Emerging Technology & The Future Of Community-Based Care

Friday, September 8, 2017 | 9:30am - 10:45am

Presented By Monica E. Oss, Chief Executive Officer, OPEN MINDS
I. The Future Of Care Is Tech-Enabled - The Drivers Of The Evolving Health & Human Service System

II. The Technology Equation In Value-Based Reimbursement Success

III. The Emerging Technologies Reshaping The Service System - The Health Care Technology Landscape
Technology Adoption in Health & Human Services Is “Slow”

- Limited capital to purchase and implement new technologies
- Lack of expertise and incentives to reengineer service processes to leverage emerging technologies
- Many challenges of health information exchange – standardization, regulatory, technical, policy, etc.
- Regulatory and licensure ‘uncertainty’
But New Service Delivery Landscape Will Drive Use Of Technology

1. Payer Push For “Integration” & “Pay For Value”

2. “Business Model” For Providers
The Payer Perspective As Strategy Driver

<table>
<thead>
<tr>
<th></th>
<th>2008, $ (Billions)</th>
<th>2008, %</th>
<th>2015, $ (Billions)</th>
<th>2015, %</th>
<th>% Increase, $, 2008-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare</td>
<td>$467</td>
<td>21%</td>
<td>$646</td>
<td>21%</td>
<td>38.3%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>$344.2</td>
<td>15%</td>
<td>$545.1</td>
<td>18%</td>
<td>58.4%</td>
</tr>
<tr>
<td>Employers</td>
<td>$803</td>
<td>36%</td>
<td>$1,072.10</td>
<td>35%</td>
<td>33.5%</td>
</tr>
<tr>
<td>Other Govt Health Insurance</td>
<td>$341.9</td>
<td>15%</td>
<td>$449.3</td>
<td>15%</td>
<td>31.4%</td>
</tr>
<tr>
<td>Consumer Out-Of-Pocket</td>
<td>$294.9</td>
<td>13%</td>
<td>$338.1</td>
<td>11%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Total</td>
<td>$2,251</td>
<td>100%</td>
<td>$3050.8</td>
<td>100%</td>
<td>35.5%</td>
</tr>
</tbody>
</table>

The “payer” perspective – spend as little as possible for acceptable quality and performance – The Value Equation

The Value Equation
### Impact Of Medicaid & Medicare Growing – With More Managed Care

<table>
<thead>
<tr>
<th>Payer Type</th>
<th>2011, % Of U.S. Population Covered</th>
<th>2016, % Of U.S. Population Covered</th>
<th>2011, % Of Population Enrolled In Managed Care</th>
<th>2016, % Of Population Enrolled In Managed Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare, non dual eligible</td>
<td>14%</td>
<td>15%</td>
<td>23%</td>
<td>32%</td>
</tr>
<tr>
<td>Medicare, dual eligible</td>
<td>3%</td>
<td>3%</td>
<td>25%</td>
<td>38%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>18%</td>
<td>23%</td>
<td>50%</td>
<td>70%</td>
</tr>
<tr>
<td>Commercial</td>
<td>52%</td>
<td>54%</td>
<td>93%</td>
<td>98%</td>
</tr>
<tr>
<td>Military</td>
<td>3%</td>
<td>3%</td>
<td>57%</td>
<td>49%</td>
</tr>
<tr>
<td>Uninsured</td>
<td>15%</td>
<td>9%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### Consumers With I/DD Receiving Services Through Medicaid

<table>
<thead>
<tr>
<th>Service</th>
<th>Total #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical services through managed care</td>
<td>348,776</td>
<td>46%</td>
</tr>
<tr>
<td>LTSS through managed care</td>
<td>113,732</td>
<td>15%</td>
</tr>
</tbody>
</table>

% in LTSS managed care anticipated to grow rapidly

LTSS either added to current Medicaid MCO or via separate MLTSS health plans
Medicare – The Biggest & The Last

56.3 million beneficiaries and $28.1 billion annual spending (2015)

- **Medicare Advantage** – 17.6 million enrollees, 31% of Medicare population (2016)
- **Medicare Advantage SNP** – 2.1 million enrollees, 3.7% of Medicare population (2016)
- **Medicare ACOs** – 7.7 million beneficiaries included, 13.7% of Medicare population (2015)
- **Medicare Bundled Rate Program** – 130,000 beneficiaries affected annually for joint/knee replacement; 1,600 participating provider organizations
- **MACRA** – 600,000 clinical health care professionals included on January 1, 2017

MedPac recommendation for payment reform
- Capitated/case rate for primary care
- Capitated/case rate for management of chronic conditions
- Bundled payment rate for acute care episodes
Shifting Payer Focus On “Superutilizer” Impact On Health Resource Use – Driving Interest

- **$43,212** average expenditure per person per year
  - 5% of U.S. population account for half (49%) of health care spending

- **$253** average expenditure per person per year
  - 50% of U.S. population account for only 3% of health care spending

“Superutilizers”

Term for people with complex physical health, behavioral health, and social issues who have high rates of utilization for ER and hospital services

- More than 80% of Medicaid superutilizers have a comorbid mental illness
- An estimated 44% of “superutilizers” have a serious mental illness
Behavioral Health Conditions Predict Increased Health Care Spending

Behavioral health problems cost $200 billion per year, more than heart conditions, trauma, or cancer.

People with one or more behavioral health conditions spend $672 billion annually on overall health care.

People diagnosed with a comorbid behavioral health and chronic health condition cost 300% more than those with only a chronic health condition.
Lack Of Integrated Care Coordination Results In Poorer Outcomes & Higher Cost Per Consumer

Drives adoption of coordinated care models across medical, behavioral, and social systems. . .

New service model: behavioral health services “imbedded” in primary care for mild/moderate conditions

New service model: single “vertical” care coordination program for each consumer
Emerging Framework For Integrated Care Coordination

Behavioral health system optimization is central to success – and value-based reimbursement key to that optimization.
Reimbursement Moving From Volume To Value To Support “Integrated Care Coordination”

Compensation Continuum By Level Of Financial Risk

<table>
<thead>
<tr>
<th>Small % Of Financial Risk</th>
<th>Moderate % Of Financial Risk</th>
<th>Large % Of Financial Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee-for-service</td>
<td>Performance-Based Contracting</td>
<td>Capitation + Performance-Based Contracting</td>
</tr>
<tr>
<td>No Financial Accountability</td>
<td>Moderate Financial Accountability</td>
<td>Full Financial Accountability</td>
</tr>
<tr>
<td>Management Via 100% Case By Case External Review</td>
<td>Internal Ownership Of Performance Using Internal Data Management</td>
<td></td>
</tr>
<tr>
<td>Passive Involvement</td>
<td>Provider Engaged</td>
<td>Provider Active In Management</td>
</tr>
<tr>
<td>Case rates for addiction treatment</td>
<td>Mental health by telehealth</td>
<td>“Center of Excellence” contracting</td>
</tr>
</tbody>
</table>
Increasing “Market Share” Captured By The New Model

- Secondary carve-outs of behavioral health are less common, but still prevalent – 40% of Medicaid health plans
- Vertical carve-outs emerging. In Medicaid, 3 states with vertical carve-outs for the SMI population – 5 states with vertical carve-out for other populations
- 30+% of Medicare beneficiaries have opted into Medicare Advantage
- 2.4 million Medicare beneficiaries (nearly 12%) are enrolled in special needs plans (SNPs) – focused on specific consumer types
- About 2.0 million consumers dually eligible for Medicaid/Medicare are enrolled in Medicare Advantage Dual Eligible Special Needs Plan
- 20 state Medicaid plans with health homes – enrolling 1.25 million consumers – an increase of 25% over 2014
- Accountable care organizations (ACOs) cover 12% of the U.S. insured population
Value-Based Reimbursement Here To Stay

Because...

- Political and competitive pressure on payers – federal government and employers
- Downward price pressure on health plans
- The success of ‘some’ ACOs
- The early findings of the Medicare bundled rate initiative
- Pressure on health plan medical loss ratios
- Return to fee-for-service not feasible – only “lever” is to reduce rates and doesn’t support ‘integrated’ care coordination for ‘superutilizer’ populations

Value-based reimbursement will not only ‘permit’ the expanded use of technology – it will make technology essential for success.
The Big Picture

Payer preference for integration driving use of value-based reimbursement

Value-based reimbursement increasing in all types of health and human service financing

Value-based reimbursement changing the fundamental business model of provider organizations

Success in this environment requires evolution – governance, management culture, and operating infrastructure
The Making Of Seismic Market Change

Disruptive Innovations – Policy, Financing, Tech, Science

Shift In Organizational Roles “Value Chain”

Altered Competitive Advantage & Market Positioning

Changing Models For Organizational Sustainability
Business Model Transition
For Service Provider Organizations

Payer Policy = Pay For Cost Or Volume
What is paid for is good for the consumer - and doing more is the business model

Payer Policy = Pay For Value
Giving the consumer (and their payer) what they want and need is the business model

A revolution in performance management required

Good outcome at low cost – conveniently
So Where Does Technology Fit In This Equation? Necessary To Manage Risk & Compete On “Value”

- Analytics technology to support performance measurement capability
- Treatment technology into increase ‘value’ of consumer care
- Organizational competency to manage technology and information

For analytics technologies, use of data is key to ROI

For treatment technologies, increasing treatment ‘value’ is key to ROI
Technology Has Changed The Expectations Of Payers & Consumers – They Want ‘Consumer Sovereignty’

The synergy of new technologies allows:

1. Personalization of consumer treatment through analytics-informed decision support
2. More efficient and effective coordination of consumer services across the service system
3. The measurement of “value” of services

New treatment technologies have changed the options for consumers

Health information exchange provides data exchange and creates ‘big data’ for consumer service planning

Telehealth and virtual consultation changing geographic market boundaries for services

Interoperable electronic record-keeping systems capture health information

Smartphone and other technologies for inexpensive consumer-directed disease management

Health information exchange provides data exchange and creates ‘big data’ for consumer service planning
Technology currently enables. . .

<table>
<thead>
<tr>
<th>Technology</th>
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<tbody>
<tr>
<td>Same day scheduling and on-line appointment scheduling</td>
</tr>
<tr>
<td>Completion of ‘paperwork’ on-line before appointments</td>
</tr>
<tr>
<td>Drop-in immediate appointments</td>
</tr>
<tr>
<td>On-line consumer health assessment and diagnostics (both real-time and expert systems)</td>
</tr>
<tr>
<td>Clinical professional visits on-line - and access to clinical professionals via telephone and e-mail – “on demand” access to primary care and specialists</td>
</tr>
<tr>
<td>“Expert systems” delivering care without synchronous professionals</td>
</tr>
<tr>
<td>On-line consumer self-managed support groups (for just about every segment of the market)</td>
</tr>
<tr>
<td>On-line consumer self-service disease state management tools</td>
</tr>
<tr>
<td>Consumer access to and management of health information</td>
</tr>
<tr>
<td>Remote monitoring and in-home case management using on-line tools and robots</td>
</tr>
<tr>
<td>More consumer ‘informed choice’ of health plan, provider organization, professional, and treatment options – with transparency</td>
</tr>
<tr>
<td>More use of ‘science-based’ treatments with higher probability of success – the advent of personalized medicine -- “Beyond talk and pharma”</td>
</tr>
<tr>
<td>“Case management” and ‘care coordination” remade</td>
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</table>
Adoption Of Technology Innovations By Specialty Provider Organizations, 2017, %

- Currently implemented
- Implementation in process
- Considering implementing in future

<table>
<thead>
<tr>
<th>Technology Innovation</th>
<th>Currently implemented</th>
<th>Implementation in process</th>
<th>Considering implementing in future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text messaging/email communication with consumer</td>
<td>34.7%</td>
<td>13.3%</td>
<td>31.1%</td>
</tr>
<tr>
<td>Telehealth/telepsychiatry</td>
<td>30.6%</td>
<td>13.8%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Consumer portal</td>
<td></td>
<td>15.8%</td>
<td>33.2%</td>
</tr>
<tr>
<td>Patient engagement apps/tools</td>
<td></td>
<td>18.4%</td>
<td>38.3%</td>
</tr>
<tr>
<td>eCBT</td>
<td>22.4%</td>
<td>3.6%</td>
<td>4.1%</td>
</tr>
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Technology Infrastructure To Support Performance Measurement Capability

### Getting The Necessary Data

| Electronic health records | Patient registries | Health information exchange | Referral tracking |

### Optimizing Care Coordination & Population Health Management

<table>
<thead>
<tr>
<th>Risk stratification</th>
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<tbody>
<tr>
<td>Advanced population analytics</td>
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</table>
### The More Risk, The More Information Infrastructure

#### Infrastructure - P4P FFS Contracts

- Centralized function for client eligibility, coordination of benefits, care authorization
- Structured revenue cycle management plan for collections with billing electronically on a weekly basis
- Services documentation on the same day service is delivered
- Formal charity care policies
- Appointment scheduling policy
- No-show/late cancellation policy
- Bad debt write-off policy and self-pay collection policy
- A/R payments are posted within 24 hours
- Track and manage claims over 180 days in A/R
- Unit costs and profitability of all service lines are tracked and managed routinely
- Performance measurement – consumer metrics, health plan performance metrics, revenue cycle management metrics, margin metrics, quality metrics
- Performance measures are reviewed regularly and are integrated with compensation and evaluation plans

#### Infrastructure - Medical Home Operations

- Same day appointment for urgent needs
- Consumer 24/7 access to clinical advice and consult electronically (telephone, e-mail, telehealth)
- Consumer portal and e-health connection
- EHR with health information exchange capability with other provider organizations
- Primary care working relationship (employed, co-located, referral)
- Specialist working relationships (own continuum or referral)
- EHR-connected functionality for decision support (wellness activities, care coordination, treatment planning, etc.)
- Analytic capability to proactively identify high-risk consumers
- Data system capacity to track health plan performance measures and generate performance reports based on these key indicators

#### Infrastructure - Risk-Based Contracts

- Care authorization for internal and network professionals and provider organizations
- Financial (medical loss ratio) risk management function
- Legal risk management requirements – risk reserves, licensure, reinsurance
- Provider network management capability – if not going to provide all services
- Claims management and payment system – if not going to provide all services
- Eligibility determination and beneficiary management capabilities
- Accreditation and licensure
- Client satisfaction measurement and customer experience management
- Performance management system with metrics-based financial management and business process management
Technology Infrastructure To Optimize Value Of Consumer Care

Engaging Consumers
- Patient portals
- Automated outreach

Reducing The Cost Of Service
- Telehealth and telemedicine
- Remote patient monitoring
# Treatment Technologies Along The Service Continuum

## Diagnostics
- Tele-psychiatry using IronWorks™
- M3 (My Mood Monitor™)
- Brain scanning tech

## Consumer Education & Decision Support
- Video Doctor
- Common Ground
- Virtual Handheld Clinic
- PTSD Coach
- True Colours
- ChronoRecord®
- Health Steps for Bipolar
- Biomarker: BDNF levels
- Mystrength.com

## Clinical Treatment
- TMS Therapy®
- Beating the Blues
- Silver Cloud

## Cognitive Function Restoration
- My Mood Map
- eCBT Mood©
- MyBrain Solutions

## Early Detection of Relapse
- Automatic Trail Making Tests™
- fMRI
- ITAREPS
- MONARCA
- ActivityWatch
- Health Buddy®
- OPTIMI

## Relapse Prevention
- Technology Enhanced Recovery™
- REAC-CRM (REAC-lithium)
- PSYCHE
- Personalised Ambient Monitoring (PAM)
- MoodMapping™

## Remote Monitoring of Patient Health
- ViTelCare™ T400
- SenseWear® Armband System
- MagneTrace
- ID-Cap
- Electronic Medication Management Assistant® (EMMA)
- Implantable RF Transceiver ZL70102
- Motionlogger Actigraph
- Helius™
- MOBUS
The Emerging Tech-Enabled Service System

1. The Right Service
2. Convenience As Driver Of Consumer Preference
3. The Technology Substitution Effect
4. The New Tech-Enabled Competition
1. The Right Service

Use of decision support tools for consumers and professionals

CDS has a number of important benefits, including:

- Increased quality of care and enhanced health outcomes
- Avoidance of errors and adverse events
- Improved efficiency, cost-benefit, and provider and patient satisfaction
Personalized Behavioral Healthcare

Our leading technology helps patients find relief faster through data-driven, personalized care.

**PROVIDERS**
Discover the new standard for personalized medicine

**PATIENTS**
Take our test and see which treatment is best for you

We prevent switches in medication by getting it right the first time.

Most depressed patients struggle with a number of drugs until they find relief. We use peer-reviewed machine-learning technology and measurement-based care to minimize trial-and-error and get patients better as soon as possible.
2. The Right Service Location

- Telehealth
- Remote Monitoring
- Mobile Apps
**Patient Services**

Patient Information about Telehealth

*Tele...what? Telehealth!*

*Telehealth, also referred to as telemedicine, is a means of delivering health care services at a distance. This can occur over two-way interactive video, or electronically using the internet. Telehealth may be used by patients to see health care Arcadian Telepsychiatry...*
3. Convenience As Driver Of Consumer Preference

“Easy” 24/7 with a “click” – the “amazon” and “Uber” phenomenon

Access to appointments

“Automated” administrative burden

Online standardized service packages and pricing
More U.S. Patients to Self-Schedule Appointments

By the end of 2019,

- 2-in-3 Health systems and patients will adopt tools to book appointments online
- 38% Medical appointments will be self-scheduled

= 986 million appointments + $3.2 billion in value

Source: Accenture 2014

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Same-day Appointments

Cleveland Clinic now offers same-day appointments. In most cases, depending on the level of care you need and the time of day when you call, you'll be seen by a physician that day.

If you call 216.444.CARE or

Same-Day Online Appointment Scheduling Now Available

Woodland Healthcare is pleased to announce that through our partnership with InQuicker, we are now

Same-Day Appointments at Wilmer Eye Institute

Wilmer Eye Institute at Johns Hopkins is now offering same-day appointments. A Wilmer operator is available to speak to you from 8:30 am to 5:00 pm (EST), Mon. through Fri., at 410.955.5080. You may also call toll-free: 888.945.6374. Depending on the level of care, in most cases if you call before noon, you will be offered a same-day appointment, and if you call after noon, you will be offered a next-day appointment.
Our subscription plans

Whether you prefer messaging only or a combination of video sessions and messaging, we have a plan that fits your needs and budget. We also offer Prepay Discounts (up to 20% off) on all our plans.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Original</th>
<th>Most Popular</th>
<th>Live Video Included</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unlimited Messaging</strong></td>
<td><strong>$32/wk</strong></td>
<td><strong>$39/wk</strong></td>
<td><strong>$49/wk</strong></td>
</tr>
<tr>
<td>Therapy Basic™</td>
<td>Text, video &amp; audio messaging</td>
<td>Text, video &amp; audio messaging</td>
<td>Text, video &amp; audio messaging</td>
</tr>
<tr>
<td></td>
<td>1 therapist check-in per day</td>
<td>2 therapist check-ins per day</td>
<td>2 therapist check-ins per day</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 Live Session/ mo (30 min each)*</td>
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*Live Sessions are available on iOS and Android.
4. The Technology Substitution Effect

- Replacing a face-to-face service with a tech-enabled service
- Replacing billable case manager time
- Replacing billable time for diagnostic testing/assessment
MEET MOLLY
YOUR VIRTUAL NURSE.

She is here to give your clinician 20% of their day back. Who is she? A breakthrough, virtual nurse who provides proven, customized monitoring and follow-up care, with a strong focus on chronic diseases.

✔ Innovative avatar-based technology
✔ Mimics the bedside manner patients need
✔ Real time data for immediate care decisions
✔ Care maintained between office visits
5. The New Tech-Enabled Competition

- Health plan development of ‘provider’ capacity
- Health systems and their ACOs
- National specialty care organizations
- National ‘virtual service delivery’ organizations
The 2025 Prediction:

“Any-Time, Any-Place, Continuous & Personalized Care...”

An ecosystem of devices and sensors which:

- Capture & Measure
- Identify
- Stratify Risks
- Inform
- Make Decisions
- Take Action
The Yellow Brick Road To “Technology Oz”

- Management KPI using existing data
- Competitive benchmarking and market metrics for strategy
- Fully functional EHR, ability to collect P4P measures
- ERP data for administrative functions to reduce administrative costs
- Fully functional EHR, ability to collect P4P measures
- Health information exchange
- Enhanced treatment using new tech
- Consumer interface tools – portal, messaging, scheduling
- Virtual consumer relationship – website, social media, ehealth, remote and passive monitoring
- Platform to manage multiple value-based reimbursement arrangement
- Population health management tools – longitudinal care management, decision support, referral tracking
- Population health predictive analytics and risk stratification

Any-time, any-place, continuous, personalized care with reimbursement based on value
The Result - Every Organization Is A Tech Organization Now!

“We’ve got 21st century technology and speed colliding head-on with 20th and 19th century institutions, rules and cultures.”

Amory Lovins

“Tech is the beating heart of efficiency, of consumerism, and of value”
Turning market intelligence into business advantage

OPEN MINDS market intelligence and technical assistance helps over 140,000 health and human service executives tackle business challenges and maximize organizational profitability

Chronic Care Management • Disability Supports & Long-Term Care • Mental Health Services • Addiction Treatment • Social Services • Intellectual & Developmental Disability Supports • Child & Family Services • Juvenile Justice • Adult Corrections Health Care

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