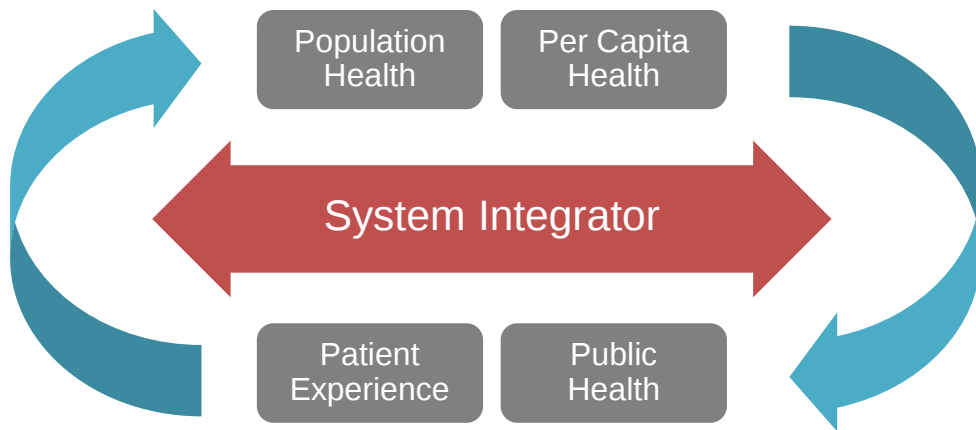


IBM Chief Medical Officer Director, Healthcare Transformation Healthcare Industry

New Mexico Academy of Family Physicians



Away from Episode of Care to Management of Population with Data



Community Health



The System Integrator

- Creates a partnership across the medical neighborhood
- Drives PCMH primary care redesign
- Offers a utility for population health and financial management

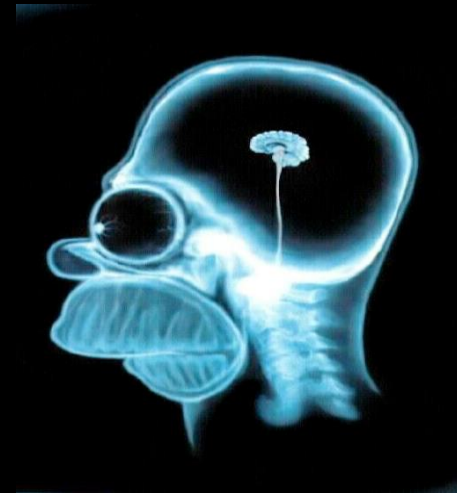
Key principles

- **Personal healer** – each patient has an ongoing personal relationship with a physician for continuous, comprehensive care
- **Whole person orientation** – physician is responsible for providing all the patient's health care needs or arranging care with other qualified professionals
- **Care is coordinated and integrated** – across all elements of the complex healthcare community
- **Quality and safety are hallmarks of the medical home** – Evidence-based medicine and clinical decision-support tools guide decision-making
- **Enhanced access to care is available** – systems such as open scheduling, expanded hours, and new communication paths between patients, their physician and practice staff
- **Payment is appropriate** – added value provided to patients who have a patient-centered medical home



Smarter Healthcare -- a no Brainer

36.3%	Drop in hospital days
32.2%	Drop in ER use
12.8%	Increase in chronic medication
-15.6%	Total cost
10.5%	Drop in inpatient specialty care costs
18.9%	Ancillary costs down
15.0%	Outpatient specialty down



July 2017, Michigan patient-centered medical home program shows statewide transformation of care YEAR 8



19%	Decrease in adult ER visits
23.4%	Decrease in adult ambulatory care sensitive inpatient stays
20.1%	Decrease in adult primary care sensitive ER visits
12.7%	Decrease in adult high-tech radiology usage
17.2%	Decrease in pediatric ER visits
22.7%	Decrease in pediatric primary-care sensitive ER visits

4,692 primary care doctors at **1,638 practices** around the state in its eight year of operation. These practices care for more than **1.4 million** BCBSM members.

<http://www.mibluesperspectives.com/2017/07/14/patient-centered-medical-homes-michigan/>

Association between elements of the PCMH model and clinical quality in the Veterans Health Admin



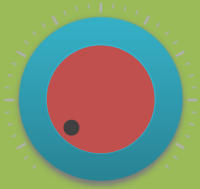
JAMA -May 1, 2017

<http://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2623525>

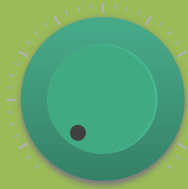


Payment reform requires more than one dial

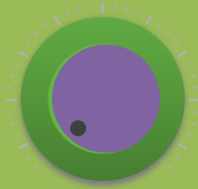
Fee for...



health



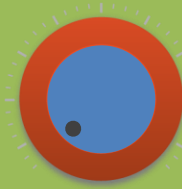
value



outcome



process



belonging



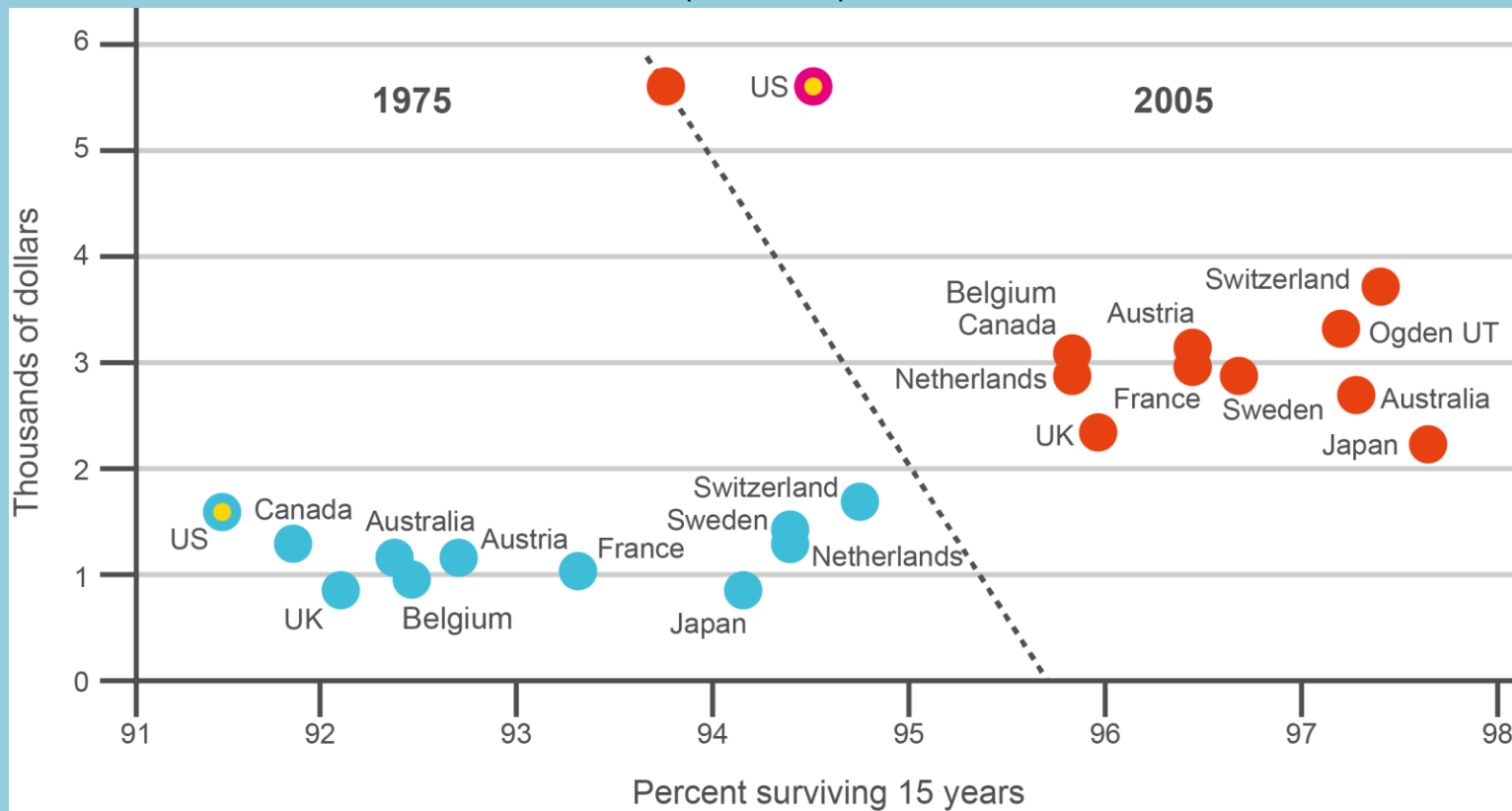
service



satisfaction

Driving factor 1: Unsustainable Cost

(USA 2012)



Driving factor 2: **Data**



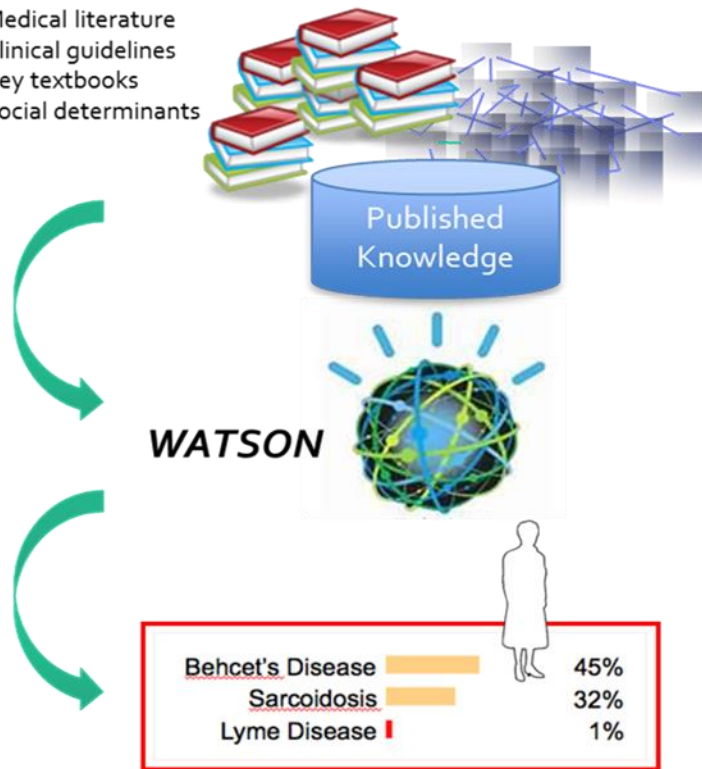
"The idea of cognitive healthcare – systems that learn – is real, and it's already mainstream," said IBM CEO Ginni Rometty in her opening keynote address to a packed auditorium at the 2017 HIMSS Convention and Exhibition. "IT can change almost everything about healthcare."



Leveraging Watson for Knowledge- and Data-Driven Insights:

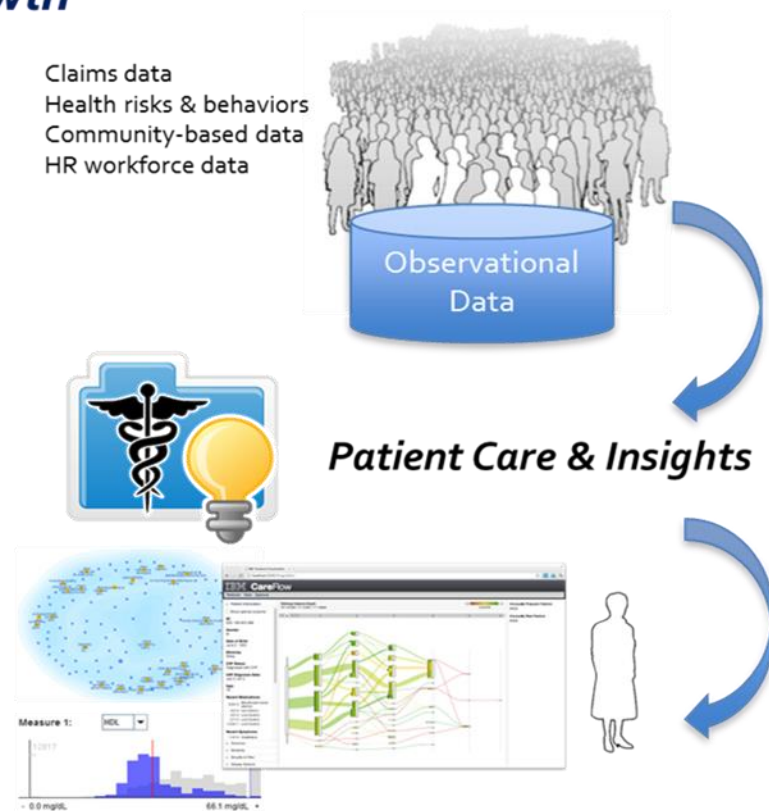
Support **business continuity** and **growth**

- Medical literature
- Clinical guidelines
- Key textbooks
- Social determinants



Closing the **translational knowledge gap**

- Claims data
- Health risks & behaviors
- Community-based data
- HR workforce data



Enabling new **personalized and population health insights**

Knowledge/Data-driven Insights for Better Health Decisions and Prevention of the Next 20% Who Could Cost 80%.

Real world evidence results from the systematic analysis of real world data



Evidence: Findings from real world data that rise to the level of medical evidence, currently include results from observational studies and case studies.



Insights: Findings that do not rise to the level of medical evidence, but which may be used for non-clinical decision making, potentially helping to inform hypotheses for further analysis or for initiation of RCTs



Predictions: Predictive models and Risk Factor identification may result from analysis and modeling using predictive techniques.

Analytic Life Course



Current Analytic Practice Timeline

2-3 MONTHS 3-24 MONTHS 2-3 MONTHS 3-9 MONTHS 2-3 MONTHS 2-3 MONTHS 2-3 MONTHS

Total Time
18 months-3 years

Watson Health Analytics Timeline

2-3 DAYS 2 DAYS 2-3 DAYS 1-7 DAYS 1-2 DAYS 2-3 DAYS 2-3 DAYS

Key factors to time reduction:

- Data is in a ready and usable state
- Feature Library already defined
- Analytics Catalog has support research

Total Time
2-3 weeks

Risk Analytics

- Actuarial Cost Analytics
- Contract Management
- Quality and cost reporting

Practice Analytics

- Physician Efficiency profiles
- Episode Efficiency profiles
- Drug profiles
- Cost of care analysis
- Imaging
- Leakage

ANALYTICS

Case Management

Manage high-cost patients (top 5%)

- Predictive modeling
- Patient risk stratification
- Readmissions
- ER usage
- Medication management
- Referral management

Population Management

Manage entire population

- Patient Stratification
- Preventive/Chronic gaps
- Visit compliance
- Rx / Lab compliance
- Self management
- ER, Hospital, Readmissions

CARE DELIVERY

DATA FOUNDATION

Diagnosis

A

I / walked / into a place, / and I /
found / my grandma. / I / hugged /
her / strongly, / I / woke up.

- About dreaming
- About waking

control



B



manic



schizophrenic



AUC > 0.9

PLoS ONE (2012)

Driving factor 3: Communication

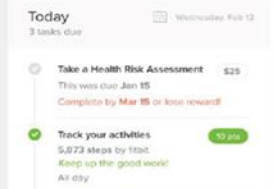
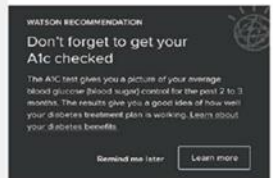
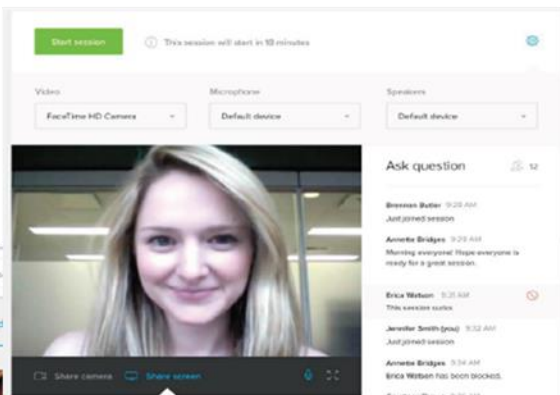
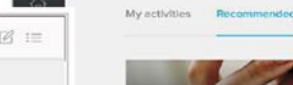
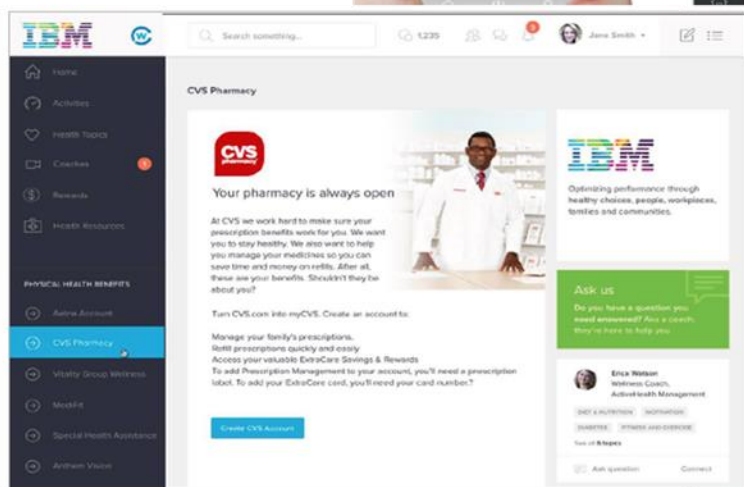


Smart Integration, Customization, and Engagement:

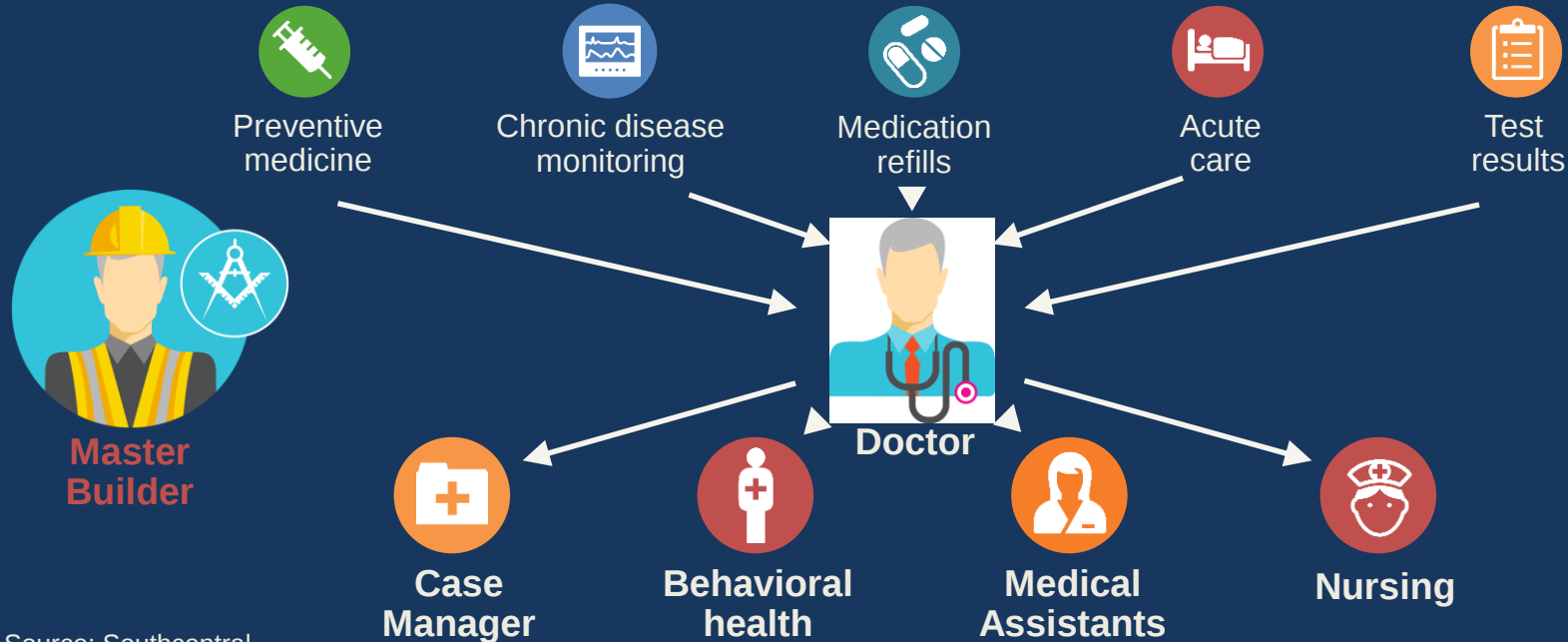
Improve the **overall health and vitality** of our employees and their families

5 Dimensions of Health:

- Physical
- Mental
- Financial
- Social
- Purpose



Practice transformation away from episode of care



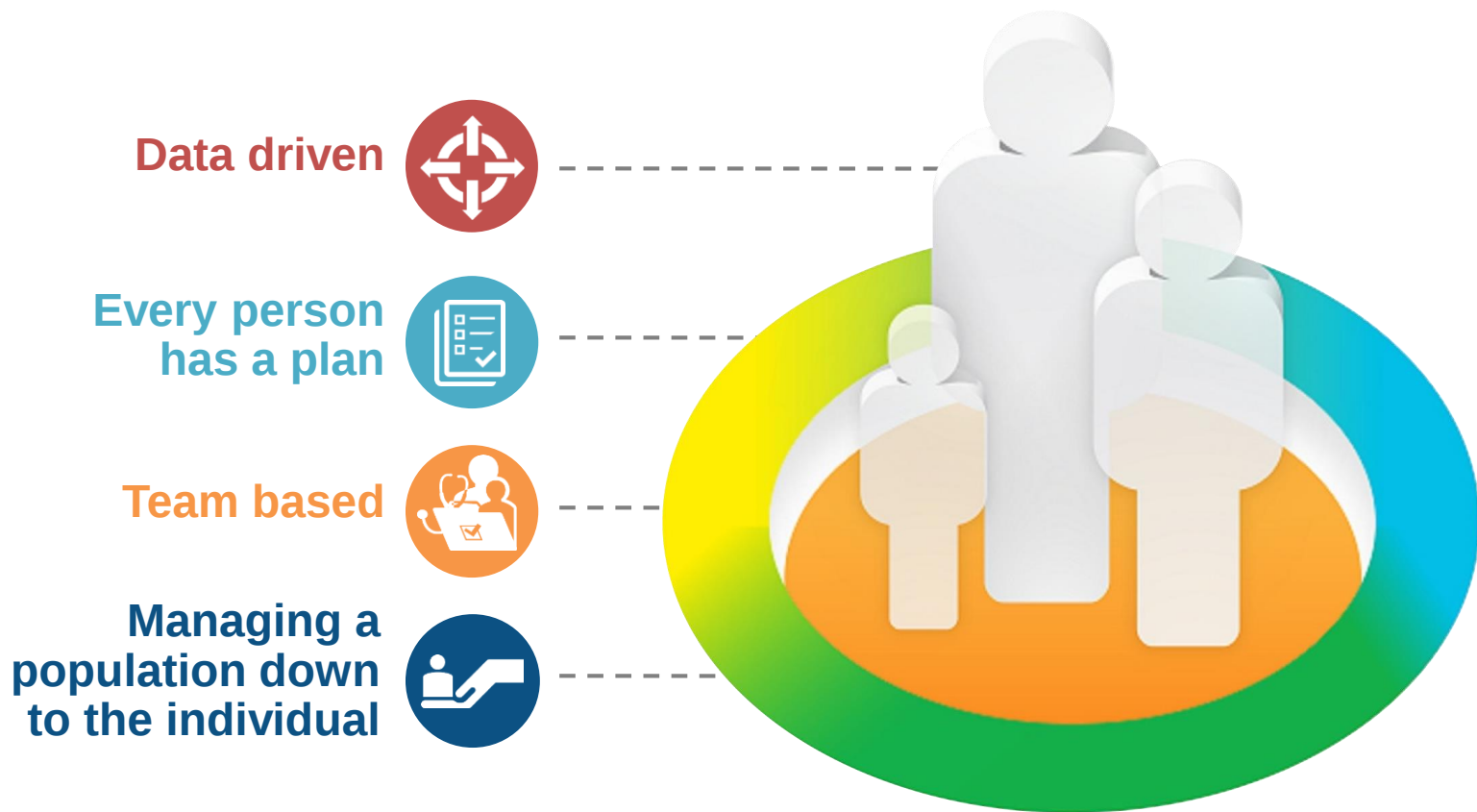
Source: Southcentral
Foundation, Anchorage AK

New model of care – putting the patient first



Source: Southcentral
Foundation, Anchorage AK

Future healthcare transformation





Today's Care

My patients are those making appointments to see me

Care is determined by today's problem and time available today

Care varies by scheduled time and memory/skill of the doctor

I know I deliver high quality care because I'm well trained

Patients are responsible for coordinating their own care

It's up to the patient to tell us what happened to them

Clinic operations centre on meeting the doctor's needs



PCMH Care



Our patients are the population community

Care is determined by a proactive plan to meet patient needs with or without visits

Care is standardized according to evidence-based guidelines

We measure our quality and make rapid changes to improve it

A prepared team of professionals coordinates all patients' care

We track tests & consultations, and follow-up after ED & hospital

A multidisciplinary team works at the top of our licenses to serve patients

Source:
Slide from Daniel
Duffy MD School of
Community Medicine
Tulsa Oklahoma

Defining the care centered on the patient



PCMH 2.0 in action

