Why link healthcare delivery and payment systems?

• Integrated care is the 21st Century effort to meet the needs of infectious, non-communicable and chronic illness – the trifecta of health challenges in LMICs

• To achieve that shift and to bolster the quality of primary care
  → financing must align with those objectives and,
  → the payment systems must provide the incentives to drive new behaviors and processes
What are payment systems?
Payment systems are simply the way health providers are paid -- and they have profound impacts on how providers behave

• The major rationale for separating payment and provision is to allow payers – governments, social insurers, private insurers – to reward good performance and penalize poor performance → it can raise overall performance and quality in health care

• However, payment systems are necessary but not sufficient for raising provider performance
What are payment systems in healthcare?

• Payment systems are provider payment mechanisms (PPM) that transfer funds from the purchasers of healthcare services – Ministries of Health, social insurance funds, other public or private sources of funds -- to the providers, hospitals, clinics, physicians, nurses, other medical staff

• They are fundamental to the operation of healthcare services
PPMs are more than a way to transfer funds

- They are key to achieving government objectives in healthcare
- PPM are the most important leverage purchasers have in shaping health care delivery because they have a profound impact on the behavior of managers, physicians and other staff
- Thus PPMs are important in affecting volume, quality and efficiency of services
Financing is not just about transfer of funds

- Financing changes behavior of providers and patients
- Ample evidence shows that explicit and implicit incentives in payment arrangements affect provider and patient behaviors
- Proper payment incentives influences efficiency and quality in healthcare delivery
- Integrating financing and delivery offers an opportunity to influence processes and outcomes – and ensure harnessing of incentives for healthcare objectives
Value based payment and integrated care
Driving change in healthcare

Payment system – value-based payment

a strategy to promote quality and value of health care services by shifting from volume-based payments to payments tied to outcomes

(Michael Porter 2009)
Value-based health care delivery - key concepts

• Value = patient health outcomes per dollar spent

• Goal is:
  – Value for patients, not just access
  – Cost containment,
  – Convenience
  – Customer service

• Choice and competition to encourage continuous improvement across providers
Porter’s choice and competition to encourage continuous improvement in value and restructuring of care

- Integrate systems of care – integrated care
- Create integrated practice units – coordinate care
- Measure outcomes – generate data
- Measure costs – know relative costs
- Bundled prices rather than FFS -- targeted payment system
- Build an enabling information technology platform – data systems to track progress and manage the system

Michael Porter, 2009
Driving value based care designs incentives and uses data to achieve results

• Payment systems designed to change behaviors to enhance quality and efficiency
• Different payment arrangements are appropriate for different purposes
• Effective use of payment systems requires:
  – Data
  – Policy and program engagement to design incentives and monitor impacts
Traditional payment systems have limited leverage to improve outcomes

• Common payment arrangements in public systems do not design incentives for productivity or quality:
  – Salary
  – Capitation
  – Fee for service
  – Line item budget

• They drive up volume rather than value
Traditional payment systems limit ability to manage healthcare

- No data on allocation of spending, so hard to know how funds are used and the impact of the payments
- No connection between level of payment and performance
- Limits ability to hold individuals or institutions to account for performance
  → no data and no accountability, that is, consequences for performance
Value –based care needs alternative payment systems

- New payment models geared to producing quality and value
- Entail more oversight from payers
- Require clear incentives for providers
- Need to equip providers to respond to incentives in payment systems
- Payers must be reliable
New payment systems and value-based care
New payment systems align with value-based care

- Global budgets with autonomy and accountability
- Capitation with autonomy and accountability
- Diagnostic related groups (DRGs)
- Bundled payments
- Pay for performance (P4P)
- Shared savings
- Accountable Care Organizations (ACOs)
Each payment system has different approach and confronts different issues

• Some are more complicated
• Others are effective but hard to use
• Autonomy of providers central to new payment models
• Role of data is key in all of them
• Accountability — that is, holding providers to account for their performance, is integral to the design
Global capitation with autonomy and accountability

<table>
<thead>
<tr>
<th>Definition</th>
<th>Issues</th>
<th>Objective</th>
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<tbody>
<tr>
<td>• Fixed prospective payment to an integrated care entity to cover all patient services for a defined population over a specified time period. Payment adjusted for gender, age, income and location.</td>
<td>• Requires data to track activity, performance and outcomes</td>
<td>Encourage use of primary care, promote wellness, reduce costs, improve quality.</td>
</tr>
<tr>
<td>• Provider has autonomy in structuring and delivering services.</td>
<td>• Requires management to assess data, compare performances, administer rewards and penalties.</td>
<td>Autonomy provides incentive to innovate and provides tools to meet goals.</td>
</tr>
<tr>
<td>• Provider is held to account for performance.</td>
<td>• Performance and outcome goals defined in advance.</td>
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<td></td>
<td>• Payer must be consistent over time and providers.</td>
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Global budgets with autonomy and accountability

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<td>• Defined annual or bi-annual payment for full service provision by health provider, often for hospitals</td>
<td>• Requires data to track activity, performance and outcomes</td>
<td>Encourage use of primary care, promote wellness, reduce costs, improve quality. Autonomy provides incentive to innovate and provides tools to meet goals</td>
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## Diagnostic related groups (DRGs)

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| • A “case rate” payment (i.e. care associated with a particular condition or procedure) to hospitals based on expected cost of inpatient treatment | • Complicated system for defining payment by diagnoses based on ICD-10 codes  
• Detailed data systems for tracking activity – also useful for monitoring provider activities  
• Provider data systems parallel payer systems | • Incentives for hospital efficiency  
• Provides a tool for monitoring hospital activity and tracking allocation of costs |
### Bundled payments

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<td>Predetermined, risk adjusted payment for full cost of treatment over the entire care cycle of a clinical episode, encompassing hospital and outpatient services</td>
<td>Need to define the full set of inpatient and outpatient needs and determine the associated costs to set prices for each bundled service</td>
<td>Encourages integrated, higher quality care with better patient support</td>
</tr>
<tr>
<td>Following of clinical protocols embedded in process</td>
<td>Need to monitor the process to ensure compliance</td>
<td>Greater efficiency in treatment lead to savings</td>
</tr>
<tr>
<td>Provider is held to account for performance</td>
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</table>
## Pay for performance (P4P)

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| • Bonus or supplemental payments for hospitals, physician groups or health care team that reward meeting of defined performance standards | • Requires data to track activity, performance and outcomes  
• Requires management to assess data, compare performances, administer rewards and penalties | • Encourages achieving specific goals for medical team or group of providers.  
• Goals can be processes, outputs or outcomes |
“Shared savings” – sharing of cost savings

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<td>• Payment in which provider or provider organizations share cost savings with the payer; savings are generated when actual spending for a defined population is below a target amount</td>
<td>• Requires data to track costs, and efficiency or savings</td>
<td>• Encourages improved care for patients including managing high risk conditions</td>
</tr>
<tr>
<td>• Payers often provide assistance and funding to initiate efficiency change</td>
<td>• Requires management to assess data, and manage the allocation of savings</td>
<td>• Offers physicians and healthcare teams tools to improve efficiency and care</td>
</tr>
<tr>
<td></td>
<td>• Often achieved by physician groups or health care teams with new delivery arrangements</td>
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Accountable Care Organizations (ACOs)

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<td>• An organizational and financing arrangement that relies on different payment systems (capitation, bundled payments, shared savings)</td>
<td>• Requires data to track activity, performance and outcomes</td>
<td>• Encourages use of primary care, promotes wellness, reduces costs, improves quality</td>
</tr>
<tr>
<td>• Payments based on the results health care organizations and health care professionals achieve for patients in their care network</td>
<td>• Requires management to assess data, compare performances, administer rewards and penalties</td>
<td>• Autonomy provides incentives to innovate and provides tools to meet goals</td>
</tr>
<tr>
<td>• Provider has autonomy in structuring and delivering services. Performance and outcome goals defined in advance</td>
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Policy objective and ability to manage providers determine best payment system

• Value-based care more challenging than traditional payment as it entails:
  – More management by providers
  – More management and oversight by payers
  – More data across the system

• In effect it means a different culture — moving from “command and control” to one of greater autonomy and accountability with ability to manage and measure
Example of an integrated care model
Using payment systems as incentives for improved performance
Only payers can shift healthcare services for quality and value

- Financial and other incentives for providers and beneficiaries are key
- Payer support for providers important in clinical services, data and analysis
Financial incentives raise provider performance and quality

Through hospital alternatives:
• Improved outpatient services and outreach
• Day hospitals
• Rehabilitation hospitals
• Home care
• Palliative care

By targeting high cost, low value behavior:
• Systematically applying clinical protocols
• Reducing readmissions
• Reducing unnecessary hospital lengths of stay
• Discouraging use of emergency rooms for routine health problems
• Engaging patients in managing their health
Thailand - different payment schemes affect Cesarean-section incidence

- Changes in how providers were paid resulted in significant variation in services provided to mothers at birth...natural delivery or C-section

- The 3 lines show payment models for 3 insurance schemes. The top line shows doctors paid under fee-for-service while the bottom two are under capitation

China: hospitalization for diabetes over 8 times the levels of European countries → no incentives to manage diabetes as chronic condition

Age-sex Standardized Rates per 100,000
Aged 15 and Over

China’s data point is an estimate based on the 2008 national household health surveys.

Source: Health at a Glance
Obamacare has restructured the US healthcare system

• Big emphasis on quality
• Strong focus on integrated, coordinated primary care
• Built and expanded a national data system using electronic health records
• Different payment systems designed and deployed to reach objectives → value based purchasing
• Disease burden big driver for change
Concentration of Health Spending Among Highest Spenders

- Top 1% of spenders account for >20% of all spending
- Top 5% of spenders account for ≈50% of all spending
- Top 10% of spenders account for 65% of all spending
- Bottom 50% of spenders account for 3% of all spending

Percentage of Civilian Noninstitutionalized Population Ordered by Health Care Spending, 2013

Source: National Institute for Health Care Management Foundation analysis of data from the 2013 Medical Expenditure Panel Survey
Obamacare was intended to:

- Change initially driven by public sector, but:
  - private sector adopted similar innovations to drive quality and better outcomes

- Improving quality and outcomes
- Controlling costs
- Increasing insurance coverage

Innovation

ACS
US private and public payment systems shifting away from fee for service (FFS)

• “Pay for quality” and “pay for value”
• Promoting new models of care
• Reliance on big data to track performance, determine compliance and define rewards
Public insurer (CMS) revised payment arrangements under Obamacare

**Alternative Payment Models**
- Accountable Care Organizations – global capitation/shared savings
- Bundled Payments to include physicians and post-hospital care
- Comprehensive Primary Care through integrated care models

**Payment for Quality and Value**
- Hospital Value Based Purchasing for quality and value - bonuses
- Physician Value Based Modifier for quality and value
- Readmissions/Hospital Acquired Infections penalties
- Shared savings/Blended payments for PHC
1. Hospitals paid for value and quality – not volume (FFS)

- Receive bonuses for improving trends in:
  - Reduced readmissions
  - Improved quality based on indicator targets
  - Controlling costs

- Face penalties for no improvement in:
  - Quality indicators
  - Patient outcomes
  - Efficiency
Positive Medicare Readmission Trends

Medicare 30-Day, All-Condition Hospital Readmission Rate
January 2007 - June 2014

- 19.0% (2007-2011)
- 18.5% (2012)
- 17.9% (2013)

Monthly Readmission Rate
Mean Rate for Period
Declining Per Capita Spending Growth
Quality and outcomes improved: hospital acquired infection reduction 2010-2013

- Readmissions
- Central Line-Associated Blood Stream Infections
- Ventilator Associated Pneumonia

17% fall in hospital acquired infections

50,000 lives saved
US$ 12 billion in savings

Source: CMS
2. Bundled Payments

Payment to provider(s) is “bundle” for:

– Hospital and physician payment: to encourage use of teams – physicians, nurses, community

– An episode of care, hospitalization and follow up outpatient care for discharged patients
  • to promote recovery and discourage reliance on emergency room care or readmission
  • To coordinate care and manage chronic conditions

– Used extensively for orthopedic surgery, cancer treatments, maternity
Successful application of bundled payments in US and Netherlands

Baptist Health System, Texas

**Summary:** Clinically integrated network of 5 hospitals with orthopedic surgery episode

**Results:**
- 21% decline in average overall episode spending
- 29% drop in joint implant device costs
- 54% drop in average inpatient rehabilitation spending
- Length of stay dropped 22% to 7%

Source: Cost of Joint Replacement Using Bundled Payment Models (Navathe et al., 2017)

Zorg In Ontwikkeling

**Summary:** Integrated primary care network for diabetes patients

**Results:**
- 15% drop in patients with poor glycemic control
- 54% decrease in hospitalization admission costs with assigned nurse specialist

Source: Case Study: Zio Integrated Care Network (Hubertus et al., 2017)
3. ACO integrated care networks provide value – though evidence mixed

- Rewards keeping chronic care patients healthy
- Payers & providers share risk -- and savings
- Avoid emergency rooms & hospitalizations
Massachusetts ACO: global capitated budget and shared savings

- Blue Cross, non profit quality and cost control finances large physician groups
- Physician group leads the process
- Spending and clinical performance data shared with providers – payer supported provider planning and testing
- Budgets based on historical provider spending
- Payer participated in redesign with ACO
AQC Improves Outcomes, 2007-2012

AQC enrollees had better outcomes on 5 measures of the Healthcare effectiveness data information (HEDIS)

### Massachusetts Alternative Quality Contract Components

<table>
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<tr>
<th>Global Capitated Budget</th>
<th>Defined annual budget for all physician groups. All medical expenses covered for enrollees</th>
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<tbody>
<tr>
<td>Performance Indicators</td>
<td>Incentives based on quality measures; performance determines share of profits or losses</td>
</tr>
<tr>
<td>Clinical Support for data analysis and best practice</td>
<td>Physician groups have dedicated team from Blue Cross to generate performance data share, best practices across groups and drive innovation</td>
</tr>
<tr>
<td>Shared savings</td>
<td>Blue Cross shared savings from increased efficiency with Massachusetts ACO physicians after the integrated care network was operating and successful</td>
</tr>
</tbody>
</table>
Many payment systems, but they can fail for many reasons:

• Distorted incentives that are confusing and make responding difficult
• Providers that don’t have sufficient autonomy or financial resources to respond adequately
• Targets too ambitious too soon
• Managers, medical staff or administrators not adequately trained to respond
Some ACOs have failed due to

• Confused incentives
  – Putting hospitals as leaders of the ACO —confused incentives as ACOs are meant to reduce hospitalizations, hospitals earnings are tied to hospital stays

• Raising the bar too high too fast
New payment systems create other demands
Payment systems require data to design incentives and hold providers to account for outcomes.

Data extracted from EMRs and other data sources allow:

• Providers to manage performance
• Payers to encourage better outcomes

• Big data can be harnessed to compensate providers for quality and value, not volume
• Big data facilitates effective use of alternative payment mechanisms
How payers can move the agenda forward

✓ Place quality of care at the center of the agenda
✓ Create incentives for providers to integrate care and raise quality
✓ Collaborate with providers in designing approaches that can work to ensure quality of care
Key Messages and Considerations

• Providers and payers have an interest in improving quality
• Quality and efficiency help to control costs
• Payers can collaborate with providers to support changes
• Many options for encouraging better care at lower cost
  – Different payment arrangements
  – ”Nudges” for behavior shifts of providers and patients
Sources and References


Institute of Medicine () To Err is Human
Institute of Medicine ()

Porter, Michael (2009) Value–based Care – or some such, the original book