Daily patient-generated data: reducing risk and improving outcomes

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What Happened on January 19, 2012?

Kodak Files for Bankruptcy as Digital Era Spells End to Film

Bloomberg, January 2012

What is the business of health care?

- Harvard Business Review blog
  - David Asch and Kevin Volpp
  - https://hbr.org/2012/09/what-is-the-business-of-health

or?

Why did Kodak fail?

- Late to recognize that it was not in the film and camera business

- It was in the imaging business

What is the business of health care?

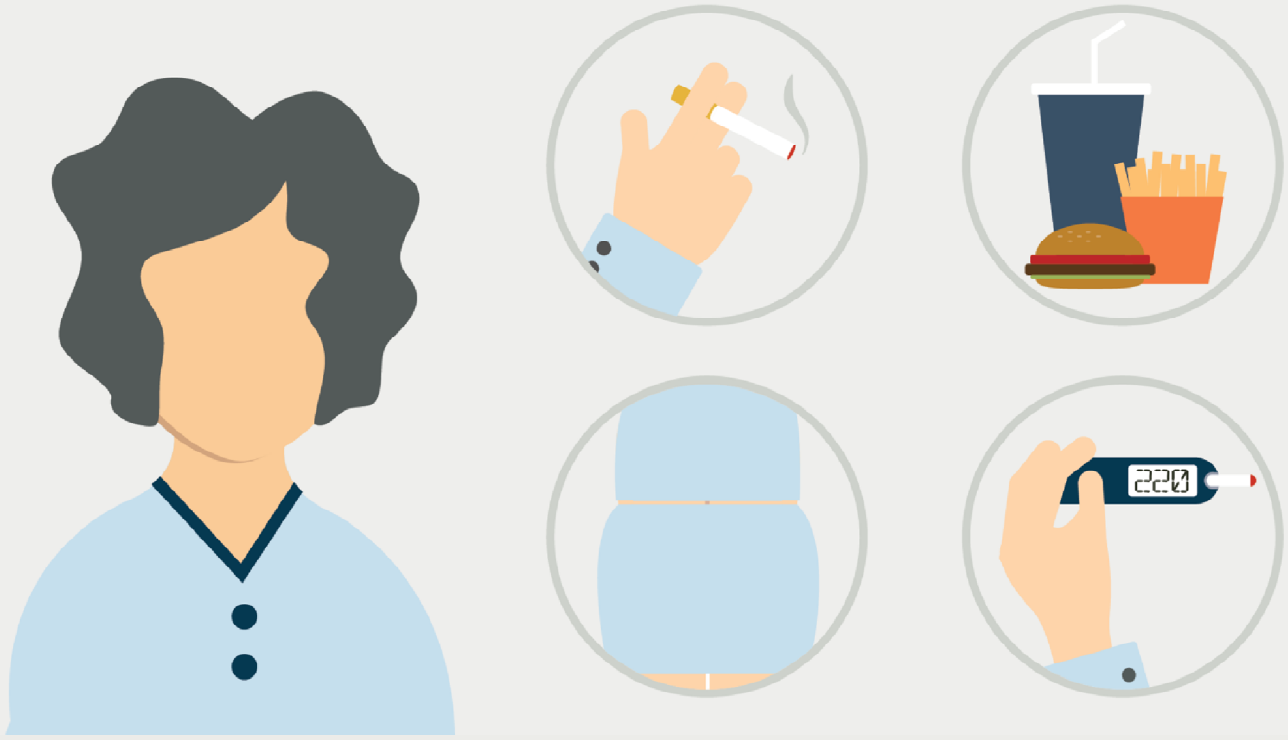
"….whereas doctors and hospitals focus on producing health care, what people really want is health."

"If we could get better health some other way, just as we can now produce images without film, then maybe we wouldn't have to rely so much on health care."

What are we trying to achieve?

"Doctors and hospitals who pay attention to the business they are actually in — defined by the outcomes their "customers" seek — will leave the doctors and hospitals who don't behind, captured in a Kodak moment."

Determinants of Health Status



- Health behaviors 40%
- Genetic predispositions 30%
- Social circumstances 15%
- Medical care 10%
- Environmental exposures 5%

McGinnis et al. The case for more active policy attention to health promotion. *Health Affairs* 21, no. 2 (2002):78-93 doi: 10.1377/hlthaff.21.2.78

If our vision is to create a sustainably affordable health and wellness system, what is standing in our way?

Health and Wellness Barriers

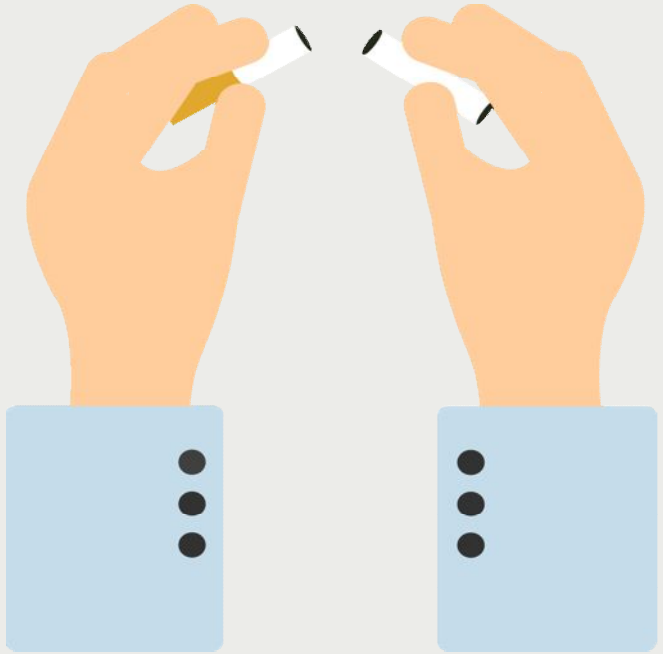
- The business model of health care
  - Activity-based payment focused on hospitals
  - An innovation engine driven by fee for service reimbursement

- Consumers engaging in behaviors that undermine health and wellness
  - “There’s a pill for that…”

Some hope for changing health behaviors

- U.S. seat belt use rates:
  - 1983 = 14%
  - 2013 = 87%

- U.S. smoking rates:
  - Adults in 1965 = 42%; in 2014 = 17%
  - HS Students in 1993 = 31%; in 2013 = 16%



IOM National Roundtable on Health Care Quality (1998)

- **Underuse**
  - Failure to provide a health care service when it would have produced a favorable outcome for a patient
- **Overuse**
  - A health care service is provided under circumstances in which its potential for harm exceeds the possible benefit
- **Misuse**
  - An appropriate service has been selected but a preventable complication occurs and the patient does not receive the full benefit

Population Health Management in 2017

- **Under-management**
  - Failure to provide a care management service that would have produced a favorable outcome
- **Over-management**
  - Delivering care management services that are more intensive than needed for a selected population
- **Mismanagement**
  - Delivering appropriate care management services ineffectively and/or to the wrong populations

Care Management Intensity

- Patient centered medical home
- Enhanced ancillary care team support
  - MTM pharmacy, DM education, group visits
- Active care coordination
  - Nurse, social worker, and/or health coach
- Care coordination plus daily monitoring
- Ambulatory ICU / home care / hospital at home

Care Management Decisions

- Where is the low-hanging fruit on the clinical quality and total cost of care tree?
  - For employees vs. Medicare vs. commercial vs. Medicaid
- Buy vs. build?
- If buying, how many partnerships can we manage really well?

Lessons Learned

- Value based care and payment requires new learning for everyone
  - Identify priorities and build engagement for the long haul

- Try to answer the “what’s in it for me?” question for as many stakeholders as possible
  - Don’t oversell
  - Don’t ignore hospital leaders and specialists

Lessons Learned

- Care coordinators should be defined by the population served, not by the location of their work
  - Eliminate the phrase “embedded care coordinator”

- Efficiency of care coordinators depends directly on the quality of actionable information they have
  - Risk stratification
  - Real-time ADT data for ED visits and hospitalizations
  - Active monitoring

Physician Engagement

- Change happens at the speed of trust
- The details are important for many (but not all) docs
  - How will daily monitoring actually help my patients?
- Physician endorsement of any care management program has a tremendous influence on patient engagement

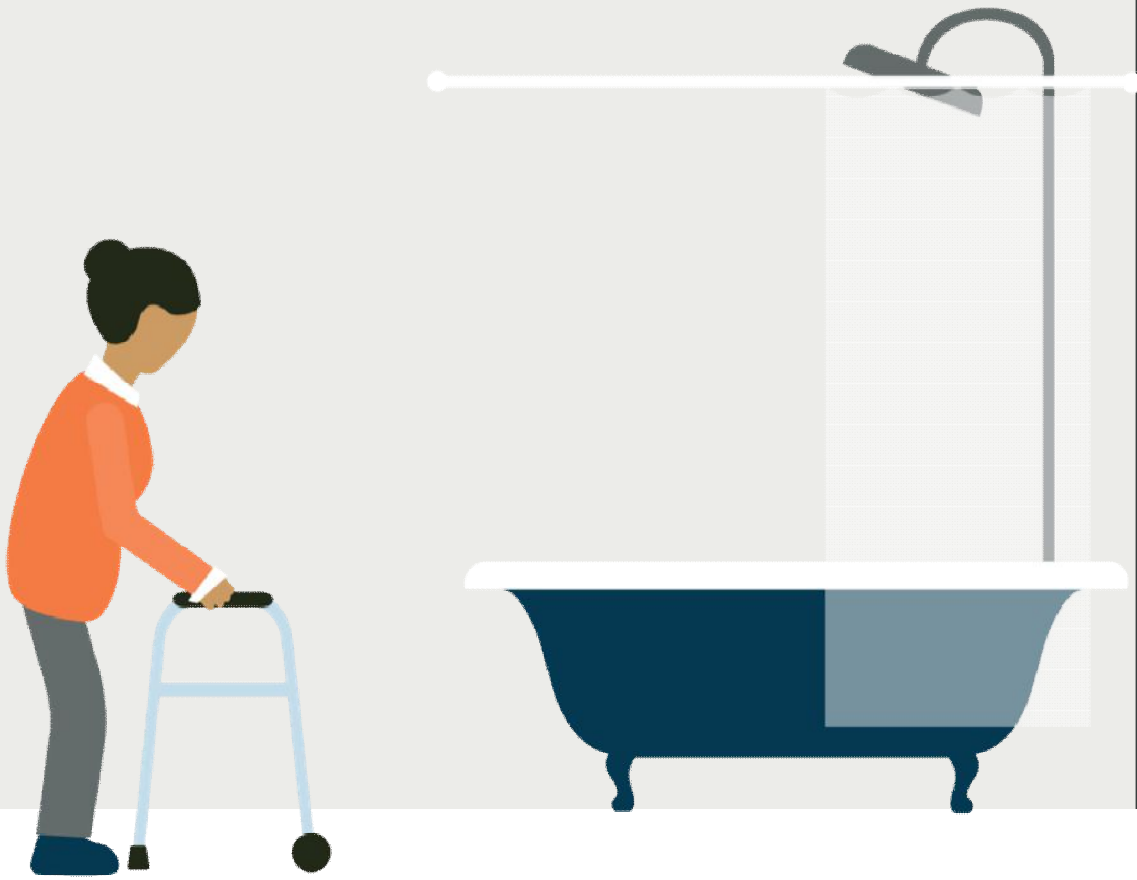
Advantages of Daily Patient Engagement

- These populations are the ones that will drive hospital-centric events
- Engaging them in proactive self-management of chronic conditions is critical
- If I can have my care management staff intervene by exception, I have greatly increased their efficiency

See Beyond the Clinical Encounter

- Multiple factors affect a patient's health from day-to-day and are not visible or addressed in the typical clinical interaction
- These factors can lead to preventable all-cause and 30-day readmissions
- "Only 10-15% of an individual's health status is attributable to the health care services he or she receives. An individual's behavior is by far the single most important contributor to his or her overall health"

–Senator Bill Frist, MD



Care for Mary….

- 74 years old
- Has heart failure
- Lives with her son
- Her son travels frequently and he’s gone for long periods of time
- Not found on high risk/cost reports
- Risk factors change based on her current situation

…and Ben…

- 67 years old, well managed health
- Tech savvy
- Contracted pneumonia, admitted for 3 days
- Discharged directly to home with no home health support
- Want to make sure he stays on his medications, makes his appointments, avoids readmission

…and Dorothy…

- 82 years old
- Knee replacement due to osteoarthritis
- Discharged to home health
- Dorothy doesn’t drive
- A month after her surgery, her husband loses his driver’s license so Dorothy no longer has transportation
- Dorothy doesn’t know how she is going to make her rehab appointments

…and Harold

- 83 years old
- Pretty good health, well managed hypertension
- Exercises all the time
- Harold’s daughter and grandchildren used to live nearby but they moved last year
- He isn’t as happy as he used to be and wonders what is wrong with him

Capture daily patient-generated data
to reduce risk and improve outcomes.

Engagement program must capture and analyze patient data in three critical domains.

Clinical Status

- Symptoms
- Vital signs
- Comorbid conditions
- Cognitive impairment
- Depression
- Sleep
- Pain control
- Wound healing
- Procedural complications

Self-care Status

- Stress level
- Medication adherence
- Nutritional status
- Medical appointments
- Healthy literacy
- Patient activation
- ADLs
- DME/Homecare
- Frailty and/or fall risk

Social Determinants

- Access to care
- Affordability issues
- Safety
- Isolation and loneliness
- Access to technology
- Cultural and socioeconomic status

Population Identification

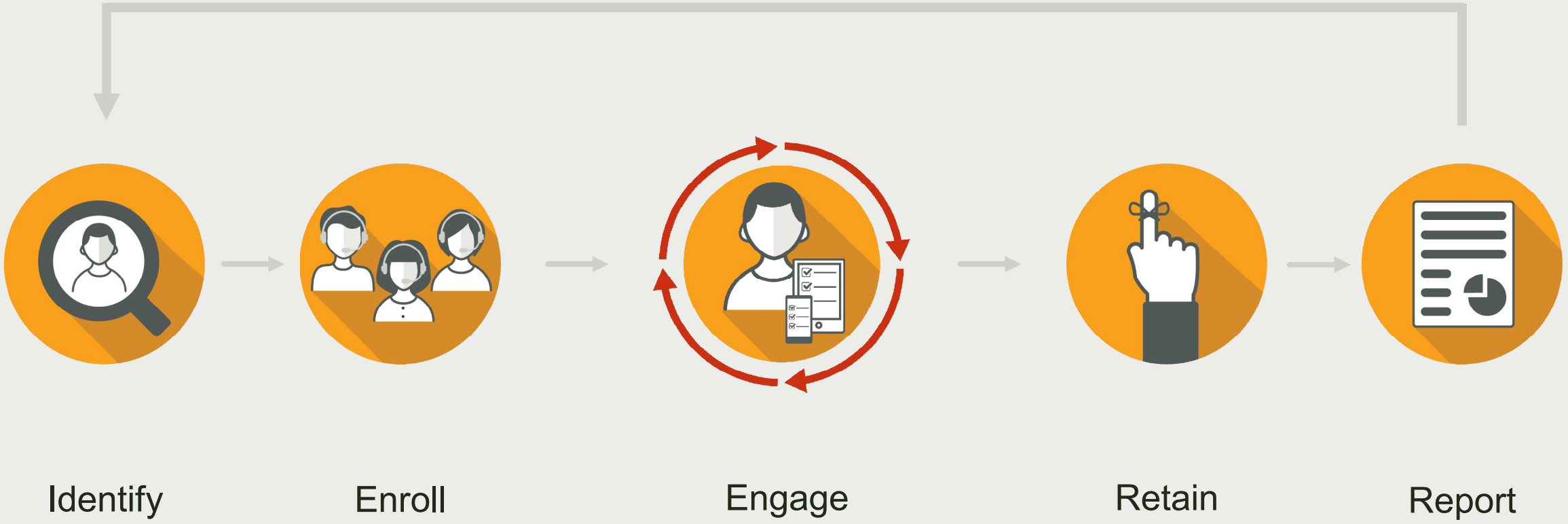
Drive down avoidable utilization by identifying the appropriate patients.

Patients have experienced or are living with:

- Care Transitions
- Heart Failure
- COPD
- Diabetes
- Frailty
- Depression

Identify who’s at risk today

People, process & technology

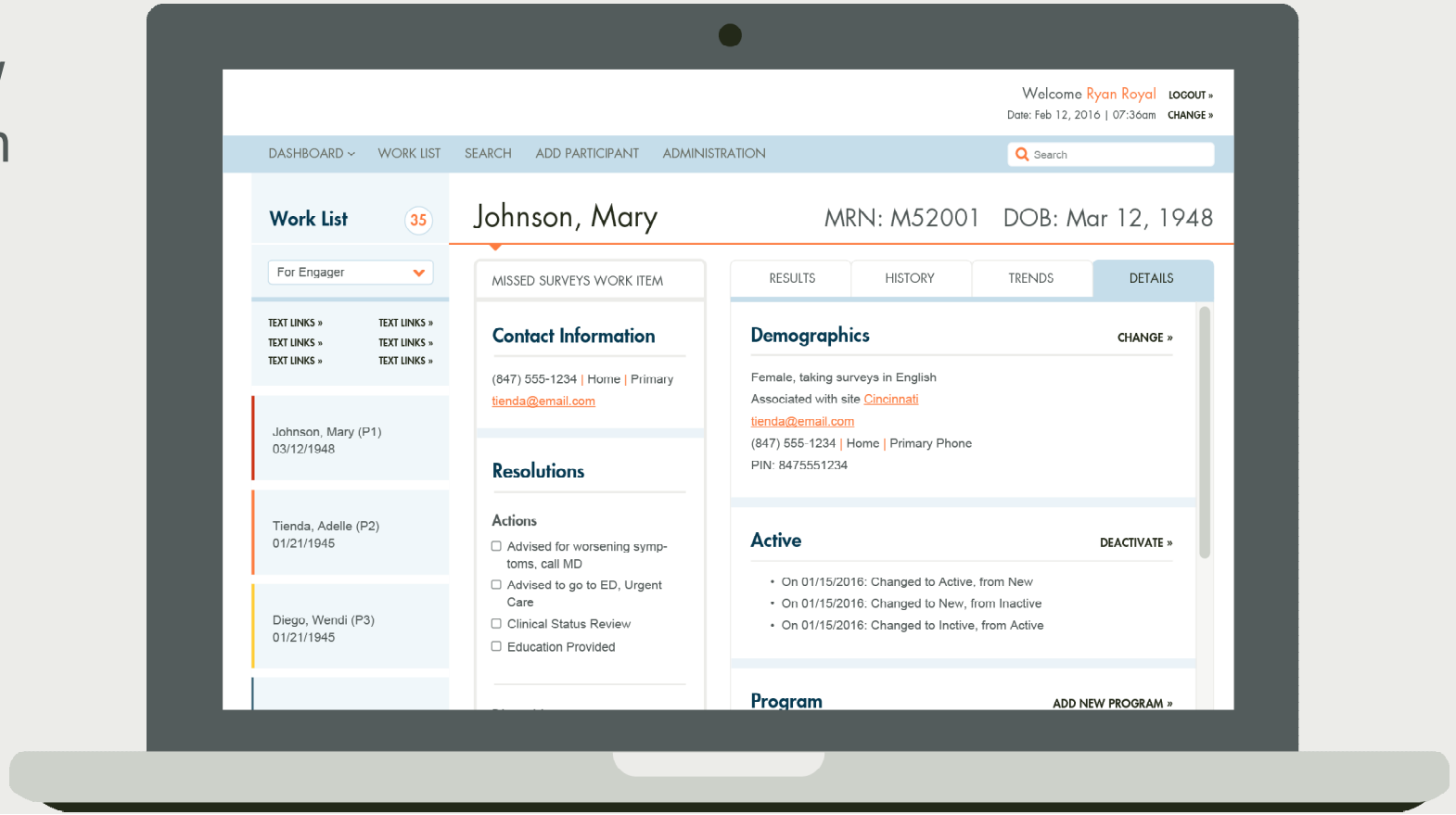


Patients check in daily

- Using a phone or a computer

Care teams use technology

- Capture daily patient data *as it is reported*
- Exception-based workflow alerts care managers when a patient needs attention



Maximizing care coordination resources

To…

Go from this…

this…

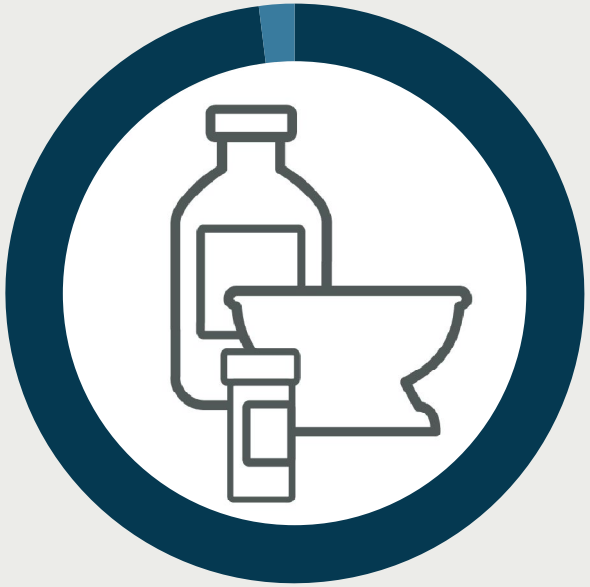
INCREASE the number of patients cared for by a single coordinator.

92%

Daily Patient Engagement Rate

85%

Physician Appointments Kept



98%

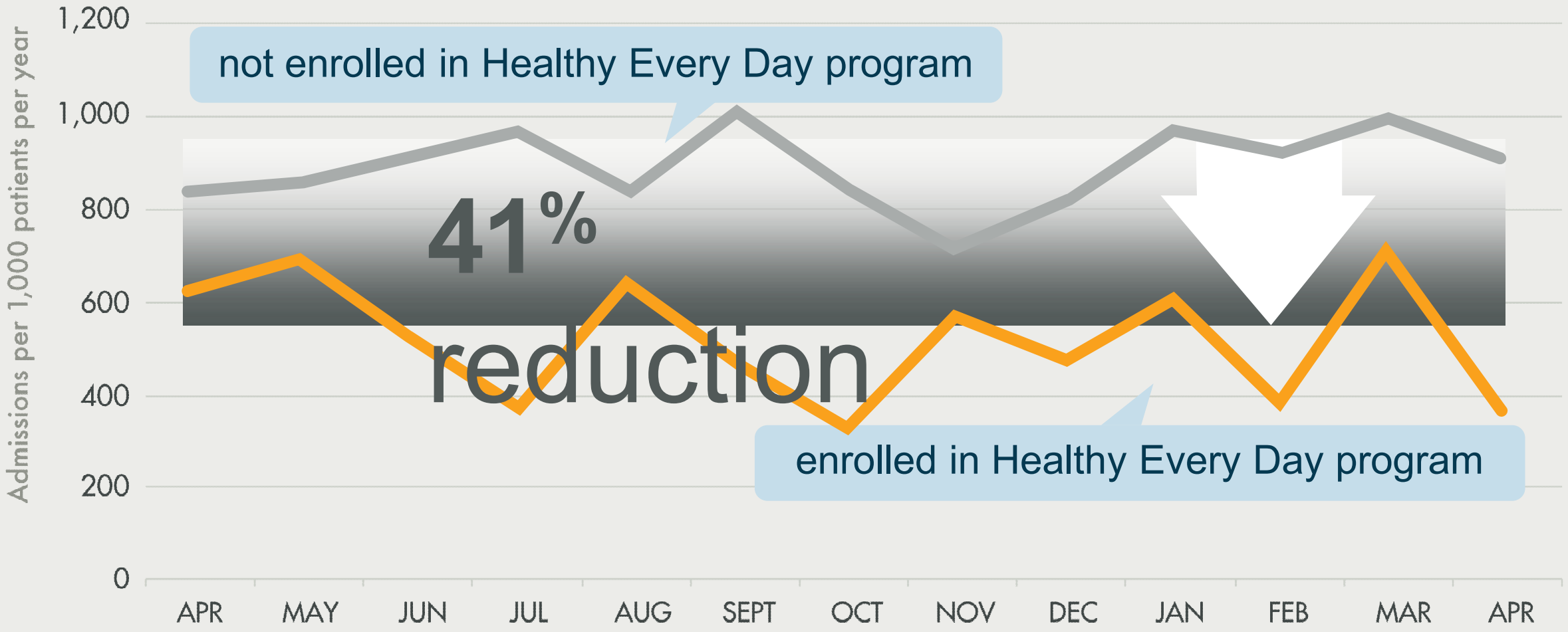
Prescription Fill Rates

Enrolled patients have

41% LOWER

admit rates per 1,000

Admission Rates

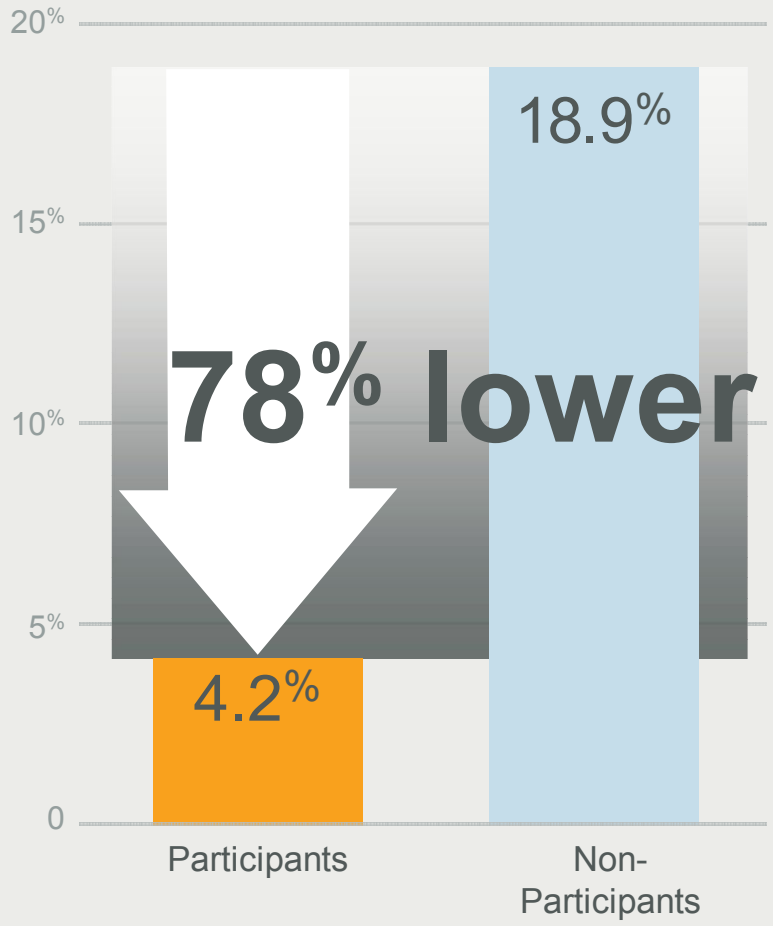


Enrolled patients have

78% LOWER

readmission rates than unenrolled patients

Readmission Rates



Enrolled patients **LIKE** participating and would **RECOMMEND** the program to others

Patient Satisfaction

90% like participating in the program

91% would recommend the program to others

What do you think?