Why did you pick this session?
What do you want to do?
- Start telehealth initiative
- Expand an existing telehealth initiative
- Reduce emergency room overutilization
- Patient access (home, clinic, work, LHD, hospital)
- Connect providers for education
- Technology to reduce travel for meetings/education
- Use telehealth to embrace healthcare reform

What do you want to know?
- Practical applications of telehealth
- Technology issues/considerations
- Legal/Regulatory issues/considerations
- Process to do telehealth
- Personnel required for telehealth
- Resources in KY to help you
What is Telehealth?
Using technology to:

Get the right care
To the right people
At the right time
In the right place
For the right price
History of Telehealth in Kentucky
1995 – Telehealth is launched at UK. No reimbursement for clinical encounters

1998/2001 – Medicare legislation

2000 – Kentucky TeleHealth Legislation
- Funded statewide expansion to the west
- Mandated Medicaid/Commercial reimbursement
- Created Board of Directors
- Created 4 Telehealth Training Centers

2004 – [www.kytelehealth.net](http://www.kytelehealth.net) on-line schedule

2013 – Medicaid reg expanded services and locations

Today – 250+ network sites, national recognition, 80,000+ encounters, hospitals, clinics, school clinics, mental health, CCSHCN, KYDPH, state/federal prison system, large industry…
Role of telehealth in a reformed healthcare system – Aligning with Triple Aim

• Improving the patient experience, including quality and satisfaction – *Right care/right people/right time/right place/right price*

• Improving the health of populations – *Extend care to more patients, resulting in healthier populations*

• Reducing the per capita cost of care – *Managing chronic disease, reducing acute events and helping patients remain OUT of the emergency room and hospital*
Practical applications of telehealth

- Medical specialists
- Behavioral Health specialists
- Emergency Medicine/ICU monitoring
- CCSHCN rural clinics
- Workplace health program
- Remote Patient Monitoring
- Direct-to-Consumer
- Connecting students/residents in rural KY
- Connecting providers in rural KY
- Connecting administrators in rural KY
Technology Considerations

- Interactive videoconferencing
- Statewide 7 digit dial plan
- Standards-based vs. proprietary
- Store and forward
- Mobile technologies
- Network/bandwidth
- Security
Legal/Regulatory Considerations

- Medicare – Interactive VTC, rurality/HPSA, providers, service types, facility fee, coding
- Medicaid – Interactive VTC, KTHN member, H.323 standards, providers, facility fee, coding
- Private insurance – Interactive VTC, facility fee, coding
- Privileging/Credentialing
- Licensure
- Anti-Kickback/Stark self-referral law
- Medical malpractice/liability
- FDA – medical equipment
Kentucky TeleHealth Network Resource Centers

University of Kentucky - Rob Sprang
rsprang@uky.edu  859-257-6404

University of Louisville – Tim Bickel
tmbick01@louisville.edu  502-562-5775

St. Claire Regional Medical Center, Morehead – Mary Horsley
mahorsley@st-claire.org  606-783-6476

Baptist Health System, Madisonville – Steve Fricker
steve.fricker@bhsi.com  270-226-8180
If we discuss healthcare reform and how telehealth is vital to its success
You get what you pay for
Healthcare when I was a kid

• 70%+ had hospital insurance, but few had primary/out of hospital care insurance

• 1 in 8 citizens were admitted to inpatient settings each year

• Emergency room visits went up 175% between 1954 and 1964

• Sore throat?
US health spending

US HC spending per capita

$8,233-8,508  (+35%)

#2

$5,669-6,712

US HC spending as % of GDP

17.6-17.7%  (+47%)

#2

11.9-12.1%

2006 US mortality rankings
(192 countries)

Life expectancy  36
Infant mortality  39
Adult female mortality  43
Adult male mortality  42

The US healthcare system, built upon rewarding volume over value has led to:
Now, let’s talk about Kentucky...
Healthcare problems in KY

- Kentucky’s national health rankings from americashealthrankings.org
  - Adult smoking rate 50
  - Obesity 42
  - Low birth weight 43
  - Preventable Hospitalizations (Medicare) 49
  - Poor mental Health days 49
  - Poor physical health days 50
  - Cardiovascular deaths 43
  - Cancer deaths 50
  - Premature death 45
  - Overall rank 45

Overall rank dropped 2 spots from 2012
USA Influenza and Pneumonia death rate by state. Latest CDC data is used to compare and rank each state. Use the interactive chart to rank from low to high and high to low to add perspective to your research.

<table>
<thead>
<tr>
<th>State</th>
<th>Death Rate Per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>15.1</td>
</tr>
<tr>
<td>Kentucky</td>
<td>21.02</td>
</tr>
<tr>
<td>Vermont</td>
<td>7.95</td>
</tr>
</tbody>
</table>
USA ADULT SMOKING RATE
Percent of Adults Who Smoke

- United States: 20.1%
- Kentucky: 29.0%
- Utah: 11.8%
USA CANCER
Death Rate Per 100,000

USA Cancer death rate by state. Latest CDC data is used to compare and rank each state. Use the interactive chart to rank from low to high and high to low to add perspective to your research.

<table>
<thead>
<tr>
<th>State</th>
<th>Death Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>172.8</td>
</tr>
<tr>
<td>Kentucky</td>
<td>208.32</td>
</tr>
<tr>
<td>Utah</td>
<td>133.71</td>
</tr>
</tbody>
</table>
The Bad News:

**Eastern Ky. worst in national well-being**

*How the states measure up*

West Virginia (63.4) and Kentucky (63.0) had the two lowest scores for the fifth year in a row in the Gallup-Healthways Well-Being Index. North Dakota's was the highest, at 70.4.

**How the states measure up**

<table>
<thead>
<tr>
<th>State</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Virginia</td>
<td>63.4</td>
</tr>
<tr>
<td>Kentucky</td>
<td>63.0</td>
</tr>
<tr>
<td>North Dakota</td>
<td>70.4</td>
</tr>
</tbody>
</table>

*Feeling bad in Eastern Kentucky*

The congressional district covering Eastern and Southern Kentucky ranked the lowest among 434 nationwide included in a survey of people's perception of well-being. Kentucky ranked 45th among states, above only West Virginia.

**Feeling bad in Eastern Kentucky**

<table>
<thead>
<tr>
<th>Rank</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

*We're seeing people...*
“Insanity is doing the same thing over and over again but expecting different results”

Rita Mae Brown from her book “Sudden Death” (1983)
So what do we do?

• Focus on the “Triple Aim”
  • Emphasize the patient experience/patient satisfaction
  • Emphasize population health
  • Reduce per-capita cost of healthcare

• Move from “sick care” to “health care”

• *The payment system for health services*
  • Providers share the financial risk and reward
  • Incentives to deliver outstanding care at lower costs
  • Penalties for poor care at high costs (readmissions)
  • Payment is tied to quality metrics
The Good News:

**Eastern Ky. **worst in national well-being**

How the states measure up

West Virginia (61.4) and Kentucky (63.0) had the two lowest scores for the 5th year in a row in the Gallup-Healthways Well-Being Index. North Dakota's was the highest, at 70.4.

Kentucky did poorly in the latest national survey of well-being, but the state's 5th Congressional District fared even worse. The district covering Eastern and Southern Kentucky ranked the lowest among the 434 nationwide included in a survey of people's perception of well-being.

The survey assessed people's emotional and physical health; behavior that affects health, such as smoking or exercising; job satisfaction and access to basic needs, including food and housing; and their outlook on life.

It's not the first time the region has finished at the bottom of the index compiled by the Gallup polling organization and Healthways, a Tennessee-based company that provides services to improve well-being.

Dumma Pace sees the reality of the survey every day. She heads the Harlan County Community Action Agency, which has assistance programs to help people with heating, food and other needs. Requests for service have increased as jobs in the regional coal industry plummeted the last two years.

"We're seeing people..."
A workplace health program, anchored by telehealth, is a model for ACO
Health Care = Sick Care + Well Care

Spending for healthcare

Today

Tomorrow

Accomplish our goals by increasing efforts on Primary & Secondary Prevention
A blueprint is drafted

- Present the problem to an HR meeting – “The cost of doing nothing was greater than any solution we could devise – *Paul Mackey, 2005*

- One employee suggested a pilot in Inez, KY with Dr. Wells and 5 mines in the region

- Subsequent meetings - Dr. Wells, epidemiologist, company executives, UK College of Medicine Dean, telemedicine…

- The pilot project was a mobile clinic, staffed by a Nurse Practitioner, connected to Dr. Wells’ office via telehealth technology…
View from outside the back of the mobile clinic

Videoconference system, stethoscope and external camera
Workspace, medical devices and exam table
View from the cab to the back of the mobile clinic

Patient sits in the chair on the left
Dr. Wells’ view into the mobile clinic
The project

• Keep employees/families healthy and safe so they can fulfill their obligations at home and at work
• Easy access to care and needed pharmaceuticals
• MD at 2 corporate offices, NP/RN at all sites
• Co-pay/Co-Insurance features
• Create network of providers/healthcare facilities
• Telemedicine connects all sites to Dr. Wells
• Telemedicine connects all sites to regional and national medical centers of excellence for clinical encounters
• Health Risk Assessment (HRA) – “Health Check” uncovers undiagnosed health conditions
• Coaching, treatment plan patient engagement
Finally some data

- Health Risk Assessments (HRA), referred to as “Health Checks” done once/year at each facility
- Participation increased when employees trusted the information was confidential
- No incentive for participants, Nurses are rewarded, raffles for participants

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Hyper tension</th>
<th>Hyper cholesterolemia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claims-Based Assessment (2008)</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>HRA self report (2008)</td>
<td>20%</td>
<td>26%</td>
</tr>
<tr>
<td>HRA – data based on biometrics - moderate/high risk (2010)</td>
<td><strong>84%</strong></td>
<td><strong>93%</strong></td>
</tr>
<tr>
<td>Year</td>
<td>Per employee per month total healthcare cost</td>
<td>Change from previous year</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>2007</td>
<td>$927</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>$1,022</td>
<td>+10.25%</td>
</tr>
<tr>
<td>2009</td>
<td>$1,213</td>
<td>+18.69%</td>
</tr>
<tr>
<td>2010</td>
<td>$1,248</td>
<td>+2.9%</td>
</tr>
<tr>
<td>2011*</td>
<td>$1,164</td>
<td>-6.7%</td>
</tr>
</tbody>
</table>

*Other spending impact
- Primary Care, preventative care (+117%)
- Major Hospital Events ($50K+) down 40%

Next project – Home patient monitoring
# Productivity, measured by absence

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Absence days</th>
<th>Employee months</th>
<th>Absence index (absent days/employee/month)</th>
<th>% change in absences from 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>17,516</td>
<td>31,440</td>
<td>0.56</td>
<td>---</td>
</tr>
<tr>
<td>2009</td>
<td>18,725</td>
<td>34,804</td>
<td>0.54</td>
<td>-3%</td>
</tr>
<tr>
<td>2010</td>
<td>16,824</td>
<td>37,811</td>
<td>0.44</td>
<td>-20%</td>
</tr>
</tbody>
</table>
Number of Health Check Completed over Four Years Among Employees and Spouses: 2009-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Spouse</th>
<th>Self</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y2009</td>
<td>182</td>
<td>1,170</td>
<td>1,352</td>
</tr>
<tr>
<td>Y2010</td>
<td>394</td>
<td>1,946</td>
<td>2,340</td>
</tr>
<tr>
<td>Y2011</td>
<td>401</td>
<td>2,681</td>
<td>3,082</td>
</tr>
<tr>
<td>Y2012</td>
<td>549</td>
<td>3,540</td>
<td>4,089</td>
</tr>
</tbody>
</table>
Cross-Sectional Heart Age (HA) to Real Age (RA) Changes Among Employees over Four Years: 2009-2012

HA below RA: 17% to 21%

HA above RA: 83% to 79%

HA 10+ Years above RA: 42% to 35%

Y2009  Y2012
-10 to -20  1   2
-5 to -10   4   5
0 to -5     12  14
1 to 5      21  21
5 to 10     20  23
10 to 15    18  17
15 to 20    13  11
20+         11  7
Conclusions

• Workplace health programs are emerging and telehealth programs should take advantage.

• Healthcare’s focus from “payment” to “health” can result in success for everyone.

• A successful deployment of a workplace health program with a telehealth foundation is a model for ACO’s and others who are focused on performance-based healthcare – The implications are much larger than one company.