UNITED

Improving Care Delivery for Diabetes

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- National Institute of Diabetes and Digestive and Kidney diseases, National Institutes of Health funded 5 year study
- Comprehensive Minnesota dataset
  - Minnesota Community Measurement (2008-2019 data)
  - Medica claims data (2008-2017)
  - Minnesota Primary Care Practice Survey (2011, 2017, 2019)
  - Interviews with 60 practices
- 586 primary care practices

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A Natural Experiment in Minnesota

- Minnesota is a leader in delivering high quality diabetes care
- Uniform collection of diabetes quality measures
- Standard set of Health Care Home services
- Opportunity- to explore this information as a ‘natural experiment’ to better understand diabetes care delivery

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Study Objective

Identify the specific services and resources associated with primary care PCMH practice redesign that result in the greatest improvement in diabetes care.

2008 Legislation

Health Care Home (HCH) legislation implemented 2010

- Data collected since 2008
- Minnesota Community Measurement (MNCM) outcomes* in diabetes
- Primary care practice seeing more than 30 patients with diabetes per year

*Outcomes available for practices that participated in MNCM.

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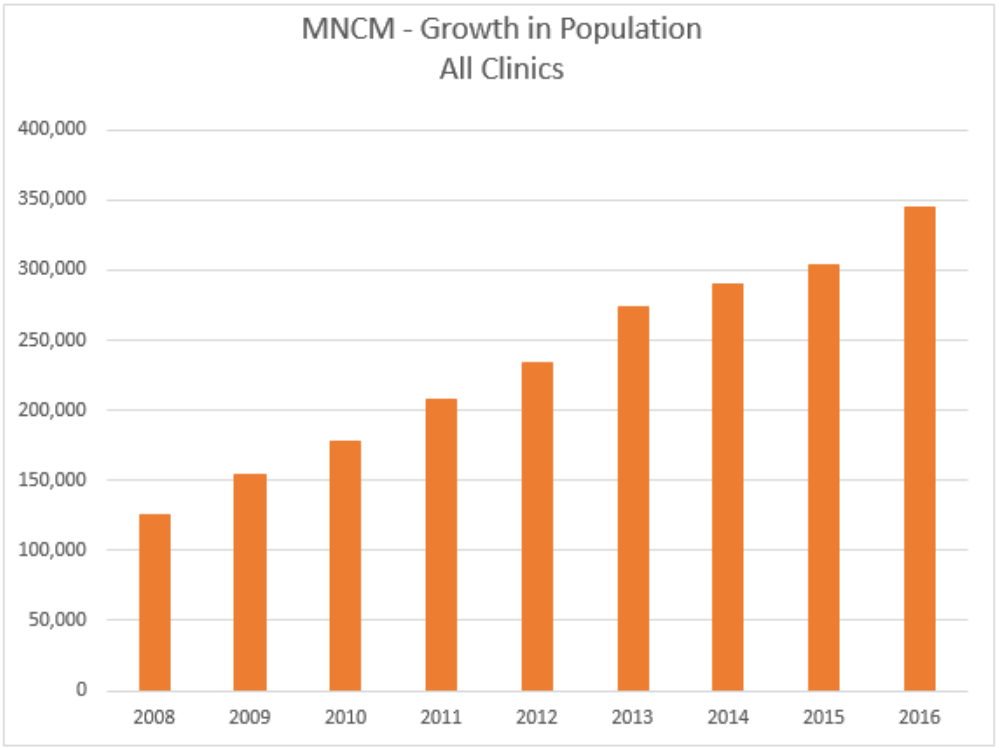
Increase in the Number of Patients with Diabetes

Number of individuals with diabetes included in the measurement is rapidly increasing



Increase is driven by:

- New clinics participating in quality measurement
- Movement from sample to full population submission
- Number of patients with diabetes increasing

MN Primary Care Practices

- 586 eligible Primary Care Practices
- Survey* of organizational services and resources
- Survey responses
  - **2011** – 111 certified HCH practices
  - **2017** – 416 certified and noncertified practices
  - **2019** – will distribute to eligible clinics in 2019

* Solberg LI, Asche SE, Pawlson LG, Scholle SH, Shih SC, Care M. Practice Systems Are Associated With High-quality Care for Diabetes. Am J Manag Care. 2008;14(2):85–93.

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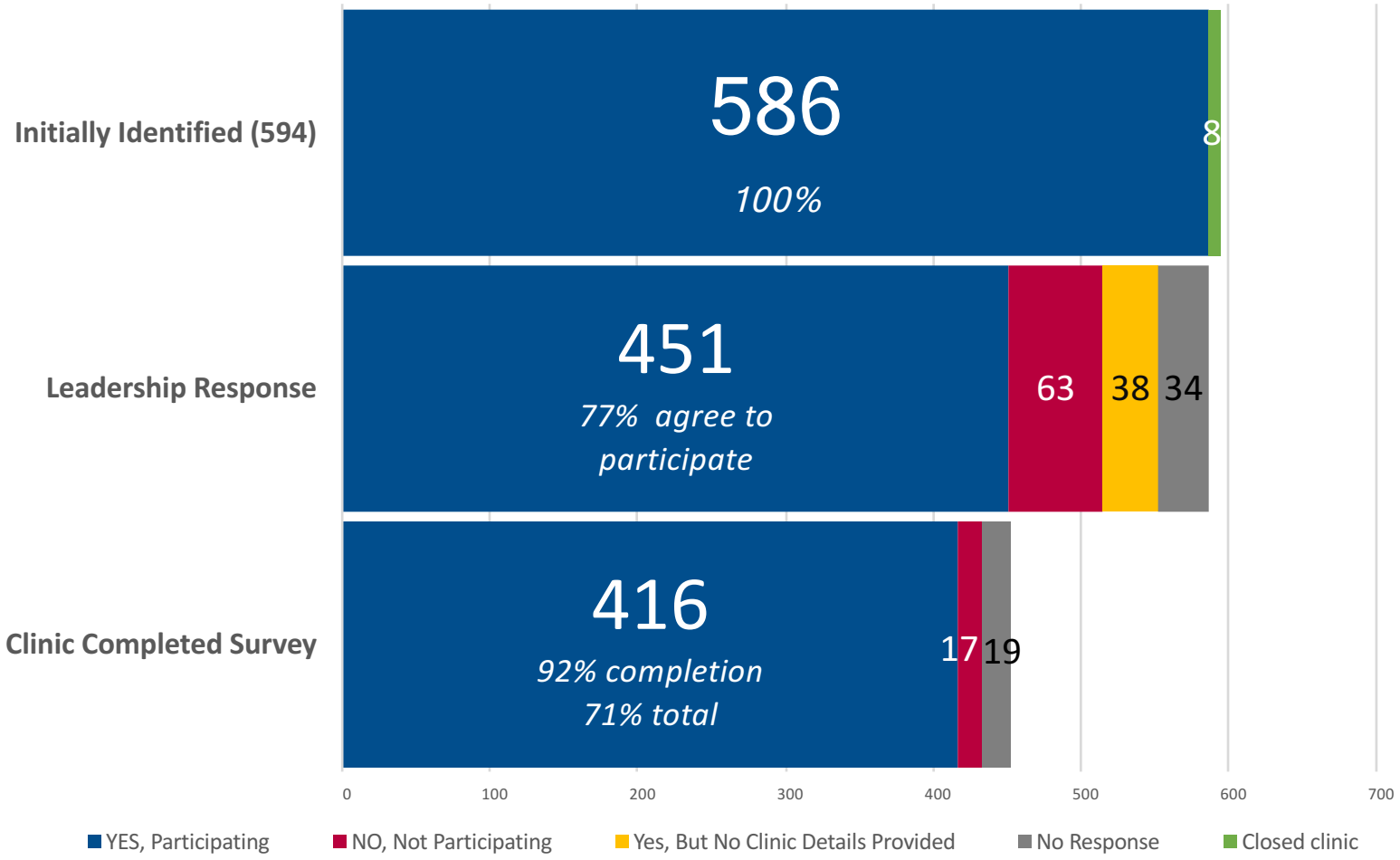
2017 Survey Report



Survey Focus Areas

- Information and tracking systems
- Chronic disease management
- Patient self-management
- Care planning and shared decision making
- Performance monitoring and quality improvement
- Managing high risk patients and hospitalization

PPCRS Domain Association with D5

Domain	Mean	P-value
Health Care Organization	91.3	<.0001
Delivery System Redesign	53.8	<.0001
Clinical Information Systems	72.9	<.0001
Decision Support	87.5	<.0001
Self Management Support	74.1	<.0001

PPC-RS: Principal Components Analysis

Variation among practices.

1. Care management
2. Performance monitoring
3. JIT reminders for preventive services
4. Reminders of services for managing chronic illnesses
5. Screening for risk factors
6. Classes/Programs – Physical activity/CV/asthma
7. Self management services
8. Classes/Programs - diabetes related
9. Lists
10. Timeliness of services
11. Test tracking
12. Classes/Programs - addiction related
13. Electronic access

2017 Comparison of Service Areas

Services more commonly seen in mature HCHs include:

- Care management
- Performance monitoring
- Reminders for preventive services
- Encouraging Self-management

Non-HCH certified practices offer comparable levels of:

- Reminders for chronic illness
- Programs for diabetes care
- Medications and problems lists
- Timeliness of services (alerts/same day appointments)
- Electronic access

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Association of Specific Services on D5

Adjusted for rurality, HCH certification, system size

1.	Laboratory test tracking	.0005
2.	System alerts about test data	.0002
3.	Diabetes registry	.0001
4.	Designated primary care team for a defined group of patients	<.0001
5.	Flow sheets for diabetes management	.0002
6.	Patient reminders for of FU visits, tests, services	.0002
7.	Previsit planning	.0004
8.	Adopted evidence based preventive services	<.0001
9.	Guideline based reminders for counseling	<.0001
10.	Systematic alcoholic/drug/dementia screening	.0001
11.	Referral programs for physical activity	.0002
12.	Written materials to support patient self management	<.0001
13.	Systematic process for shared decision making	<.0001

Limitations

Association versus Causation

- Current analysis is cross sectional
- Additional PPCRS survey in 2019
- MNCM data until 2019
- Future data will support causal inference