The Office of the National Coordinator for Health Information Technology

Current Health IT Challenges and Opportunities in Population Health

A presentation to the National Advisory Council on Nurse Education and Practice
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Agenda

- Define population health
- Provide examples
- Explain the role of ONC in population health
- Discuss Advanced Primary Care and the steps involved in managing the health of populations of patients
- Illustrate how technology supports population health management
- Describe the importance of process and workflow
- Identify challenges and opportunities

What is population health?

Definition of population health:

"The health outcomes of a group of individuals, including the distribution of such outcomes within the group"

Think of your patient and your population of patients

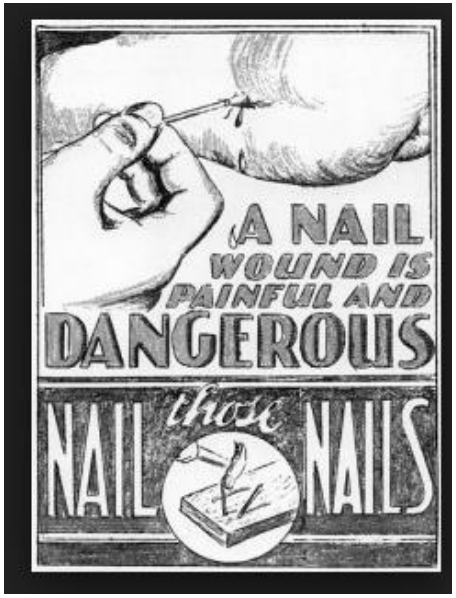
Source: David Kindig and Greg Stoddart, "What Is Population Health?," American Journal of Public Health, March 2003: Vol. 93, No. 3, pp. 380-383.

Examples

- Florence Nightingale 1853 Crimean War
  - » Studied the population of the sick and wounded soldiers.
  - » Collected data on mortality by cause and created sophisticated polar area diagrams. Queen Victoria personally requested and received reports as well as sent necessary supplies.
  - » The greatest cause of mortality was infection. After instituting hygienic measures, she reduced the death rate from 42% to 2%.

Examples

- Sidney Garfield, MD – Colorado River Aqueduct Project 1933
  - » Five cents a day per employee for work-related care paid by the employer.
  - » Five cents a day out-of-pocket per employee for all other medical care.
  - » Caring for the population of construction workers he studied the data and found the most prevalent injury was a nail in the foot. He bought and gave all the workers safety boots to prevent nail injuries.
  - » Went on to co-found Kaiser Permanente.



Examples

- The Precision Medicine Initiative -- An approach for disease prevention and treatment that takes into account both the population and individual variations in genes, environment, lifestyle, etc.
  - » Creates a research cohort of **>1 million American volunteers** who will share genetic data, biological samples, and diet/lifestyle information, all linked to their electronic health records if they choose.
  - » Pioneers **a new model for doing science** that emphasizes **engaged participants, responsible data sharing, and privacy protection**.
  - » Tests whether **mobile devices** can encourage healthy behaviors.
  - » Lays **scientific foundation** for precision medicine for **many diseases**.

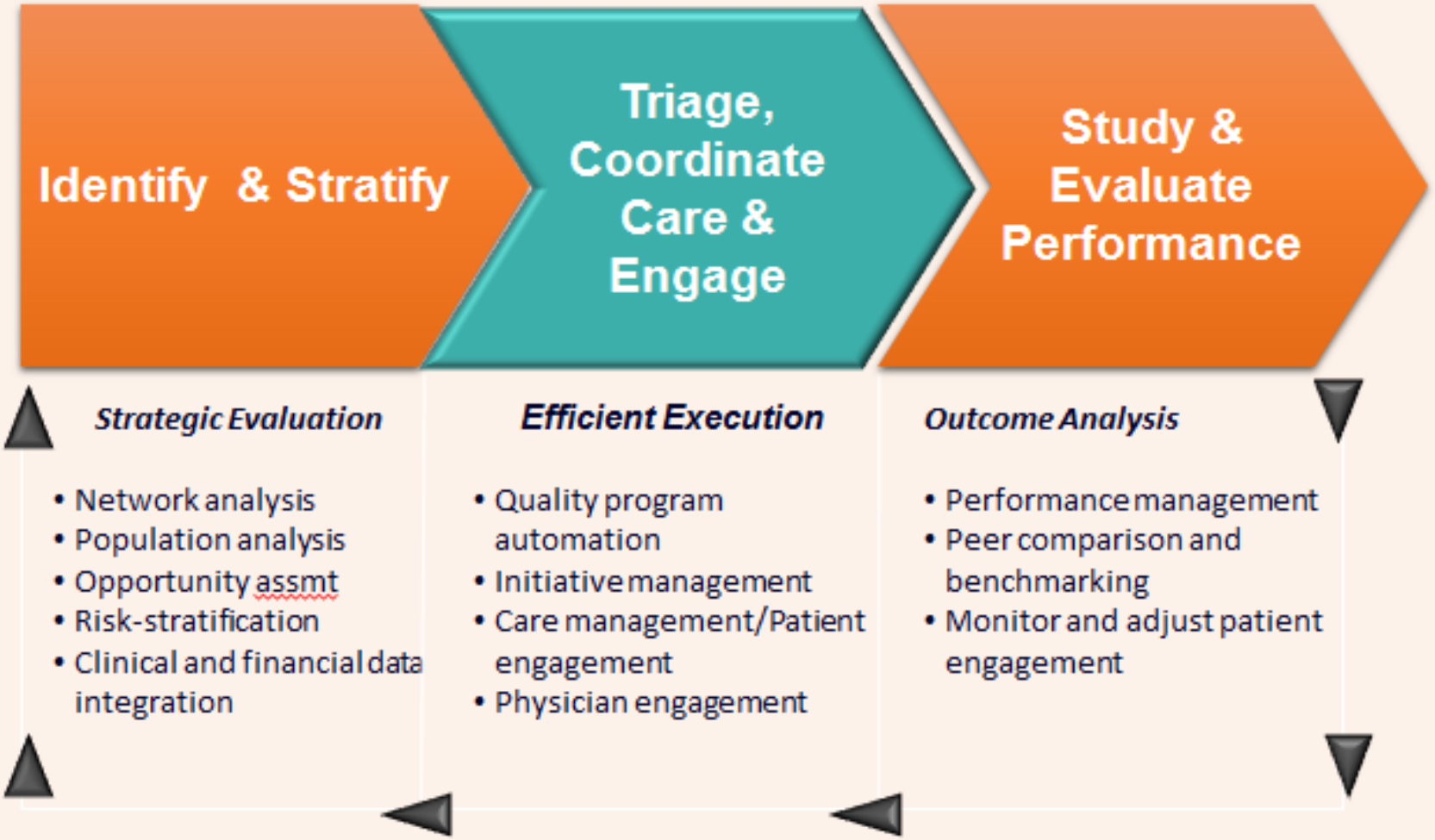
What role does ONC have in population health?

- Provider payment has changed
  - The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) replaces the Sustainable Growth Rate (SGR)
    - Moves providers from fee-for-service to value-based payment models beginning in 2019. Payment relies on quality measurement and financial/ administrative data.
    - Two new programs, which require increased coordination amongst providers and community-based services across the care continuum, as well as focus on rewarding providers for the quality of care they provide, rather than the quantity:

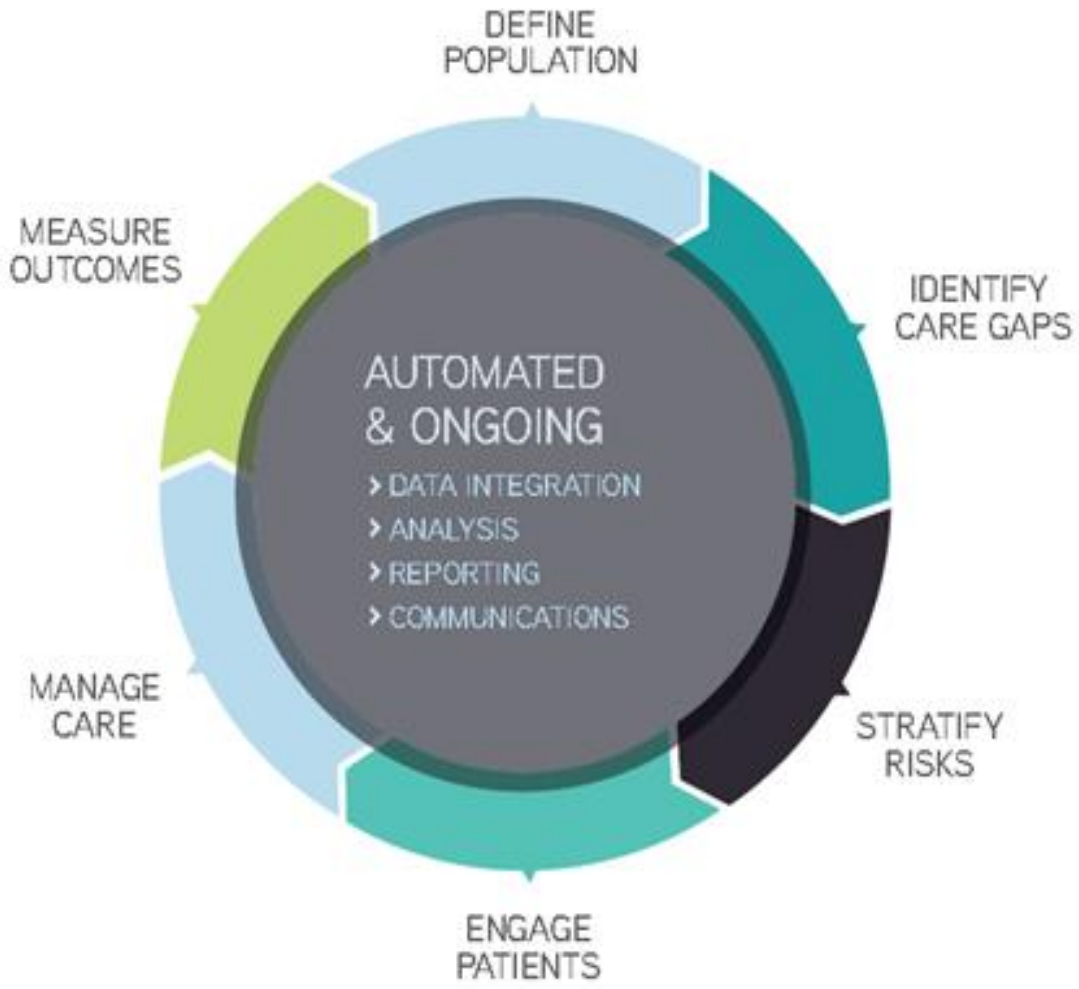
    1. Merit-Based Incentive Payment System (MIPS)
    2. Alternative Payment Models (APMs)

    ONC is working on certifying the technology required for providers to be successful under MACRA APMs: Accountable Care Organizations (ACOs), Bundled Payments, and Advanced Primary Care

Advanced Primary Care includes Population Health
The steps…



The process: Another view



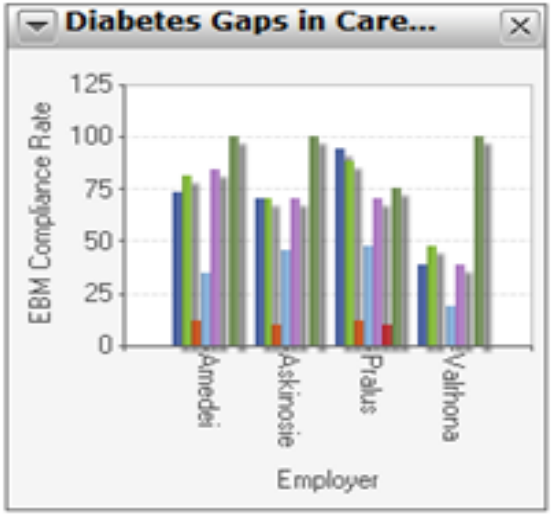
Source: Institute for Health Technology Transformation, "Population Health Management: A Roadmap for Provider-Based Automation in a New Era of Healthcare," http://ihealthtran.com/pdf/PHMReport.pdf, April 2012.

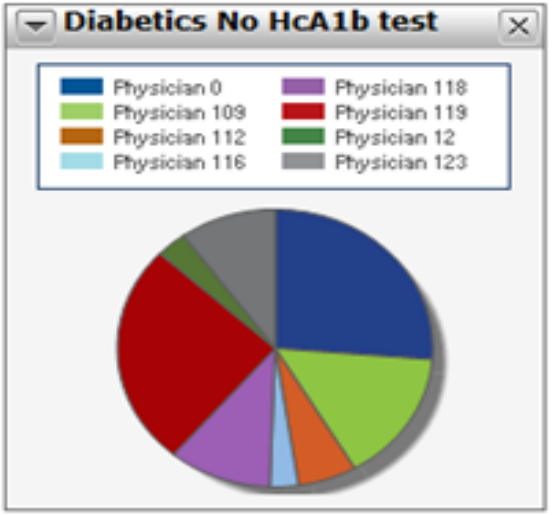
Technology supports population health management and requires reliable data

Patient Segmentation and Gaps in Care

Gaps in Care by Condition and physician

Clinical Conditions	Overall Non-Compliance Rate	Number of Compliant Rules
100004 - CHF	15.65%	97
100404 - Asthma	27.83%	83
102500 - HTN	16.86%	1,396
102600 - CAD	21.88%	300
105200 - Diabetes Care (NS)	45.54%	354
Total : Selected Filter(s)	**24.23%**	**2,230**





Wait! There's more to population health management

- **Care coordination is process and workflow driven**
  - » Involves communication with multiple care providers involved in the continuity of care and data sharing.
  - » Requires coordinated team-based care.
  - » Includes the processes and workflow to assess risk and identify and empanel patients in the appropriate care management programs.
  - » Needs to have automation tools that combine the EHR, the practice management system, the population health management applications and reporting.

Challenges and Opportunities in Population Health

- Challenges
  - Interoperability – data not always readily available or easily transferable Different EHRs makes data acquisition difficult
  - Lack of claims and clinical data aggregation
  - Unstructured data
  - Attribution and ability to identify and de-identify patients
  - Lack of multi-provider care planning
  - Lack of cost data to derive total cost of care
  - Certifying applications that go beyond EHRs

- Opportunities
  - Focus on interoperability, toward an open, connected care for communities
  - Application Programing Interfaces (APIs) -- Fast Healthcare Interoperability Resources (FHIR)
  - Multi-provider care planning
  - Claims and clinical aggregation
  - Patient matching
  - Consultation and referral management
  - Real-time benefits and formulary checking
  - Healthcare Provider Directory
  - Risk management scoring

Recommendations for NACNEP

Nursing, with more than 3.1 million RNs, represents the largest healthcare profession. The contributions of nurses are needed in population health to serve as leaders and light the way.

K. Kimmel

- Remember Florence Nightingale – population health management is at the very core of nursing practice
- Build upon the traditional nursing focus on patient-centered care to include *populations* of patients
- Augment nursing education to emphasize data analysis, yet understand that population health also involves care coordination and workflow
- Acknowledge advanced practice nurses who bill for their services and the importance to nurses of understanding payment reform initiatives

THANK YOU!

The Office of the National Coordinator for Health Information Technology

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