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Conference

Data Culture: Using Data to Drive Decisions

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Introduction

- Division of Data Management & Analytics
  - Supports National Patient Information Reporting System (NPIRS)

- Provides a centralized data repository

- Enables national reporting
  - COVID
  - Workload
  - User Population

- Supports internal and external stakeholders
  - OPHS, ORAP, OCPS
  - 9 of 12 program offices
  - Congress, OMB, Other federal agencies (CDC, CMS, HHS)

Agenda

- Importance of data
  - Challenges
  - Timeline of data perception and usage
  - Support of IHS goals and future

- Data culture
  - Definition
  - Benefits
  - Components

Importance of Data

- **Assists with decision-making**
  - Enables well-informed, data-driven decisions

- **Helps to achieve goals**
  - Sets expectations

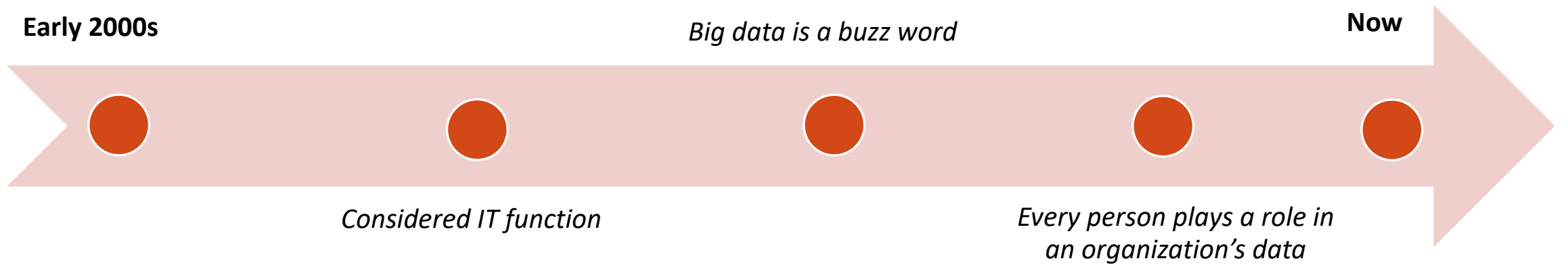- **Postures agency to meet customer needs**
  - Promotes agility

Data Challenges

- Data overload

- Data is spread across divisions

- No consolidated data system

- Minimal knowledge of data

Data: Then and Now

Early 2000s

Big data is a buzz word

Now

Considered IT function

Every person plays a role in an organization's data

Supporting IHS Goals with Data

- Provide optimal care
  - Understand how messaging may be received by a population

- Promote excellence throughout the agency
  - Identify training needs

- Engage in continual process improvement
  - Share best practices

Data Culture

Data Culture

- 2 features that define data culture

  ✓ Expectation to use data when making decisions

  ✓ People feel confident with data

Establishing a Data Culture

- Shift in organization's mindset

- Support from all levels in the organization

- Align with organization's priorities and objectives

- Adoption of data management practices
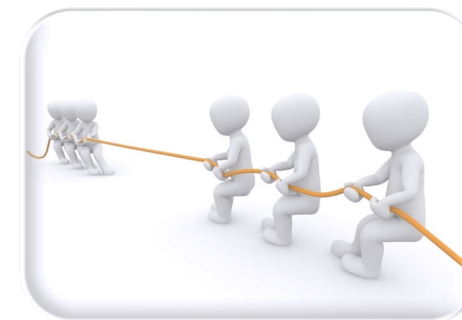
- Data skills development

Benefits of a Data Culture
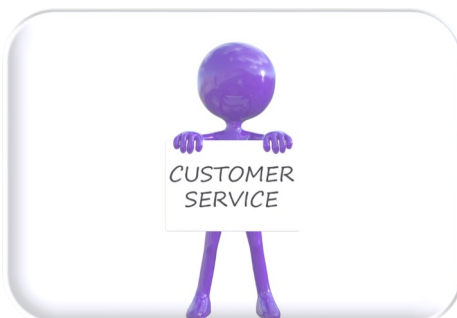
Meet or exceed goals

Encourages collaboration and involvement
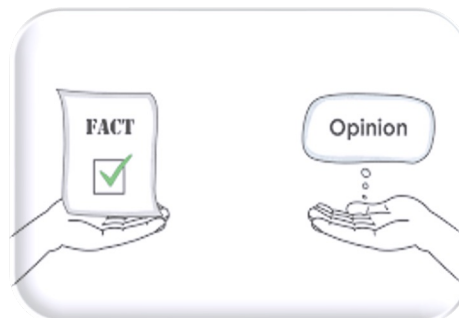
Achieve faster success

Maintain competitive edge

Better able to support customer needs
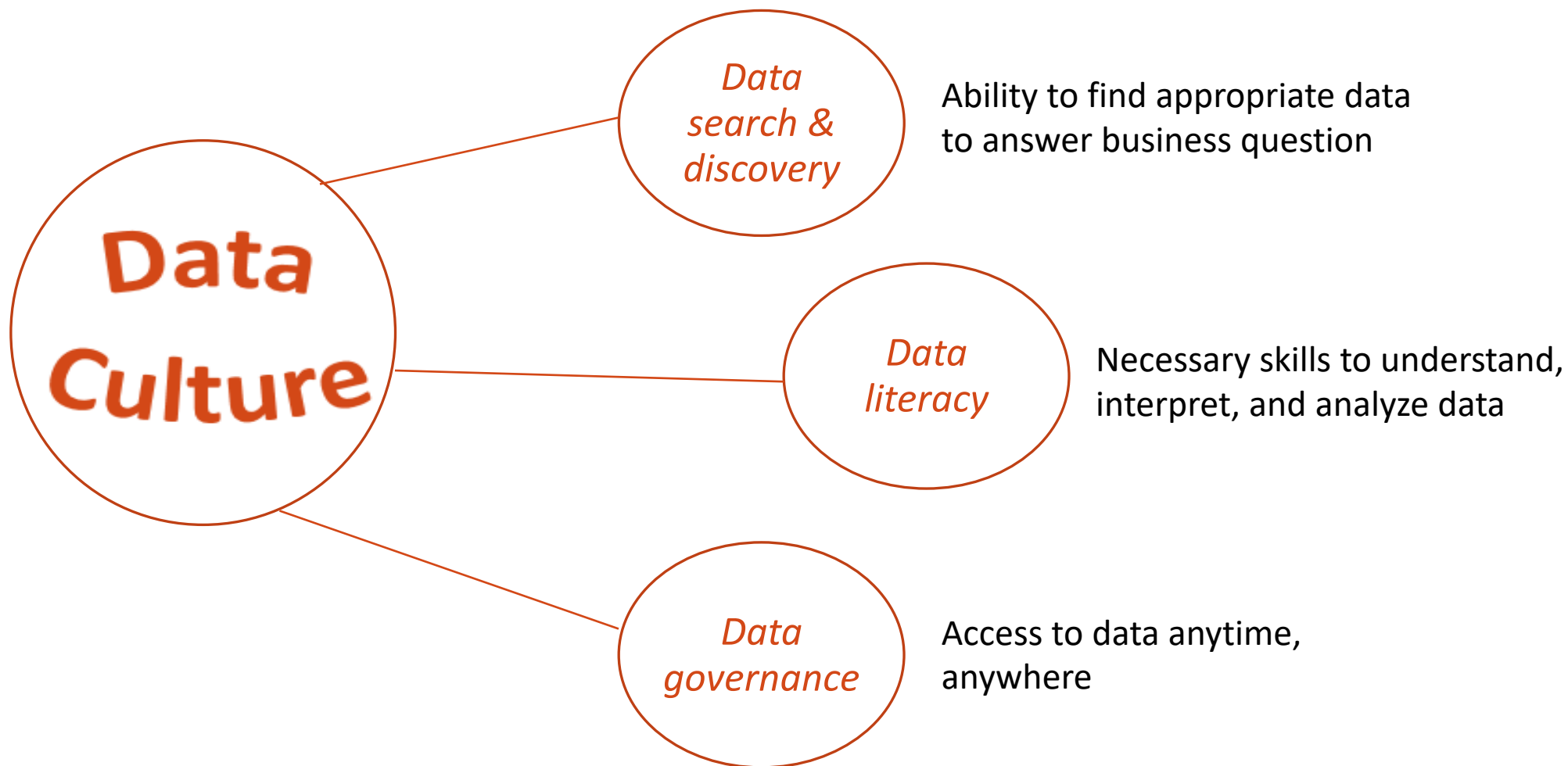
Ensures data is used as a basis for fact

Enables self-service business intelligence

Pillars of Data Culture

Data search & discovery — Ability to find appropriate data to answer business question

Data literacy — Necessary skills to understand, interpret, and analyze data

Data governance — Access to data anytime, anywhere

1st Pillar: Data Search & Discovery

Data Search & Discovery

- Search is finding data you know/assume exists; discovery is browsing data that may be of use

- 1st step in answering a business question

- Self-service exploration

Enabling Data Search & Discovery

- Understand all data sources

- Establish data management processes
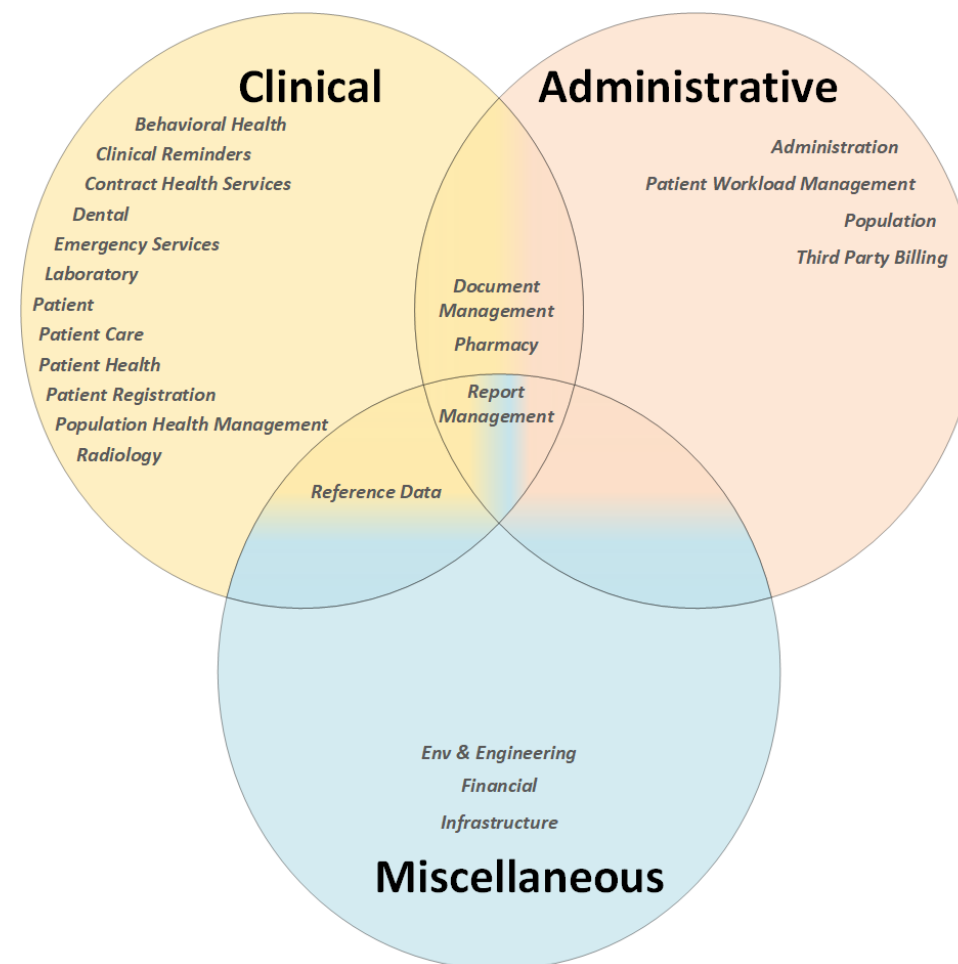
- Address data quality issues

Understand all data sources

Data Warehouse

- National Data Warehouse (NDW) is maintained by NPIRS

- Stores data received from various data sources
  - Electronic Health Record (EHR) systems
  - External agencies

- Contains wide array of data
  - Clinical
  - Administrative
  - Financial

Clinical
Behavioral Health
Clinical Reminders
Contract Health Services
Dental
Emergency Services
Laboratory
Patient
Patient Care
Patient Health
Patient Registration
Population Health Management
Radiology

Administrative
Administration
Patient Workload Management
Population
Third Party Billing

Document Management
Pharmacy

Report Management

Reference Data

Miscellaneous
Env & Engineering
Financial
Infrastructure

Metadata Management

- Metadata is data about data

- Metadata management ensures users can locate data elements

- Provides consolidated repository of information
  - Reduces project delivery times

Building a Data Catalog

- Defines business terms

- Contains various elements to help with understanding data
  - Description
  - Possible Values
  - Format

- Establishes relationships between terms

- Contains definitions for Extract-Transform-Load (ETL) processes

- Depicts lineage between technical and business assets
  - Impact analysis

Data Dictionary versus Business Glossary

DATA DICTIONARY

- Technical focus

- List of table and fields

- Identifies where data is located

BUSINESS GLOSSARY

- Business focus

- List of business terms and definitions

- Identifies what the data is

Establish data management processes

Understanding Data Management

- Processes involved in the collection, storage, and usage of data

- Ensures data is viewed as an organizational asset

- Leads and/or supports various efforts
  - Data warehouse
  - Data architecture
  - Data governance
  - Security management
  - Metadata management
  - Data model
  - Data quality management

Data Security

- Prevention of
  - Unauthorized access
  - Data loss
  - Data corruption

- Keep sensitive data safe

Data Business Rules

- Define execution of day-to-day data activities
  - Instructions
  - Constraints

- Allow for consistent outcomes

- Set organization-wide expectations

- Minimizes reliance on institutional knowledge

2nd Pillar: Data Literacy

Data Literacy

- Increase awareness of the value of data

- Transform the way data is viewed and used

- Provide training to develop data skillsets

Supporting Data Culture with Data Literacy

- Ensure everyone knows he/she plays a role in data
  - Data entry
  - Data analysis
  - Data governance

- Expand knowledge of data
  - Experts should share their knowledge
  - Encourage collaboration when discussing data

3rd Pillar: Data Governance

Data Governance

- Framework comprised of policies defining rules, standards, practices, and norms
  - Ensure a consistent and relevant experience

- Guides operations supporting data as an asset
  - Difficult to realize value of data without governance

- Policy adherence maintained by data stewards, data custodians, and executive sponsors

Benefits of Data Governance

- Collaboration between technical and non-technical users

- Data becomes understandable

- Accessibility and ownership is established

- Streamlines analysis

Data Governance in IHS

- Data quality rules
  - Review exports from RPMS/third-party electronic health record systems
  - Data quality mart

- Data access restrictions
  - Security tag applied throughout data
  - Web application access restricted

Conclusion

- Support at all levels

- People are key

- Provide sufficient training

- Provide a data catalog

- Encourage collaboration and sharing

Contact Information

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