Care often is not patient-centered, many patients do not receive palliative care to manage their symptoms and side effects from treatment, and decisions about care often are not based on the latest scientific evidence.

IOM Recommendations to improve the quality of cancer care

• A national quality reporting program with meaningful quality measures
• Improve the affordability of cancer care by leveraging existing efforts to reform payment and eliminate waste
• Reimbursement aligned to reward affordable, patient-centered high quality care
IOM highlights importance of aligning reimbursement to support higher quality and lower cost of care

Delivering on IOM Recommendations to Chart a New Course will require quality measurement to be used for accountability

Anthem
Cancer drugs are one quarter of cost of cancer care

Oncology Practice Revenue Sources

Chemotherapy Accounts for 25% of Cost
WellPoint affiliated health plans internal data 2012

Reimbursement model must change so that focus shifts to providing cancer care that is value-based and patient-centered.
Income for many associated with administering chemotherapy and growth factor

Fig 1. Impact of referrals and prescribing on medical oncologist income.

Initiatives to Reform Oncology Payment – Past, Present, and Future

• Medicare Modernization Act (MMA)
• Population-based risk-sharing arrangements
  • Shared savings
  • Capitation (downside risk)
  • ACOs
• Episode-based Payment
  • drugs included in episode payment
  • drugs excluded and reimbursed at cost
  • drugs excluded and reimbursed at ASP+
• Treatment Pathways
  • Lump sum payment for participating
  • Pay for performance (retrospective)
  • Shared savings
  • Prospective enhanced reimbursement when pathway selected

Anthem
Medicare Modernization Act decreased reimbursement for drugs infused in office

- On January 1, 2005, Medicare reimbursement for physician-administered drugs from AWP to ASP system
  - AWP — average wholesale price — a list price that was often unrelated to purchase prices
  - ASP — average sales price — payment system set reimbursement at the national average of manufacturers' sales prices from two earlier quarters plus a 6% margin
- Over time, private payers followed Medicare’s lead
- Impact of MMA on cost of cancer care as yet undetermined
MMA may have decreased chemotherapy at the end of life

Probability of receiving chemotherapy in (A) last 14 days of life and (B) last 3 months of life by location of chemotherapy receipt.

Colla C H et al. JOP 2012;8:e6s-e13s
Widespread variation in use of chemotherapy in response to implementation of MMA

Regimens including drugs impacted by MMA

Hornbrook M C et al. JCO 2014;32:4042-4049
Regimens including drugs impacted by MMA: Integrated Health Networks (IHN) vs. FFS

Hornbrook M C et al. JCO 2014;32:4042-4049
At ASP + 6% razor thin margin for practices on many generics drugs

<table>
<thead>
<tr>
<th>Drug</th>
<th>Reimbursement ASP +6%</th>
<th>Practice Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generic Cancer Therapy Drugs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-FU</td>
<td>$18</td>
<td>$1</td>
</tr>
<tr>
<td>Irinotecan</td>
<td>$64</td>
<td>$4</td>
</tr>
<tr>
<td>Paclitaxel</td>
<td>$48</td>
<td>$3</td>
</tr>
<tr>
<td>Doxorubicin</td>
<td>$16</td>
<td>$1</td>
</tr>
<tr>
<td>Docetaxel</td>
<td>$2,219</td>
<td>$126</td>
</tr>
<tr>
<td><strong>Branded Cancer Therapy Drugs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxaliplatin</td>
<td>$3,699</td>
<td>$209</td>
</tr>
<tr>
<td>Bevacizumab</td>
<td>$2,266</td>
<td>$128</td>
</tr>
<tr>
<td>Cetuximab</td>
<td>$2,675</td>
<td>$151</td>
</tr>
<tr>
<td>Abraxane</td>
<td>$3,062</td>
<td>$173</td>
</tr>
<tr>
<td>Pegfilgrastim</td>
<td>$2,919</td>
<td>$165</td>
</tr>
</tbody>
</table>
ASP-based reimbursement lags price by two quarters

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Mean change (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2011</td>
<td>2.12% (-65.72% - 62.99%)</td>
</tr>
<tr>
<td>Oct. 2011</td>
<td>11.78% (-48.98% - 81.20%)</td>
</tr>
<tr>
<td>Jan. 2012</td>
<td>1.15% (-46.64% - 123.53%)</td>
</tr>
<tr>
<td>April 2012</td>
<td>-3.32% (-61.50% - 75.68%)</td>
</tr>
</tbody>
</table>

With fluctuations in generic pricing, small practices often “under water” with generic drugs.
Dramatic growth in affiliated providers taking advantage of 340B pricing

340B Program Participation Among Hospitals and Their Affiliated Sites (2005 – 2011)

Source: GAO analysis of GRSA data.
Note: 2005 was the earliest year data were reliable for hospitals without their affiliated sites.
Unintended consequences of MMA?

*COA Practice Impact Report Excerpt:* There was a 20% increase in the number of community oncology physician-owned practices impacted from 12 months ago. Specific impacts over this period are as follows:
- 21% Increase in Clinics Closed
- 20% Increase in Practices Struggling Financially
- 2% Decrease in Practices Sending Patients Elsewhere
- 24% Increase in Practices with a Hospital Agreement or Purchased
- 19% Increase in Practices Merged or Acquired

Issued April 4, 2012 by Community Oncology Alliance (COA)
Hospital charges for drugs higher than community practices

**A Quirk in Drug Pricing**
Insurers pay hospitals and doctors affiliated with hospitals more to administer chemotherapy drugs than they pay independent doctors.

<table>
<thead>
<tr>
<th>Insurance reimbursement per dose in a hospital or hospital-affiliated office</th>
<th>Reimbursement per dose in a private practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7,500</td>
<td>$0</td>
</tr>
<tr>
<td>5,000</td>
<td>2,500</td>
</tr>
<tr>
<td>2,500</td>
<td>5,000</td>
</tr>
<tr>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

**Chemotherapy drug**
(and some cancers it can treat)

- Pertuzumab (breast cancer)
- Rituximab (lymphoma, leukemia)
- Bevacizumab (several cancers)
- Cetuximab (head, neck, colorectal)
- Trastuzumab (breast, stomach)
- Fulvestrant (breast)
- Leuproline Acetate (prostate)
- Epirubicin (breast)
- Interferon alfa-2B (lymphomas, others)
- Mitoxantrone (prostate, leukemia)
- Doxorubicin (leukemia, others)
- Goserelin (prostate, breast)
- Daunorubicin (leukemia)
- Idarubicin (leukemia)
- Mitomycin C (stomach, pancreas)

Sources: IMS Institute for Healthcare Informatics; RxList
By The New York Times
Unadjusted healthcare costs by site of service

Fisher et al. ASCO 2014

aMean total costs, unadjusted
*p<.001 (PO vs HOP)
§Includes infused (IV) cancer therapies and other ancillary services.
Adjusted healthcare costs by site of service

- All cancer types (N=12,899)
  - PO costs less than HOP: 0.92, p-value: 0.001
- Early breast cancer (N=6,502)
  - PO costs less than HOP: 0.92, p-value: 0.001
  - PO costs more than HOP: p-value: 0.230
- Metastatic breast cancer (N=2,553)
  - PO costs less than HOP: 0.97, p-value: 0.007
  - PO costs more than HOP: p-value: 0.011
- Metastatic lung cancer (N=1,254)
  - PO costs less than HOP: 0.92, p-value: 0.001
- Metastatic colorectal cancer (N=1,099)
  - PO costs less than HOP: 0.86, p-value: 0.001
- NHL/CLL (N=1,491)
  - PO costs less than HOP: 0.92, p-value: 0.001
UHC Pilot

• **Payment model**
  - Episode payment = margin that would have been paid to practice on drugs + average of E&M for professional services during hospitalization + “small case management fee” (19 episode categories); episode payment continued when patient on hospice
  - Drugs reimbursed at ASP as a proxy for acquisition cost
  - No payment for professional services (E&M) during hospitalization or hospice
  - Other payments remained unchanged
  - Opportunity for shared savings on total cost of care

• **Setting** - 5 large practices
  - 810 patients with breast, colon and lung cancer treated Oct ‘09-Dec ‘12

• **Control Group**
  - UHC’s registry of >65,000 patients with breast, colon, and lung cancer with sufficient clinical and claims data to assign them same episode categories

• **Results** – compared with registry predicted costs
  - 179% greater chemotherapy costs (+$13.46 million)
  - 34% lower total health care costs (savings of $33.36 million)

CMMI Oncology Care Model Proposal

Requirements
• Employ one or more designated patient navigator/care coordinators;
• Document a care plan that contains the 13 components in the IOM Care Management Plan
• Provide 24 hours/day, 7 days/week patient access to an appropriate clinician who has real-time access to practice’s medical records
• Utilize data for continuous quality improvement
• Use an EHR compliant with Stage 2 of meaningful use by Year 4

Additional payment
$160/PBPM
+ performance-based payment calculated based on the practice’s scores on quality measures and savings >4% total cost of care
Pathways are widely discussed as key solution to escalating costs of cancer care

Clinical Pathways:

What happens when a healthcare institution creates its own clinical pathway process to optimize patient care while lowering the cost of cancer treatment? UPMC Cancer Centers has done exactly that and demonstrates how other institutions might be able to benefit from its experience.

Speak Up!
All Pathways Are Not Created Equal

BY PETER G. ELLIS, MD

State Oncology Groups Advance Clinical Pathways

BY LOLA BUTCHER

Indiana Oncology Society's recent decision to endorse the pathways services of P4i Healthcare marks the third regional oncology organization to take a position on cancer care. "Increasingly, insurers are mandating that health care providers follow certain quality measures, or pathways, that define what constitutes appropriate services for the majority of our Naveed Chowhan, MD, President of the Indiana society, said in a news release announcing the decision. "This is approaching this preemptively to ensure that cancer care providers not only assist in the development of the pathways to be used in Indiana, but are comfortable with them as well."

The Indiana group follows the lead of Oncology Physician Resource (OPR), a physician-owned group purchasing organization in Michigan. OPR worked with the state's biggest insurer to develop strategies for clinical pathways.

Cancer Care Pathways
Catching on with Payers

BY LOLA BUTCHER

Three pathways companies—Innovate Oncology, P4i Healthcare, and Via Oncology—are actively marketing their services to insurers, and others are expected to come on the scene soon. And while it is clear that the use of clinical pathways will change how oncologists are paid, exactly how that will play out is not.

Strategic Use of Clinical Pathways

BY Dean B. Greene, MD, and Marian Wiseman, MA

Minnesota Oncology, Minneapolis, MN: Wiseman Communications, Washington, DC

What’s involved in using clinical pathways in oncology practice: Who’s using them, and why? Are they something your practice should consider?

Some oncologists have embraced pathways, while others haven't. "Some physicians will say it’s too much of a cookie-cutter approach," comments oncologist Bruce A. Feinberg, DO, vice president and chief medical officer of P4i Healthcare, which develops oncology pathway programs and was acquired by Cardinal Health earlier this year. He goes on to say, "I always derived my greatest satisfaction from making the diagnosis, going on to develop strategies for oncologists such as poor outcomes or elderly patients.

The scope, granularity, and available options of pathways vary. For example, Via Oncology, a subsidiary of the University of Pittsburgh Medical Center, has pathways that cover 17 types of cancer and include prognostic testing, such as EGFR and CapecitabineX. Chemotherapy and biologic therapy, supportive care, and radiation therapy. Via is adding an end-of-life pathway in early 2011. Via’s pathways have a single treatment protocol for each specific patient presentation, including stratification for scenarios such as poor performance or elderly status.
Guidelines – very broad and inclusive

NCCN includes 64 platinum-based combinations as guideline-concordant treatment options for first line therapy of non-small cell lung cancer
### Variation in outcomes across 1st line regimens for non-small cell lung cancer*

<table>
<thead>
<tr>
<th></th>
<th>Estimated Survival (months)</th>
<th>Grade 3-4 Adverse Events</th>
<th>Any serious AE (Hospitalization)</th>
<th>Deaths on Rx (Deaths due to Rx)</th>
</tr>
</thead>
</table>
| **Rx A** | 13.0 (NR) mos. | N/V risk: Moderate*  
FN + infection:1%  
Neuropathy: 11%  
Debilitating fatigue: 6% | 53% (**)) | <1% (<1%) |
| **Rx B** | 10.4 (9.6-11.2) mos. | N/V risk: High  
FN + infection:4%  
Neuropathy: ND  
Debilitating fatigue: 5% | 35% (**)) | 7% (1%) |
| **Rx C** | 11.8 (10.4-13.2) mos. | N/V risk: High  
FN + infection:1%  
Neuropathy: ND  
Debilitating fatigue: 7% | 37% (**)) | 7% (1%) |
| **Rx D** | 13.1 (NR) mos. | N/V risk: Moderate  
FN + infection:1%  
Neuropathy: 3%  
Debilitating fatigue: 4% | ** (**) | <1% (<1%) |
| **Rx E** | 13.4 (11.9-14.9) mos. | N/V risk: Moderate  
FN + infection:4%  
Neuropathy: 4%  
Debilitating fatigue: 5%  
Bleeding 4% | 75% (19%) | 5% (4%) |
| **Rx F** | 12.6 (11.3-14.0) mos. | N/V risk: Moderate  
FN + infection:2%  
Neuropathy:0%  
Debilitating fatigue:11% | **(20%)** | **(2%)** |

* Non-squamous histology; first line platinum based chemotherapy indicated when no EGFR or ALK mutation present  
** Not reported

Anthem  
Socinski JCO 2012; Sandler NEJM 2006:355; Scagliotti JCO 2008:26; Reck Annals of Oncology 2010; Patel 2012
Little variation in patient outcomes but marked variation in treatment cost

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Estimated Survival (months)</th>
<th>Deaths on Rx (Deaths due to Rx)</th>
<th>Cost (4 cycles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbo/Paclitaxel</td>
<td>13.0 (NR) mos.</td>
<td>&lt;1% (&lt;1%)</td>
<td>$452</td>
</tr>
<tr>
<td>Gem/Cis</td>
<td>10.4 (9.6-11.2) mos.</td>
<td>7% (1%)</td>
<td>$886</td>
</tr>
<tr>
<td>Cis/Pemetrexed</td>
<td>11.8 (10.4-13.2) mos.</td>
<td>7% (1%)</td>
<td>$25,619</td>
</tr>
<tr>
<td>Carbo/nab-Paclitaxel</td>
<td>13.1 (NR) mos.</td>
<td>&lt;1% (&lt;1%)</td>
<td>$24,740</td>
</tr>
<tr>
<td>Carbo/Paclitaxel/Bev</td>
<td>13.4 (11.9-14.9) mos.</td>
<td>5% (4%)</td>
<td>$39,770</td>
</tr>
<tr>
<td>Carbo/Pemetrexed/Bev</td>
<td>12.6 (11.3- 14.0) mos.</td>
<td>** (2%)</td>
<td>$64,988</td>
</tr>
</tbody>
</table>

Socinski JCO 2012; Sandler NEJM 2006:355; Scagliotti JCO 2008:26; Reck Annals of Oncology 2010; Patel 2012
US Oncology found pathways associated with same overall survival and 30% lower cost

Outcomes associated with pathways vs. usual care for advanced non-small cell lung cancer

Overall survival by Pathway status

12-month cumulative cost by Pathway status

<table>
<thead>
<tr>
<th>Pathway status</th>
<th>Overall Survival Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>All patients (n = 1,409)</td>
<td>3 month 0.82</td>
</tr>
<tr>
<td>On pathway (n = 1,095)</td>
<td>0.82</td>
</tr>
<tr>
<td>Off pathway (n = 314)</td>
<td>0.80</td>
</tr>
</tbody>
</table>

Log-rank P = .867

Neubauer M A et al. JOP 2010;6:12-18
BCBS Michigan – widespread acceptance & high adherence to Pathways

- Expectation of participation: install and use data analysis tool eobONE; 70% adherence to Pathways in Year 1 and 80% in Year 2
- Participants received $5,000 incentive payment in Year 1 (2009)
- Reimbursement incentives included enhanced generic pricing and 10% increase in E&M codes
- 80% of community oncologists participated in BCBS Michigan pathways program

![Pathway Adherence Among Participating Practices](chart)

Feinberg B A et al. JOP 2012;8:e38s-e43s
Reduced treatment variation

Reduction in treatment variation by participating practices.

Impact on cost of care not reported....
### Care First Blue Cross Blue Shield 2008-09

<table>
<thead>
<tr>
<th></th>
<th>Year -1 (n = 1,852) Cost</th>
<th>Year +1 (n = 1,897)</th>
<th>Year +2 (n = 1,595)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost</td>
<td>Mean Difference</td>
<td>P</td>
<td>Cost</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$16,494</td>
<td>$17,437</td>
<td>941.87</td>
<td>.227</td>
</tr>
<tr>
<td><strong>Chemotherapy</strong></td>
<td>$14,359</td>
<td>$15,016</td>
<td>656.68</td>
<td>.368</td>
</tr>
<tr>
<td><strong>Supportive care</strong></td>
<td>$2,136</td>
<td>$2,421</td>
<td>285.19</td>
<td>.048</td>
</tr>
</tbody>
</table>

- Included pathways for breast, lung and colorectal cancer
- “Providers were incentivized to participate with increased fee schedule payment for compliance” (65% in year +1 and 80% in year +2)
- Pathway adherence was 78% ± 14% and 80% ± 17% for years +1 and +2 with 83% and 54% of practices meeting the threshold set for the incentive each year
- “Compared with projected cost increases [12%/year], pathways resulted in $10.3 million in savings by participant sites ($7.0 million from drugs and $3.3 million from hospitalizations)”
Anthem’s Approach

- Cancer Care Quality Program provides a framework for rewarding high quality cancer care

- Oncologists participating in the Cancer Care Quality Program will receive additional payment for treatment planning and care coordination when they select a treatment regimen that is on Pathway ($350 per patient per month)

- Web-based platform with decision-support for Quality Initiative also improves efficiency of review against Health Plan Medical Policy and decreases administrative burden for practices

www.cancercarequalityprogram.com
Impact of enhanced reimbursement and support for Pathways

Mean Practice Revenue across regimens

without S code $3,010 (SD $1,488)

with S code $3,943 (SD $1,230)

S code reimbursement decreases variation in revenue across regimens
Anthem’s Approach to Pathway Development

Data from trials, publications, and compendia for many different patient populations are extracted, reviewed, and analyzed.

Medical evidence is synthesized by national experts into clinical guidelines. Evidence is also used by health plan committees to develop medical policies and utilization management guidelines used in making benefit coverage determinations.

Pathways are a subset of regimens supported by evidence and clinical guidelines and aligned with health plan medical policies. Pathways are intended to be applicable for 80%-90% of patients and are selected based on:

1. Clinical benefit (efficacy)
2. Side effects/toxicities (especially those leading to hospitalizations & impact quality of life)
3. Strength of national guideline recommendations
4. Cost of regimens

WellPoint Pathways are developed through a rigorous evidence based medicine process and reviewed by external advisors.

WellPoint’s external advisors include ~10 oncologists from geographically diverse academic and community oncology practices who have specific interest in quality of care; 4 are affiliated with NCI-designated cancer centers, 6 with Blue Centers of Distinction, and 6 have served on national committees for organizations such as NQF, ASCO, and IOM to improve the quality of cancer care.
Cancer Care Quality Program administered by AIM Specialty

**CLINICAL REQUEST**
Request is made by a Provider via the AIM ProviderPortal℠

**TREATMENT REVIEW**
Treatment request reviewed against an evidence-based regimen library for alignment with health plan medical policy for members in that health plan. Wellpoint’s Pathways are based on efficacy - toxicity and cost are also highlighted.

**DECISION RENDERED**
Immediate approval is granted if consistent with plan medical policy. Clinical experts available as necessary for peer-to-peer discussion. Notified if Pathway option available.

**PATHWAY ADHERENCE**
Practice authorized to bill S0353 and S0354 for Treatment Planning and Care Coordination when regimen is on pathway. Quarterly Analytics and Reporting are available.
Value for All Stakeholders

- Quality affordable cancer care
- Reimbursement for providers aligned to achieve desired outcomes
- Encourages innovation

-Anthem-