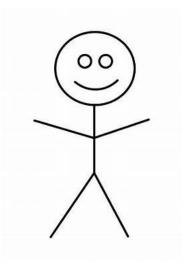
John Smith 6/9/1992

Jon David Smith 6/9/1992

Dave Smith 9/6/1992





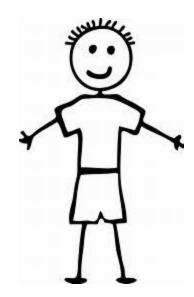


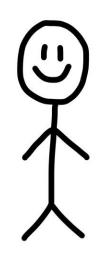


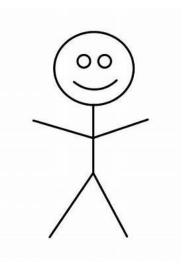
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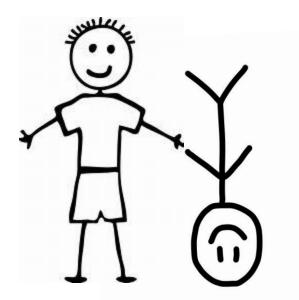


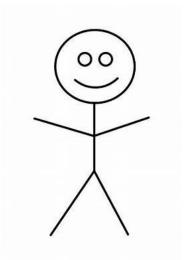


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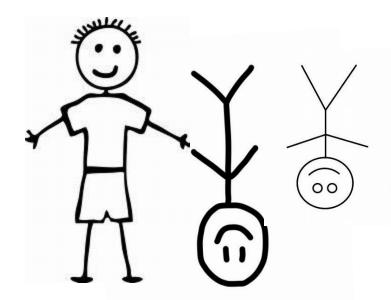




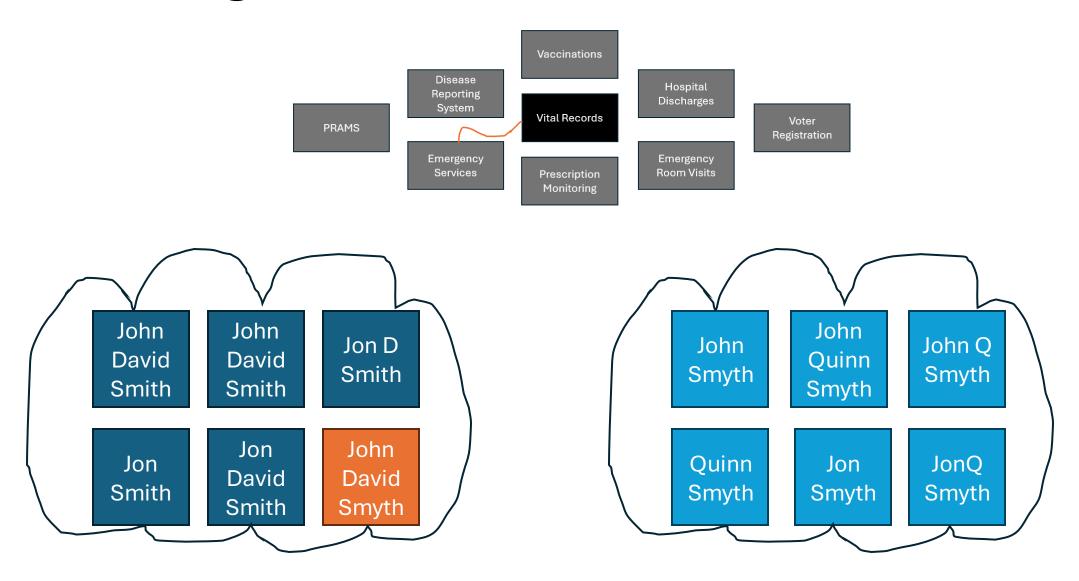
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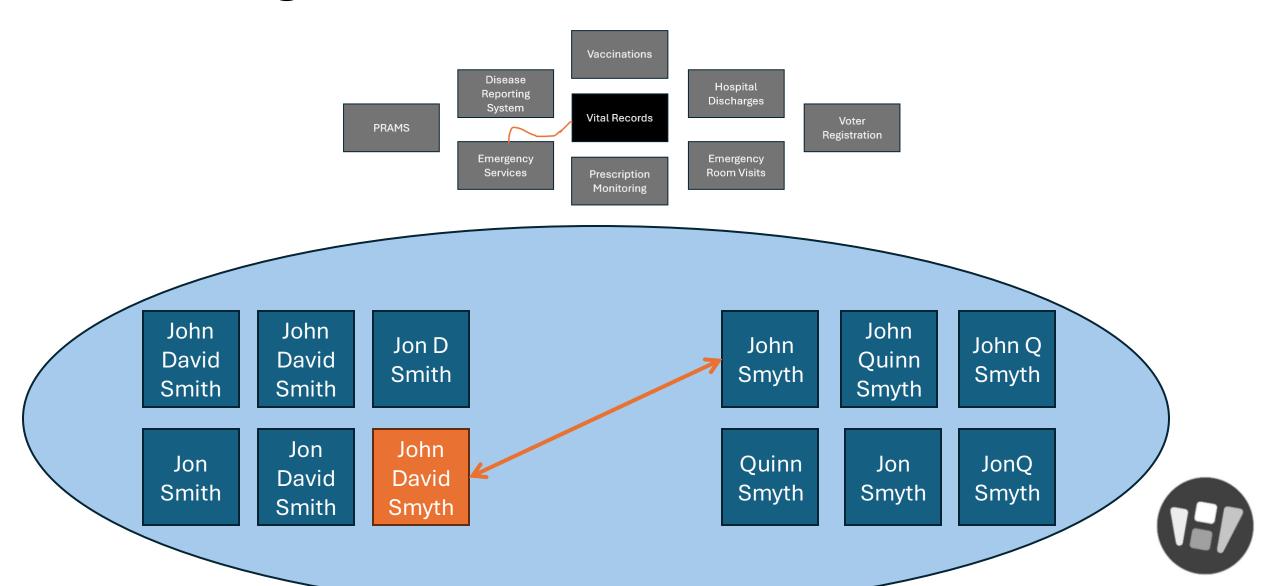
Dave Smith 9/6/1992



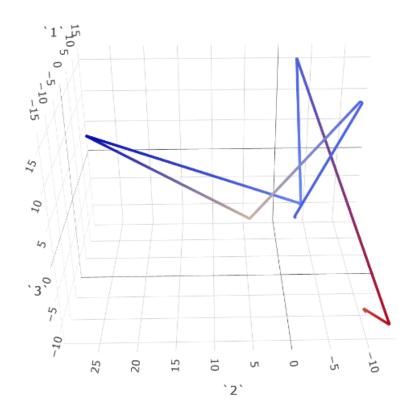








- Large QA Requirement
  - Novel QA Techniques like
    Hyperdimensional Cluster Detection
  - Cluster separation and link weight considerations (data quality)
  - The cyclical nature of updates can compound errors at an alarming rate





### Takeaways

- VIPER provides a robust multi-system integration model that allows for...
  - Novel analytical usages and relational models
  - Data imputation and supplementation
  - More robust linkages with tons of bonus variables
  - Consolidated project to enhance collaborative efforts and standardization of novel methodological development
  - Expedited data sharing practices
- MPIs strengths also make them difficult to build
  - Cyclical nature and high QA requirements

