POINT OF CARE TESTING AND POPULATION HEALTH MANAGEMENT

Kathleen David, MT (ASCP)
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Employed by TriCore Reference Laboratories
OBJECTIVES

• Describe population health management, diagnostic optimization, and targeted interventions

• Examine the way that point of care tests are reported, and how they could be used in data analytics

• Discuss the importance of including point of care testing results in data analytics
Facts

- Regional medical laboratory providing diagnostic testing for patients and providers
- Located throughout New Mexico
- >11 Million Test Per Year (does not include POC tests)
- 99% Volume Performed On-site
- 75% of Clinical Data for the state of New Mexico
**STRUCTURE**

10 hospitals

~140 clinics

>700,000 interfaced tests/year

13 instrument types; over 600 separate instruments

15 manual kits/tests

8000 operators

**STAFF**

1 POC manager

3 technical supervisors

15 POC techs (13.5 FTE)
FORCES AFFECTING HEALTHCARE

ACA - Affordable Care Act
Fee for service transition to value-based payments
Triple Aim – Quality, Cost/Value, Patient Satisfaction
MACRA
Quality Payment Program-MIPS and APM
Meaningful Use
Lack of interoperability of healthcare IT technology
Reshape the Way Medicine is Delivered

**WHY**
Clinical labs are the first step to reshaping the way medicine is delivered to improve healthcare

**HOW**
Proactive focus on Population Health Management

**WHAT**
Targeted Intervention...
- Improves Outcome
- Improves Quality of Life
- Reduces Overall Cost
Population Health Management

• is the aggregation of patient data across multiple health information technology resources,

• the analysis of that data into a single, actionable patient record,

• and the actions through which care providers can improve both clinical and financial outcomes.
TriCore’s Diagnostic Optimization transforms data into actionable knowledge aiding physicians in ordering the right test, at the right time, for the right patient resulting in the right treatment, improved outcomes and ultimately a reduced healthcare spend.

Connects patients, providers, and health plans by providing data to identify gaps in care, improve utilization, reduce costs and provide education for patients and providers.
What should we do to drive this new paradigm?

- Promote quality
- Improve utilization
- Move from individual patient to population health management
- Voice of customer
  - National disease burden
  - HEDIS/quality measures
### Diagnostic Optimization

**TriCore’s Laboratory Driven Population Health Management Model**

- Relies on current and historical lab data to provide real-time targeted interventions
- Focuses on diseases with high incidences, increasing costs, clinically defined risks
- Connects patients, providers, and health plans by providing data to identify gaps in care, improve utilization, reduce costs and provide education for patients and providers

![Diagnostic Optimization Diagram](image)

Services provided (not all listed):

<table>
<thead>
<tr>
<th>Disease Screening</th>
<th>Disease Diagnosis</th>
<th>Disease Management/ Monitoring</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider screening algorithms</td>
<td>Provider diagnostic algorithms</td>
<td>Gaps in care and utilization data</td>
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<td>Patient and provider education</td>
<td>Patient and provider education</td>
<td>Provider and patient automated outreach/reminders</td>
<td>Provider and patient automated outreach/reminders</td>
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<td>Risk assessments</td>
<td>Risk assessments</td>
<td>Point of Care Testing</td>
<td>Disease surveillance support</td>
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<td>Lab results</td>
<td>Lab results</td>
<td>Lab results</td>
<td>Analytic-driven decision making</td>
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Volume vs. Value Model (Diabetes)

**Volume Model**

<table>
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<tr>
<th>High</th>
<th>Low</th>
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</table>
| High | Hgb A1C  
Urine Micro Alb  
Serum Creatinine |
| Low  | HEP C Geno Type  
Factor 5 Leiden  
Coumadin Sensitivity |

**Value Model**

<table>
<thead>
<tr>
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<th>High</th>
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</table>
| Low  | Diabetic Bundle  
Pre-diabetic Screen  |
| High | HEP C Geno Type  
Factor 5 Leiden  
Coumadin Sensitivity |

**Test Centered (Sample Centric)**
- Outreach Focused
- Outpatient = Result
- Reactive (One snapshot of data)
- Analytical Phase Efficiency Focused
- Siloes

**Information Centered (Patient Centric)**
- Coordinated Focused
- Proactive
- Aggregation Longitudinal / Chronological
- Actionable Info./Coordinated Care
- Patients, Doctors and Case Managers
- Pre & Post Informational Value
- Shared risk, shared gain
What if lab data could be used to triage a patient?

- Data could be used to drive care from specialists to primary care
- Data could identify patients in need of specialty care services

Distribution of A1c in Population

- Medical Home
- Primary Care
- Specialist
Advantages
• Published weekly
• Assists in quick diagnoses
• Identify outbreaks

Disadvantages
• Lacks location identification
• Latent period: Up to a week
Albuquerque Metro Area (FLURSV)

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Advantages to Health Plans/Health Payers

Identify Populations

What if you knew the prevalence of a disease across your state?

- Disease management
- Used to develop population-specific care management programs
  - By city/zip code
  - By patient
  - By payer
  - By health system

Average A1c by Patient Age and City
What if ....you could drive quality in real time for a large health payer?

- A1c >7%
- Adjust the HEDIS scores
- Reduce complications
- Reduce long term costs
- Optimize Economics
Advantages to Providers

Disease Monitoring and Management

What if a physician could easily see longitudinal data to manage their group of patients?

- A1c ≥ 8
What is Point of Care Testing?

Point-of-care testing (POCT) is defined as medical testing at or near the site of patient care.

• Includes: hospital, clinic, physician office, pharmacy, home health, skilled nursing facility, etc.

• Traditionally performed by non-laboratorians
HOW USEFUL ARE THE RESULTS?
RESULTS DON’T CHART ON PATIENT RECORD
RESULTS NOT AVAILABLE FOR DATA ANALYTICS
RESULTS NOT AVAILABLE FOR CLINICIAN IN A TIMELY MANNER
Most POCT instruments are interfaced through middleware and available in LIS

Manual POCT kit/test results, as well as some instrument results, are entered in patient EMR but are not in LIS

- Longitudinal view for providers does not include these manual test results
- Cannot get a complete picture of patient
Proposed Solutions

Interface all POC instruments

Automate process for manual test result entry

Work with LIS/HIS to ensure all clinic results are also available for analytics

EMPI-longitudinal patient demographic information
Any new instrument purchases need to have interface capability

IT is essential to the success of a POCT Program

Develop good working relationships with IT

Include IT in planning for new instruments and systems.
We believe:

Diagnostic optimization is the future of laboratory medicine

- Shared risk with clinicians, payers, and patients
  - Includes laboratory
- Targeted intervention for improved outcomes
- Fee for service no longer relevant
We believe:

Point of Care results are integral to Diagnostic Optimization

• Results that currently only appear in patient EMR need to be part of data analytics
• Connectivity is the key to obtaining these results

Food for thought: How much more powerful would the data be if it includes home meters/kits? How about wearable technology?
Thank you

Kathleen David, MT (ASCP)
kathleen.david@tricore.org