nrhi Network for Regional Healthcare Improvement

CENTER FOR HEALTHCARE QUALITY & PAYMENT REFORM

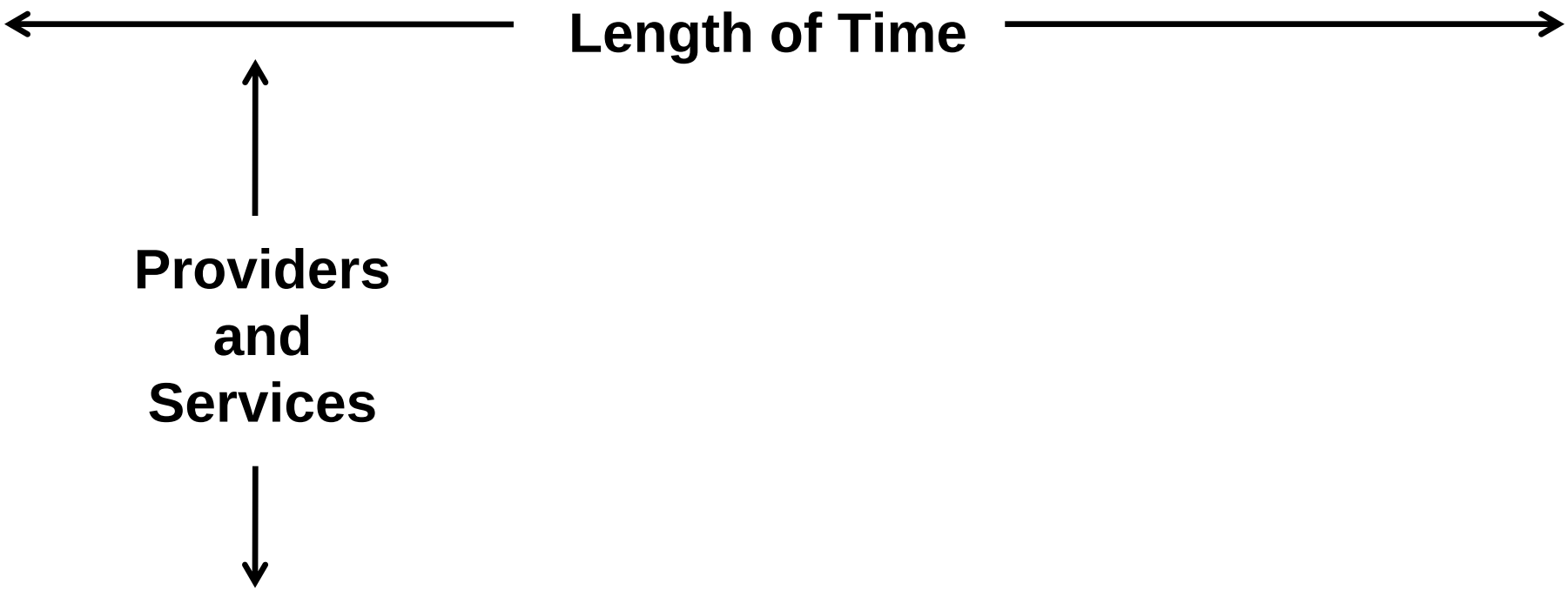
BUNDLING, EPISODES, AND WARRANTIES: How They Work for Hospital Services and How to Price and Pay for Them

Harold D. Miller
President and CEO
Network for Regional Healthcare Improvement
and
Executive Director
Center for Healthcare Quality and Payment Reform

Many Different Payment Reform Concepts Being Discussed/Tested

- “Bundling” hospital and physician payments
- “Bundling” hospital and post-acute care payments
- Penalizing hospitals for readmissions
- Refusing to pay for never events, infections, etc.
- Episode-of-care payments

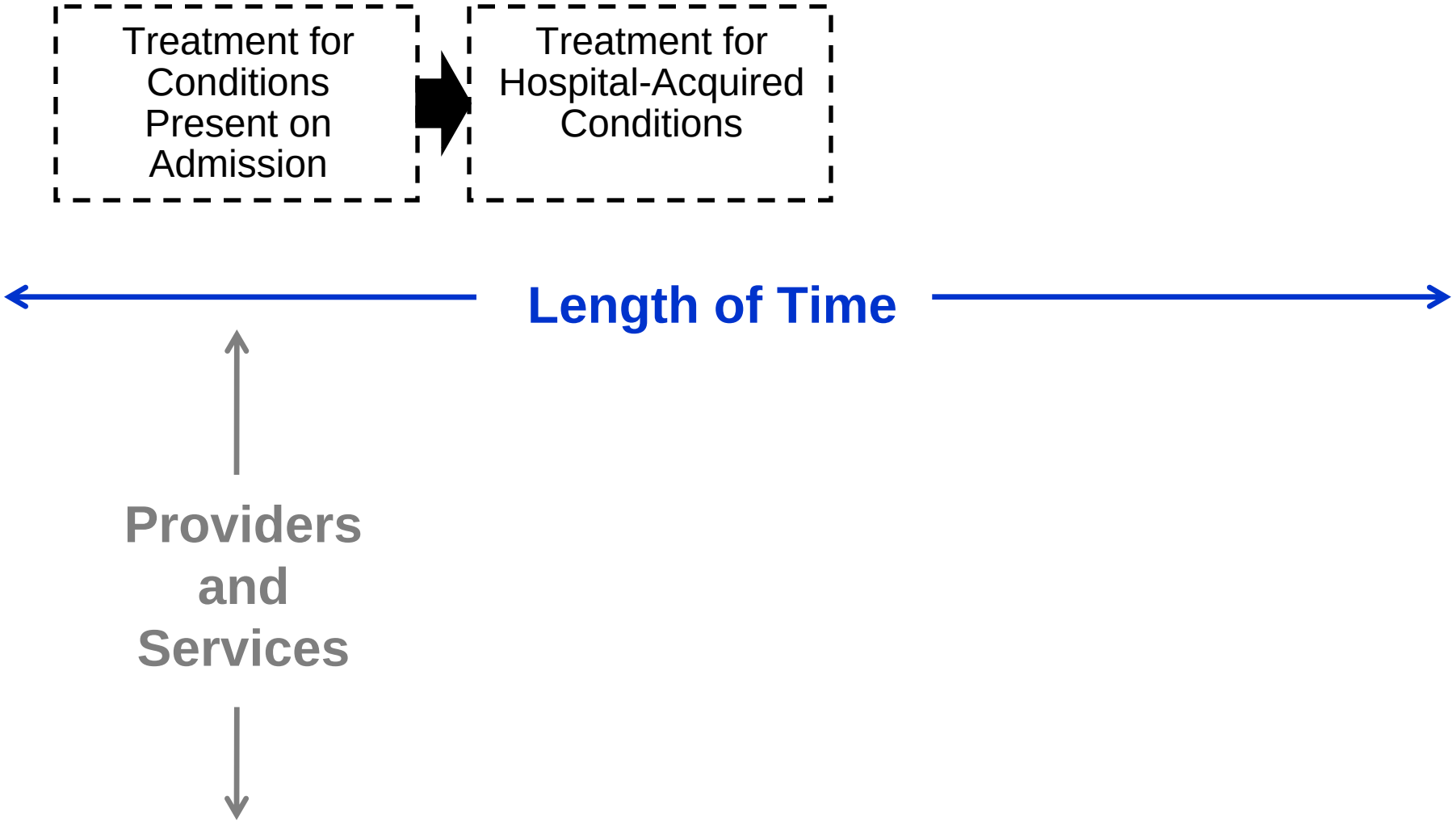
Options for Defining Payments for Major Acute Episodes



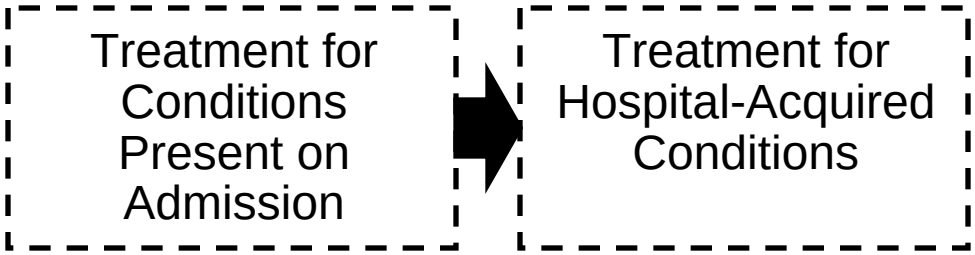
Episode Component #1: Treatment as Expected

Treatment for Conditions Present on Admission

Potential Episode Component #2: Treatment for Adverse Events



Potential Episode Component #2: Treatment for Adverse Events



Length of Time

Providers and Services

What happens if we don't include it?

PROBLEMS:
- No penalty for quality problems

Potential Episode Component #3: Post-Acute Care

Length of Time

Providers and Services

What happens if we don't include it?

PROBLEMS:
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PROBLEMS:
- No incentive to use post-hospital care efficiently

Potential Episode Component #4: Readmissions

Length of Time

Providers and Services

What happens if we don't include it?

PROBLEMS:
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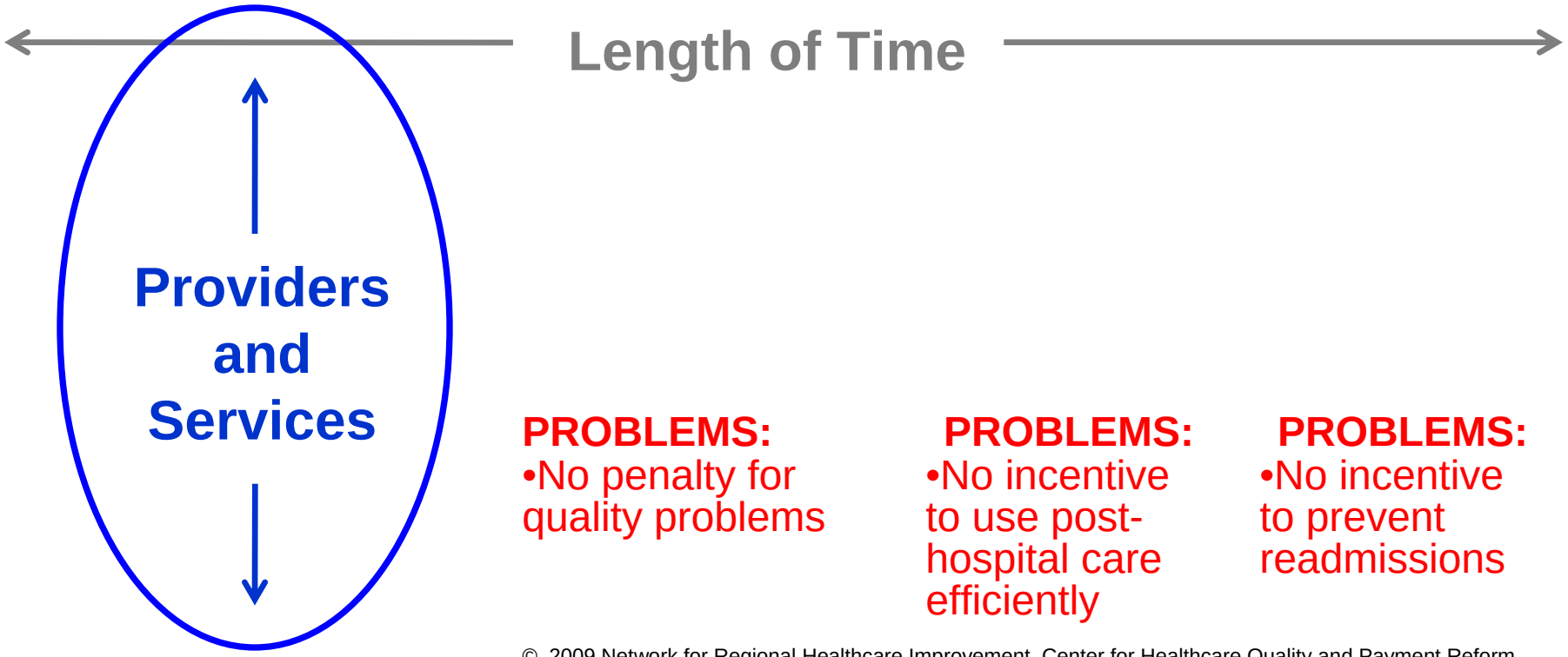
PROBLEMS:
- No incentive to use post-hospital care efficiently

PROBLEMS:
- No incentive to prevent readmissions

Which Providers & Services Are "Bundled" Into Each Component?



PROBLEMS:
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PROBLEMS:
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PROBLEMS:
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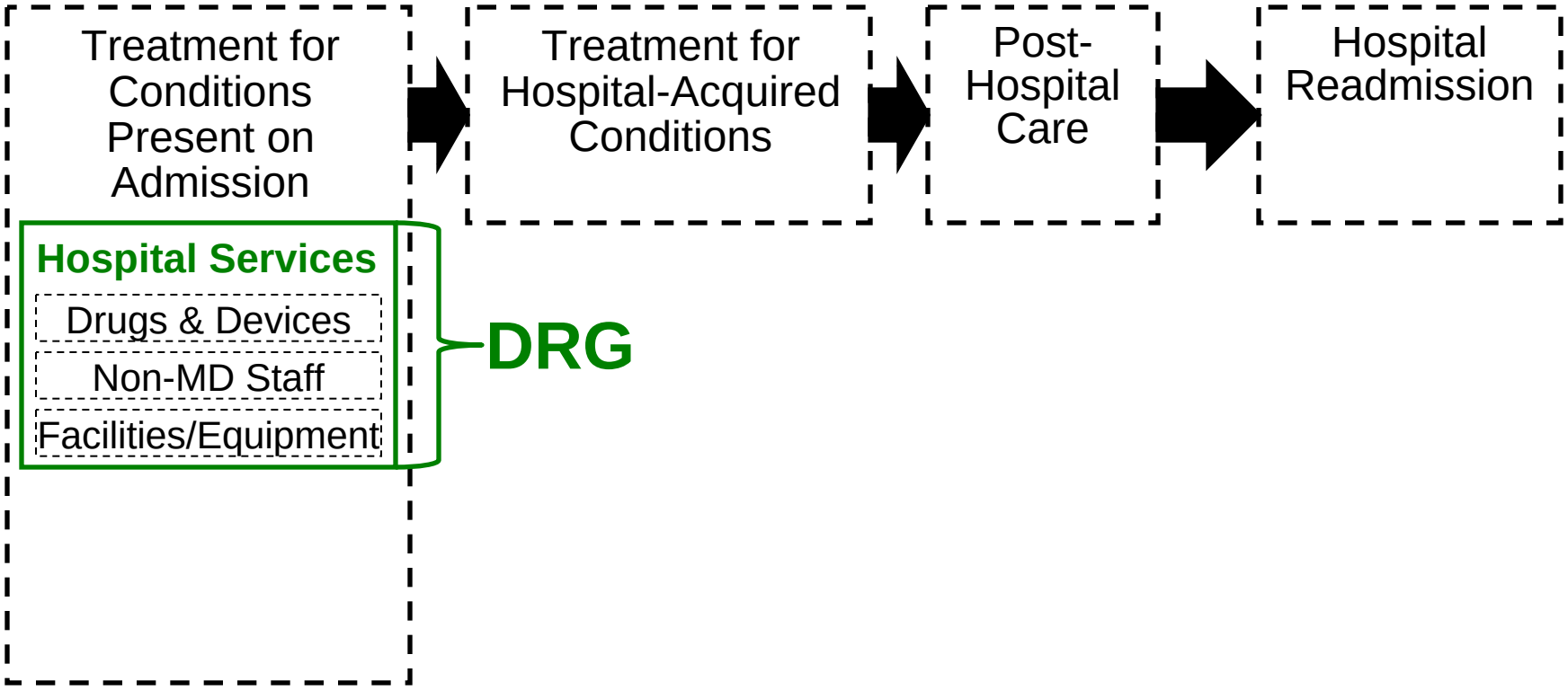
Non-MD Hospital Services Are "Bundled" Today Under DRGs



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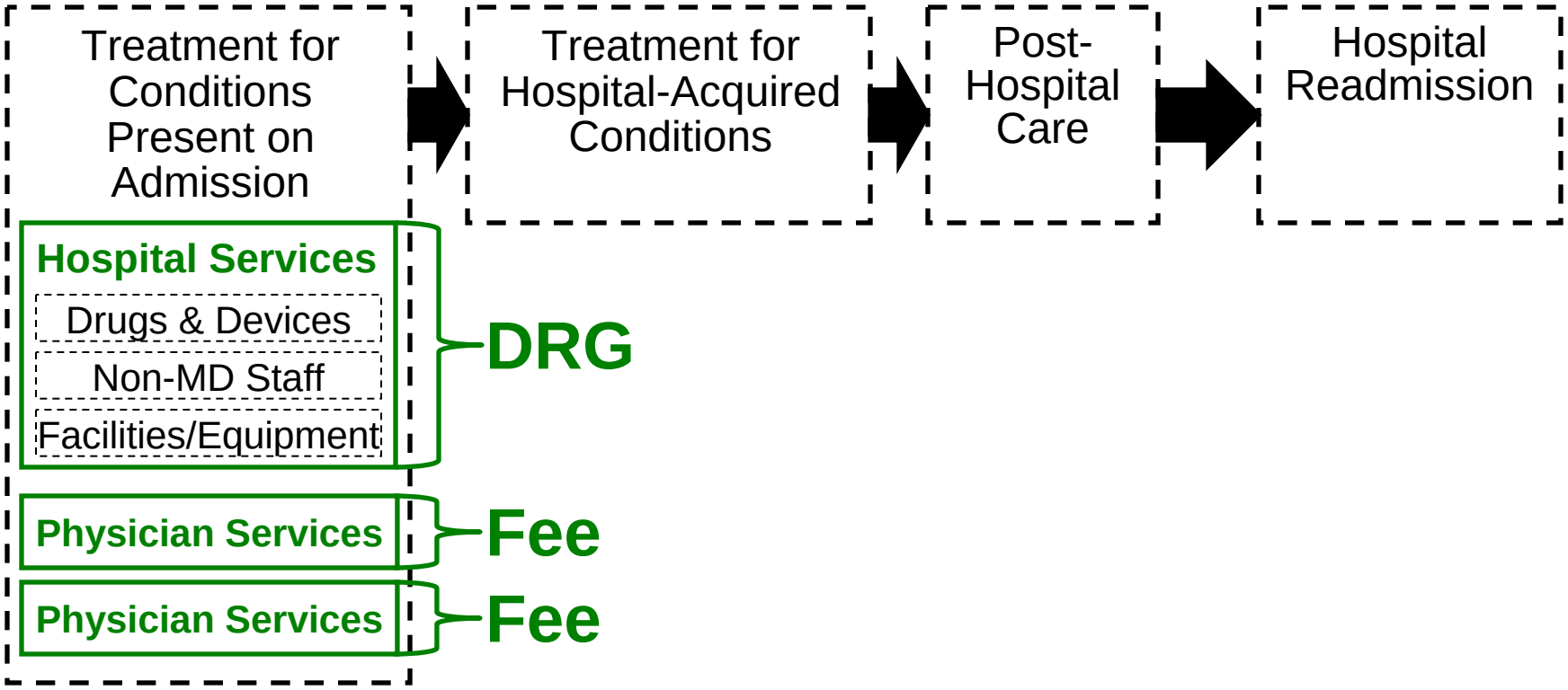
But Physicians Are Paid Separately, Many on FFS



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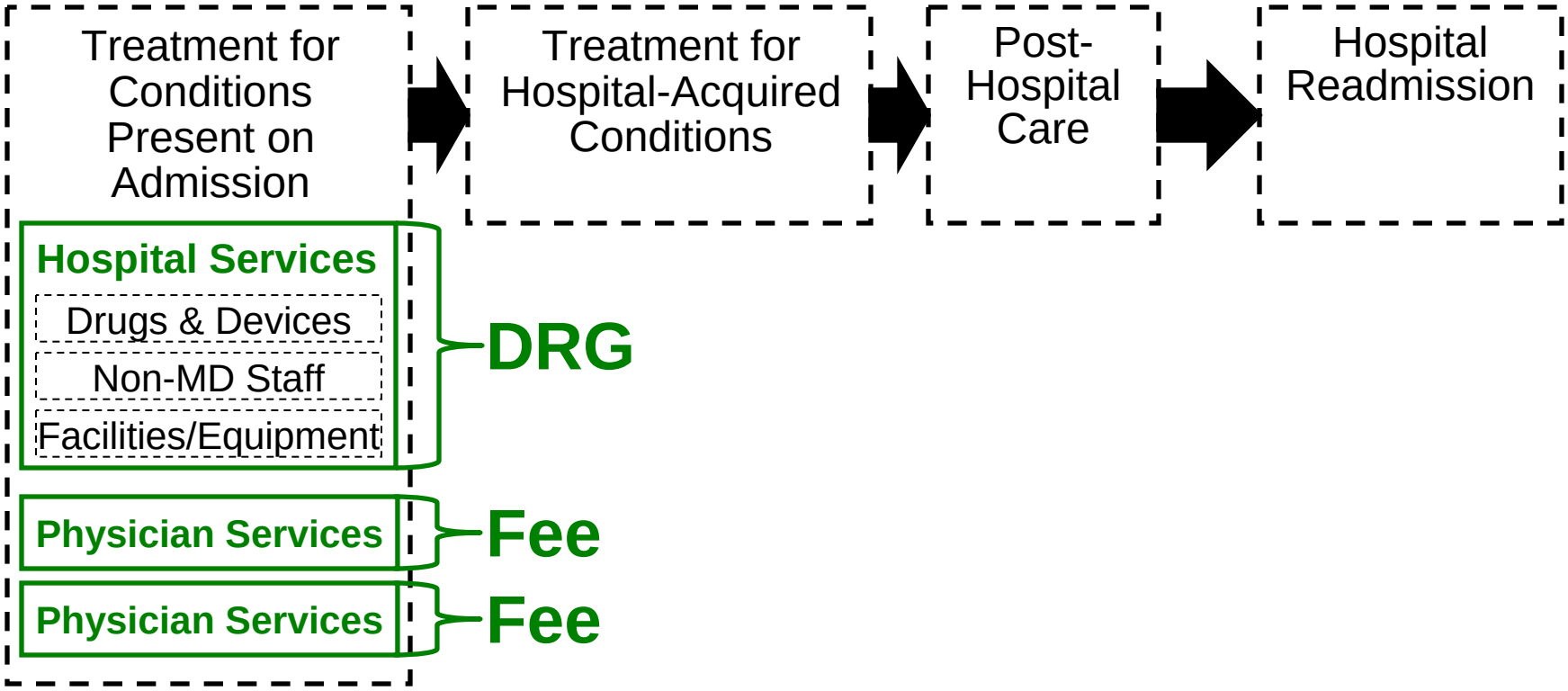
Creates Non-Aligned Incentives Between Hospitals & Physicians



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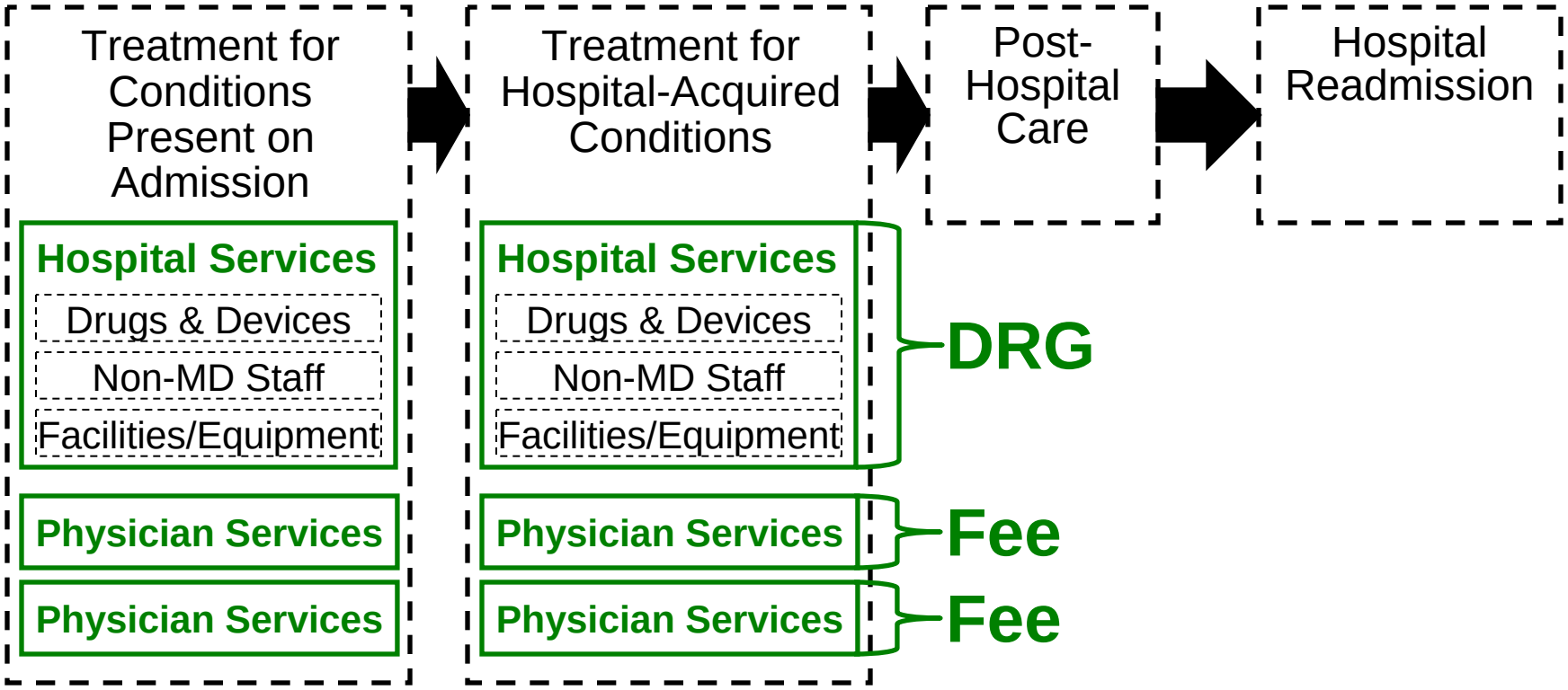
Treatment for Complications May Add Additional Services/MDs



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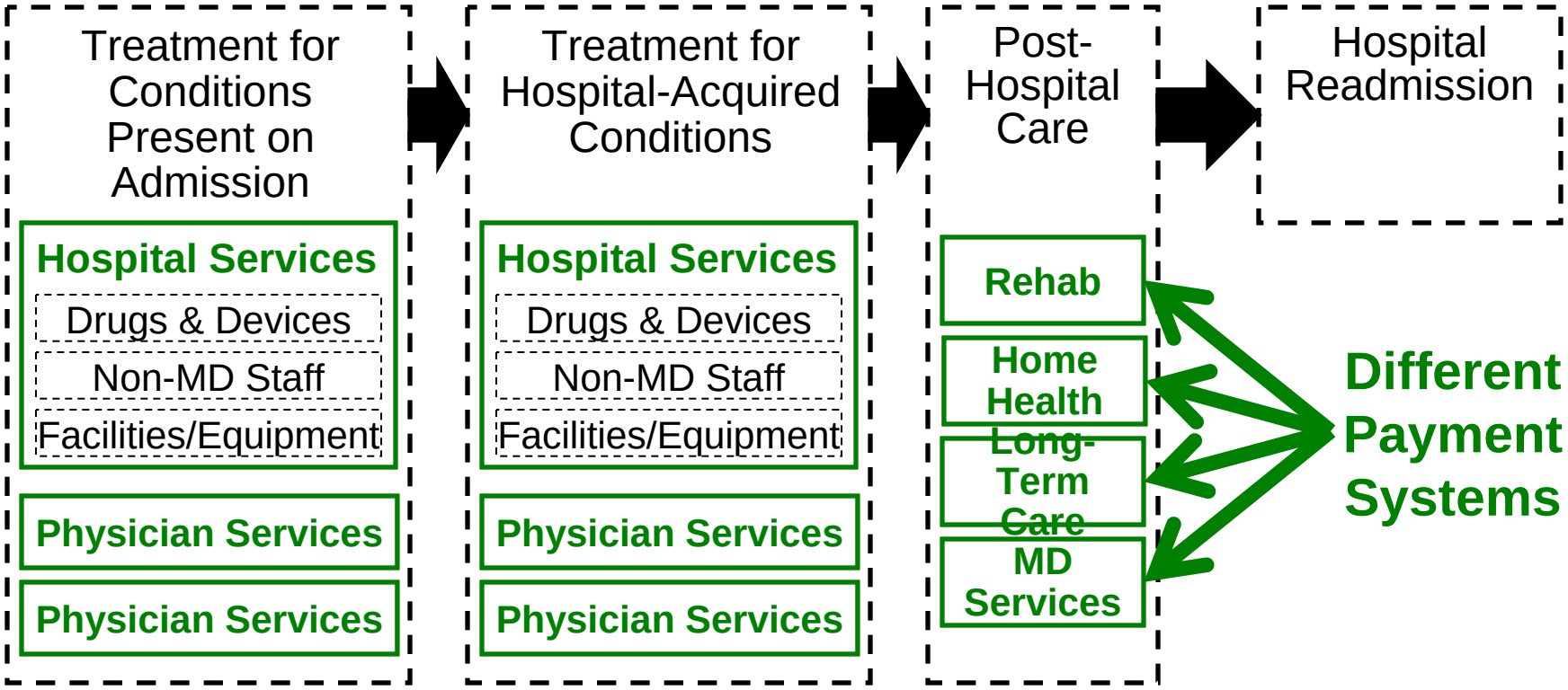
Many Different Providers Involved in Post-Acute Care



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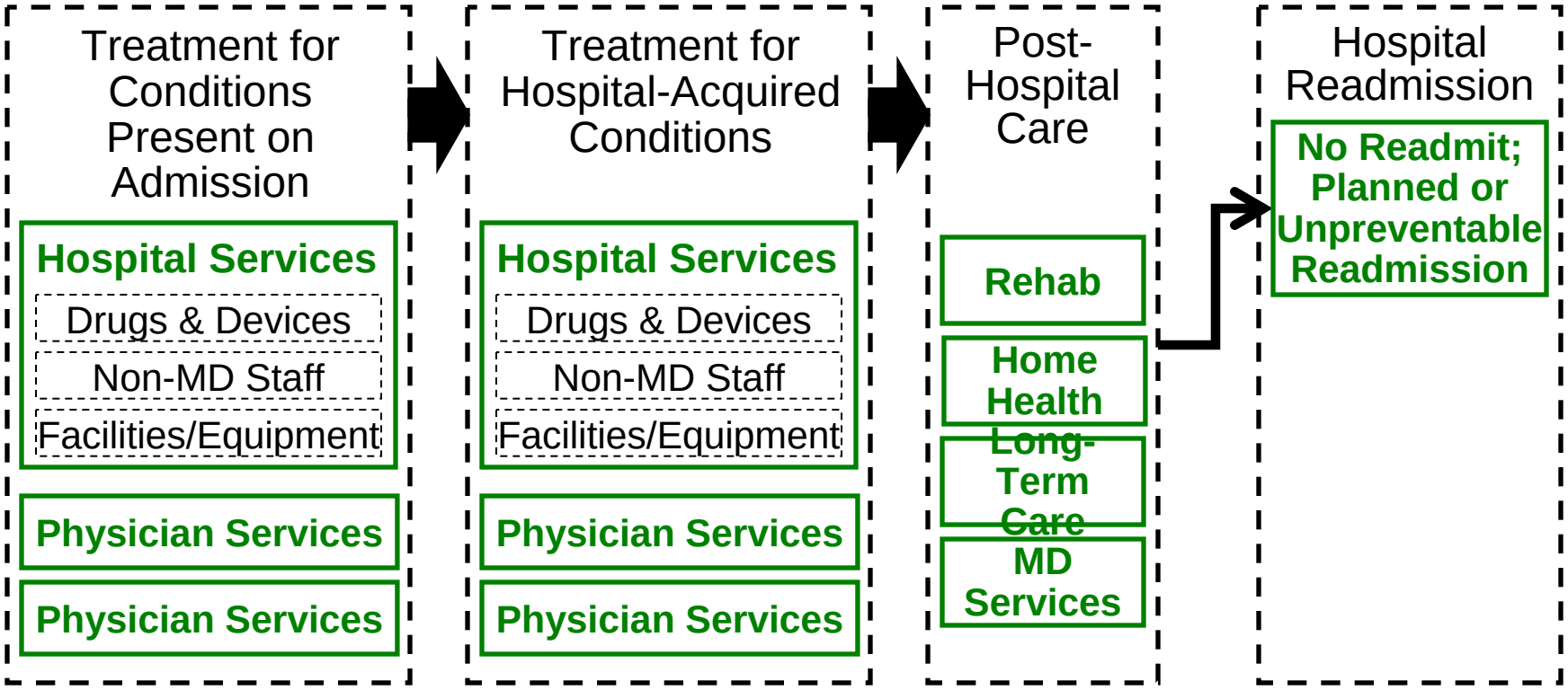
Some Readmissions Are Planned or Unpreventable...



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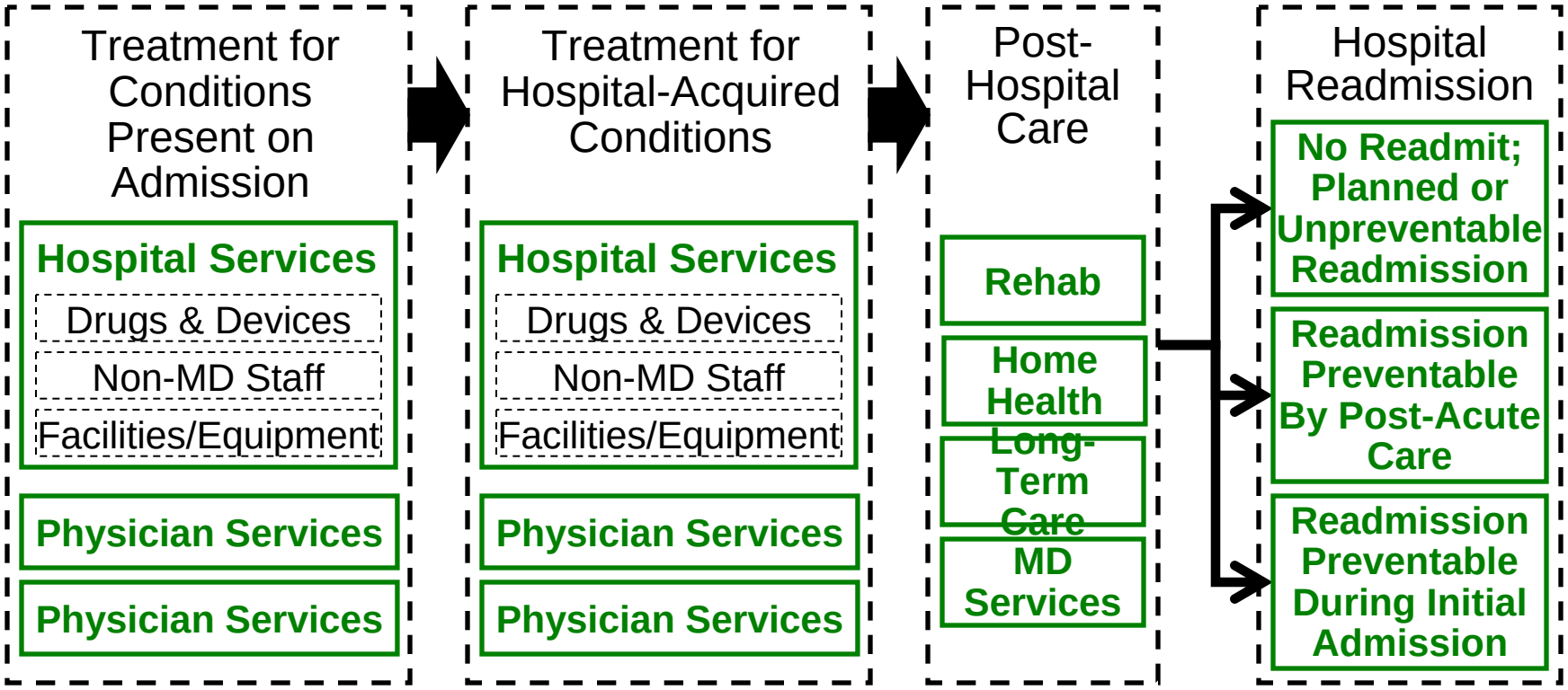
...Many Readmissions Are Preventable, But By Whom?



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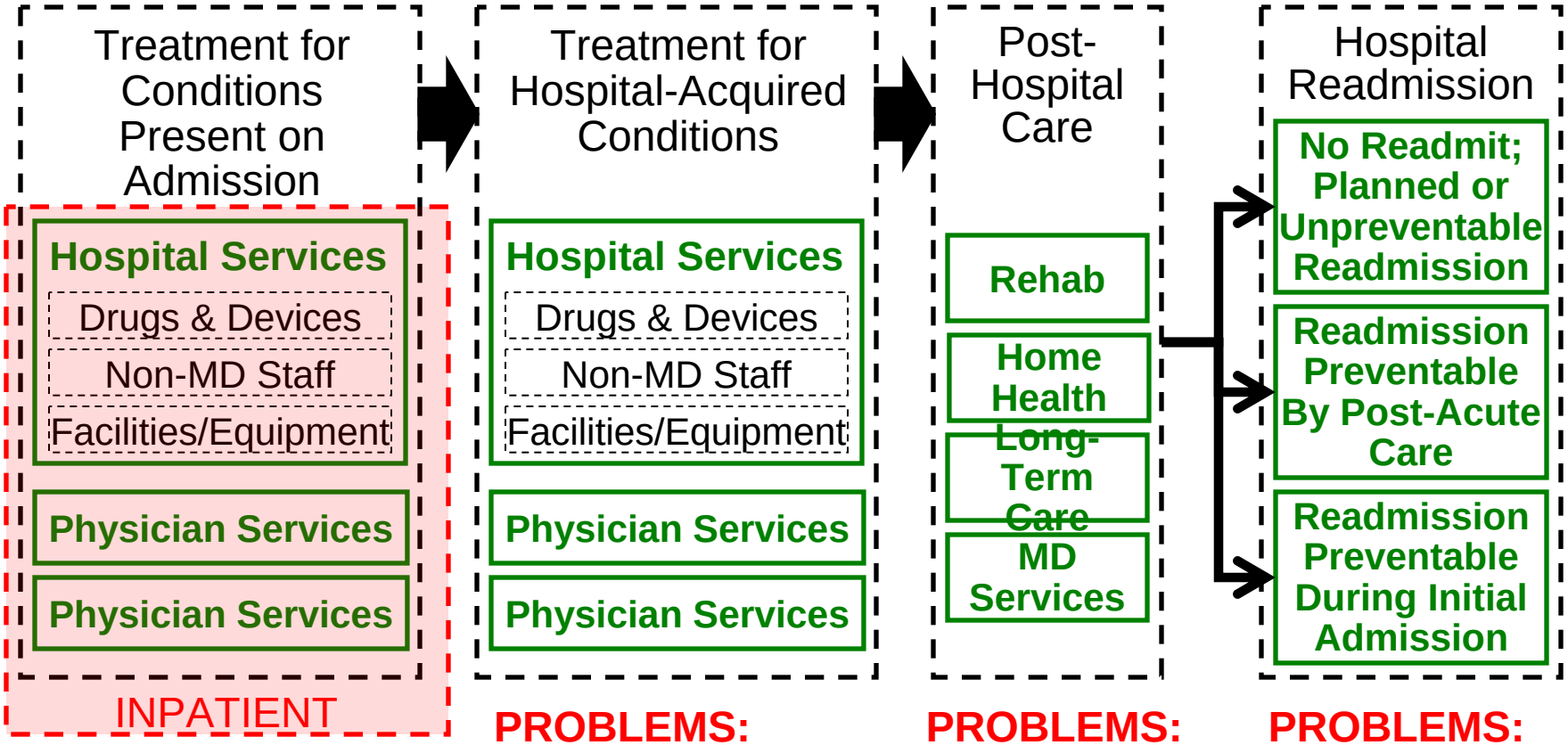
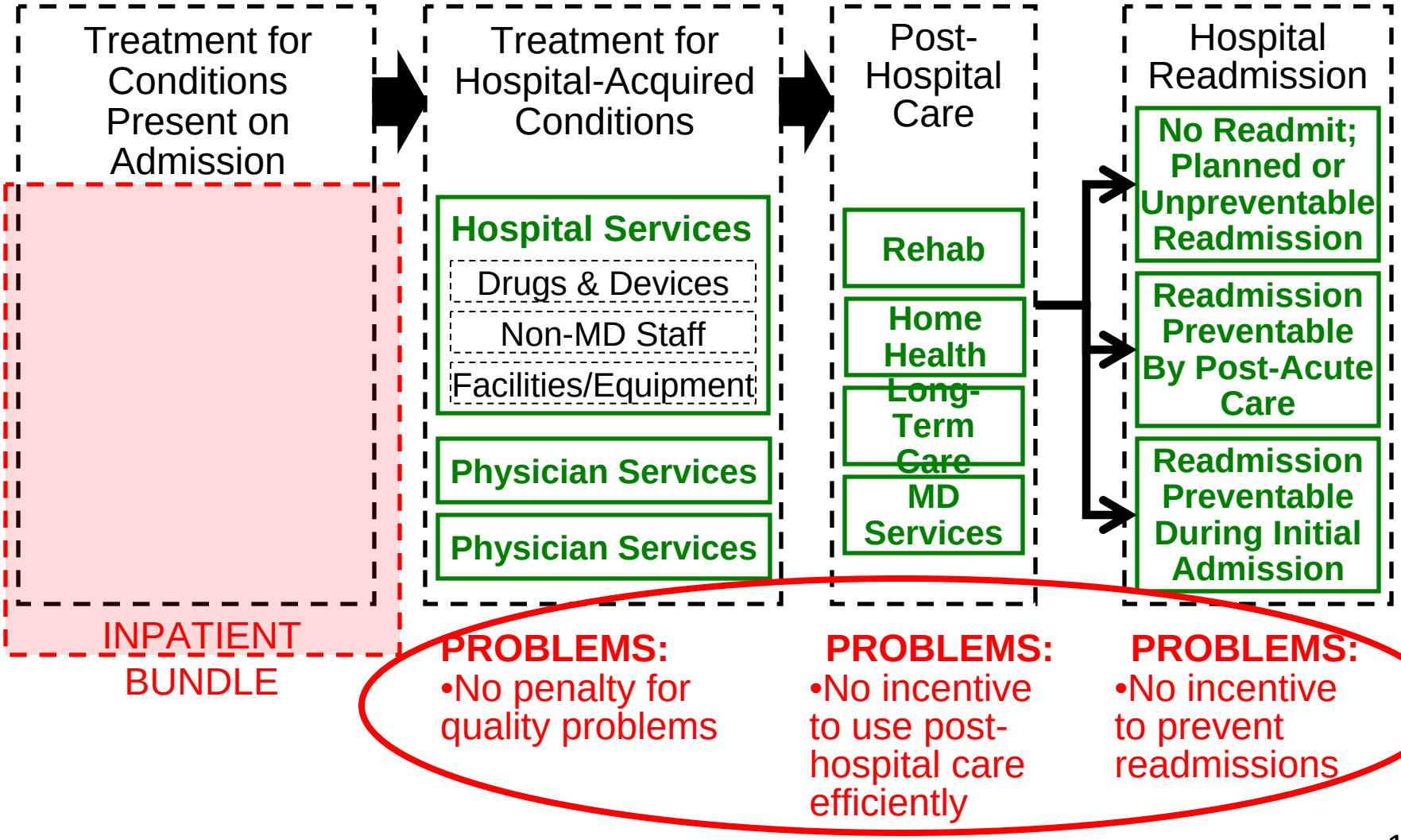
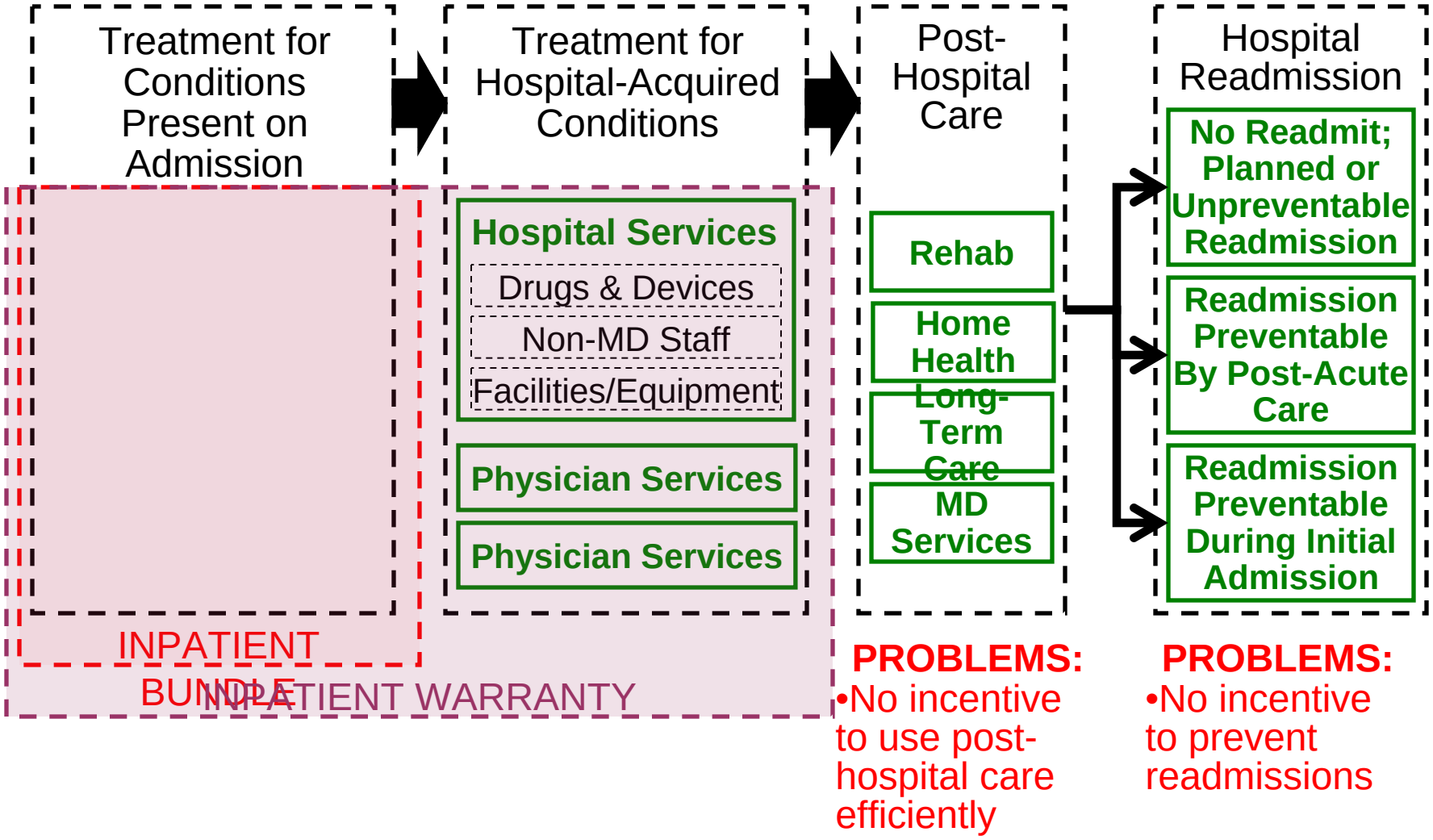
"Inpatient Bundle:" Hospitals & MDs in a Super-DRG



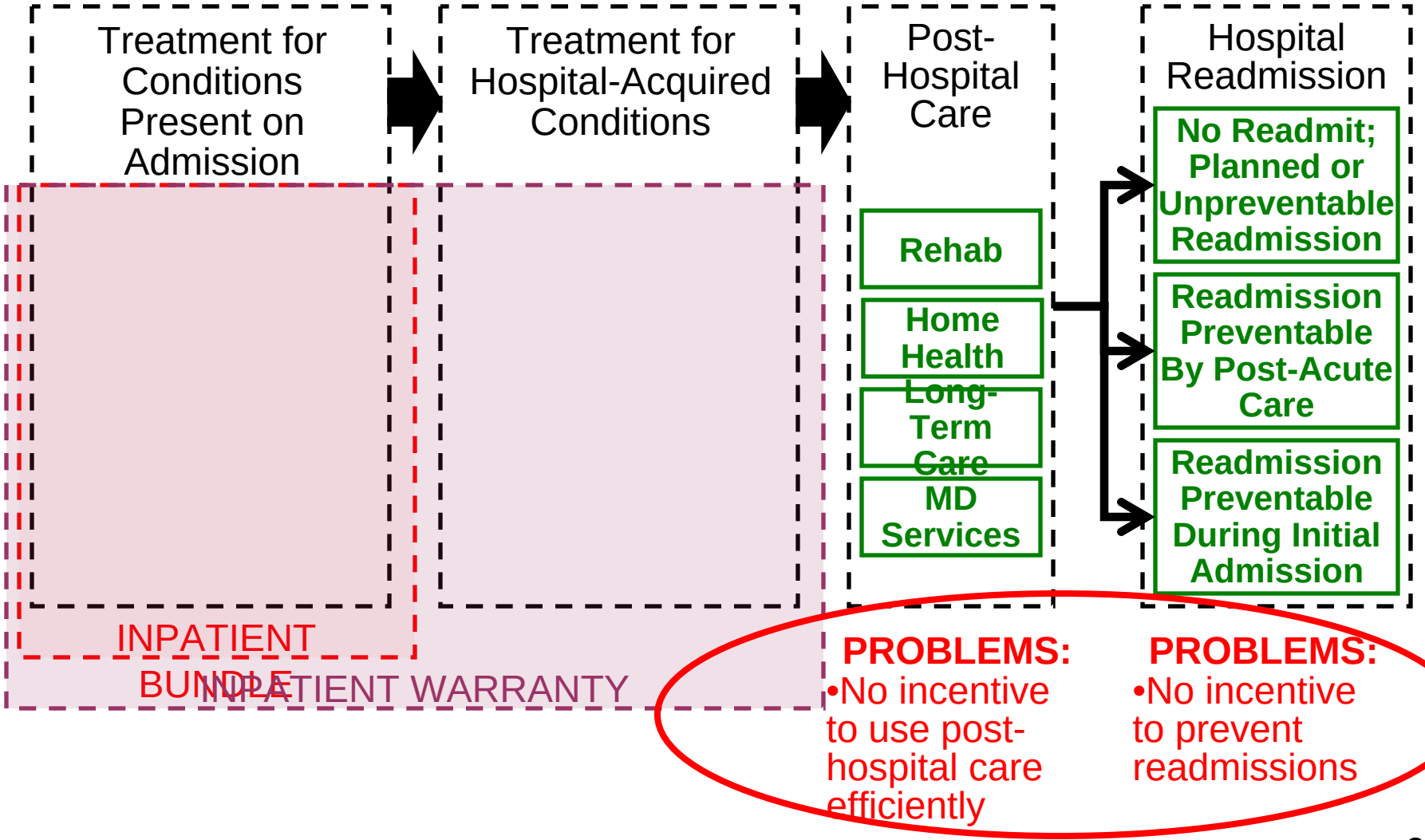
Inpatient Bundle Doesn't Address Other Problems



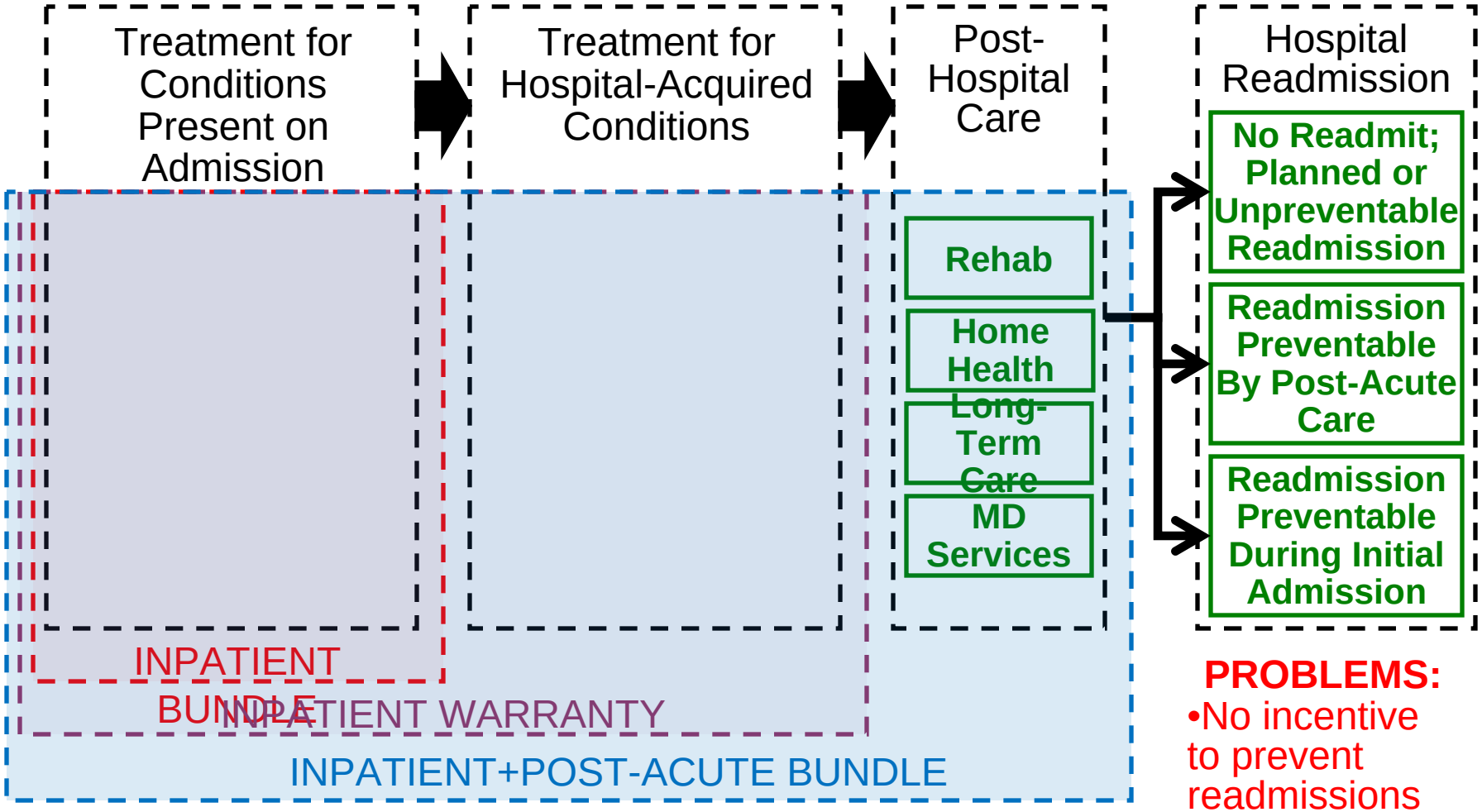
"Inpatient Warranty:" No Additional Payment for Adverse Events



Inpatient Warranties Don't Address Post-Discharge Costs



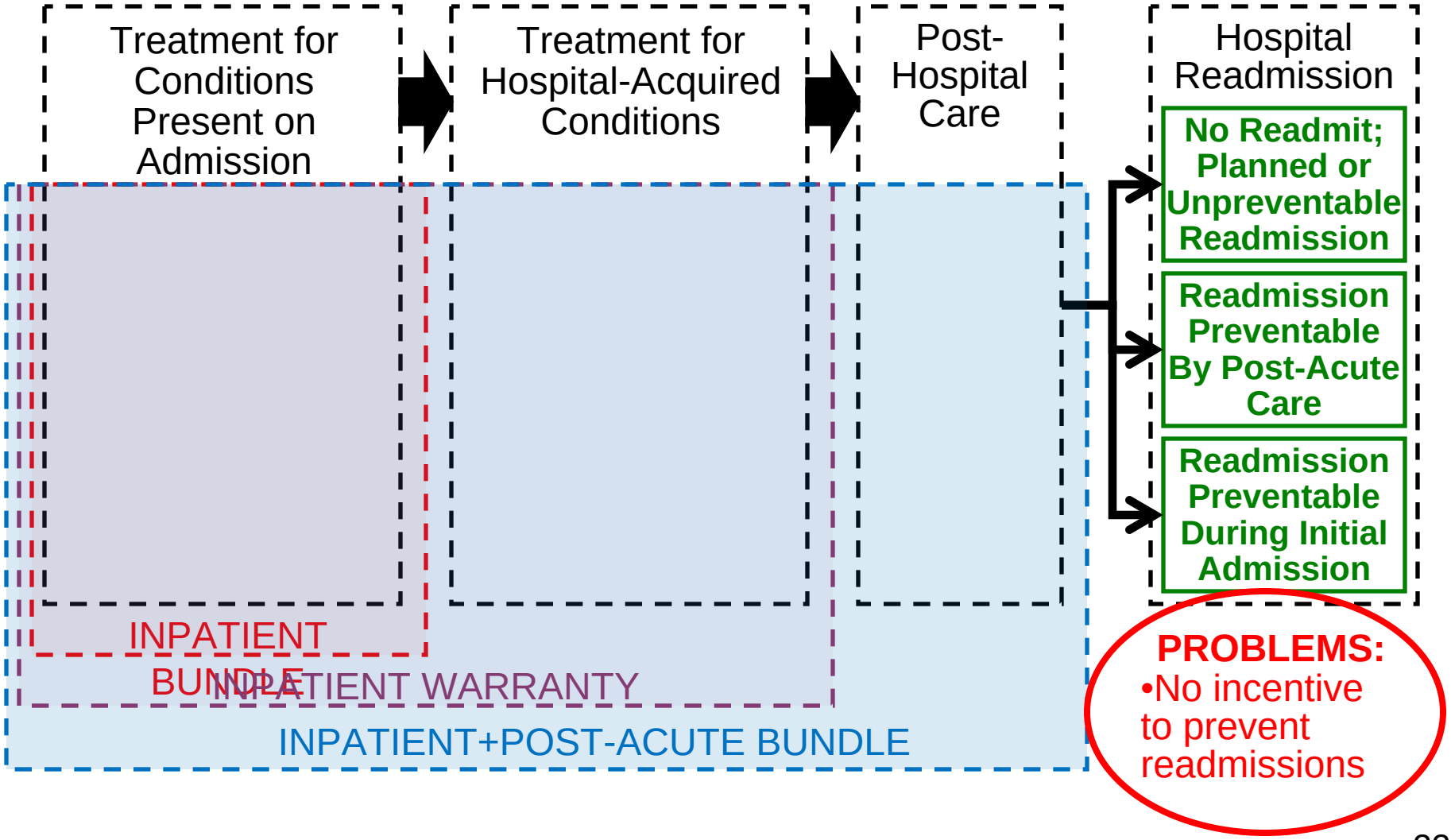
“Inpatient + Post-Acute Bundle”



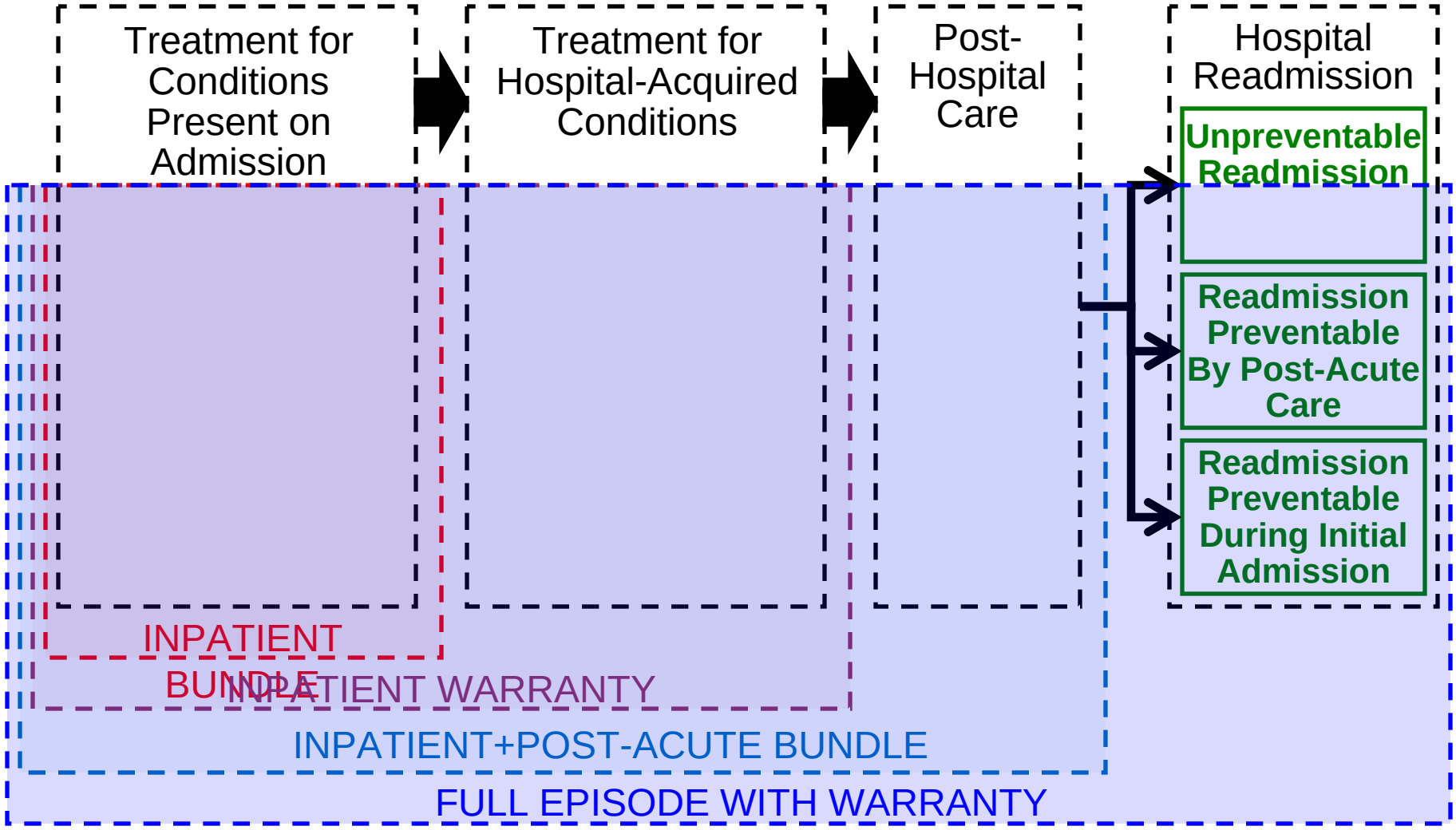
PROBLEMS:

- No incentive to prevent readmissions

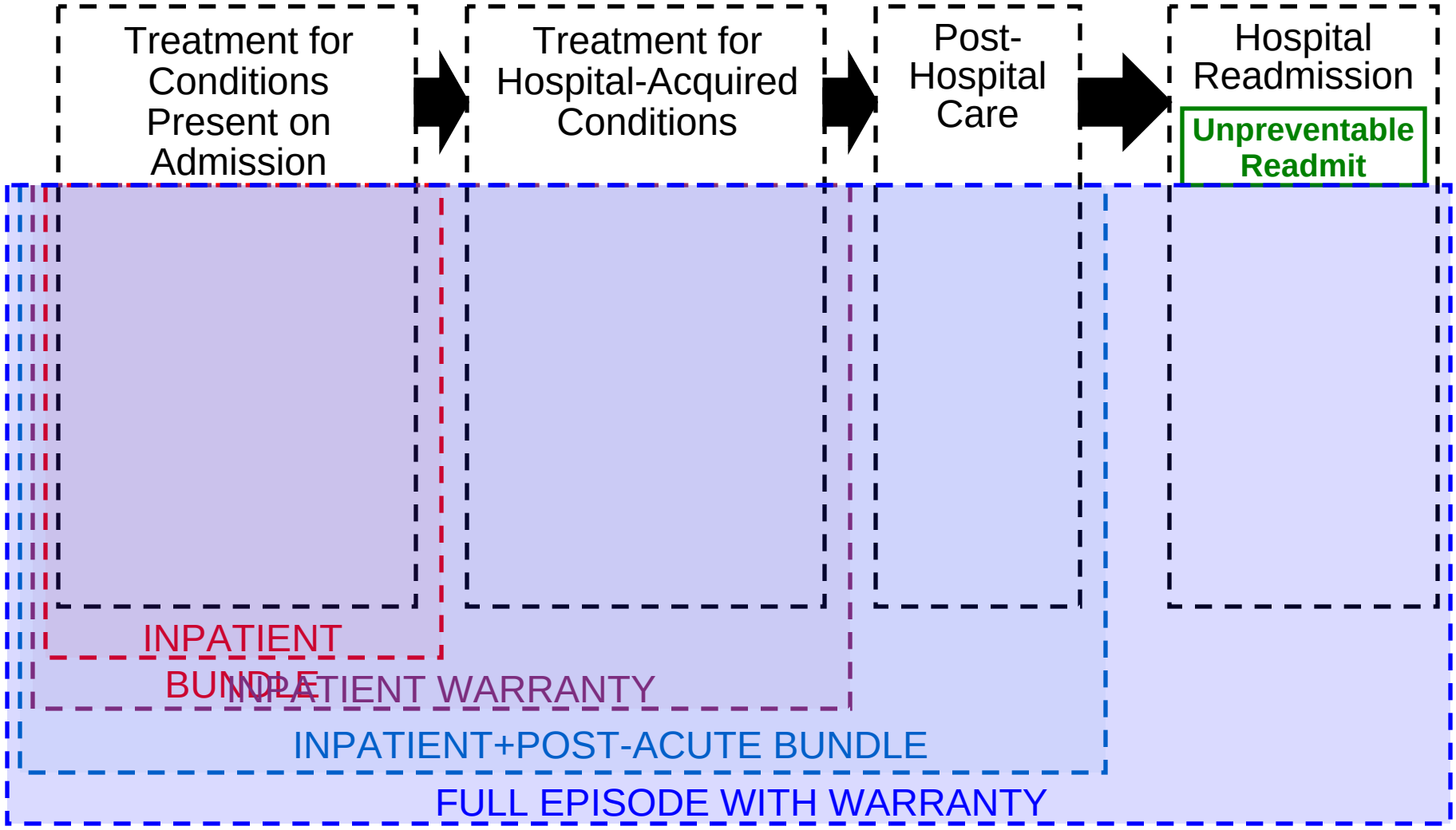
The Last Group of Problems: Preventable Readmissions



Incorporating the Costs of Preventable Readmissions



"Full Episode Payment With a 'Limited Warranty'"



Different Episode/Bundling Concepts for Different Problems

PROBLEM/GOAL	PAYMENT METHOD
Encourage physicians to work with hospitals to eliminate inpatient inefficiencies	INPATIENT BUNDLED PAYMENT
Encourage reduction in adverse events during inpatient care	INPATIENT WARRANTY
Encourage more efficient combinations of inpatient & post-acute care	BUNDLED INPATIENT & POST-ACUTE CARE PAYMENT
Encourage efficiency and quality across the full episode of care	FULL EPISODE PAYMENT WITH LIMITED WARRANTY

"Bundling" and "Warranties" Create Different Challenges

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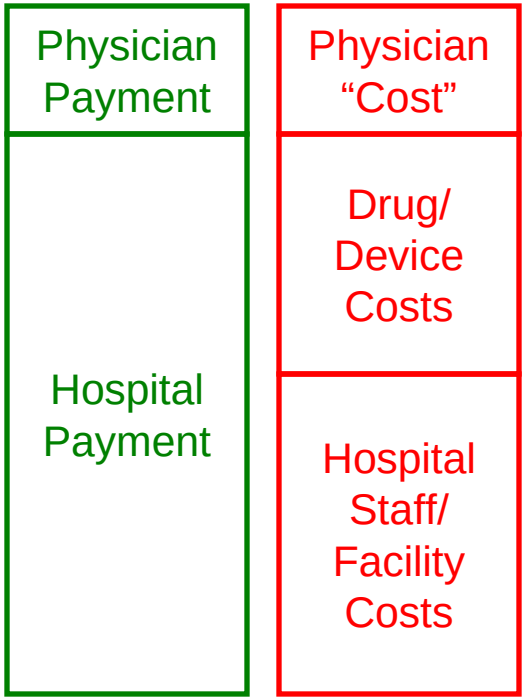
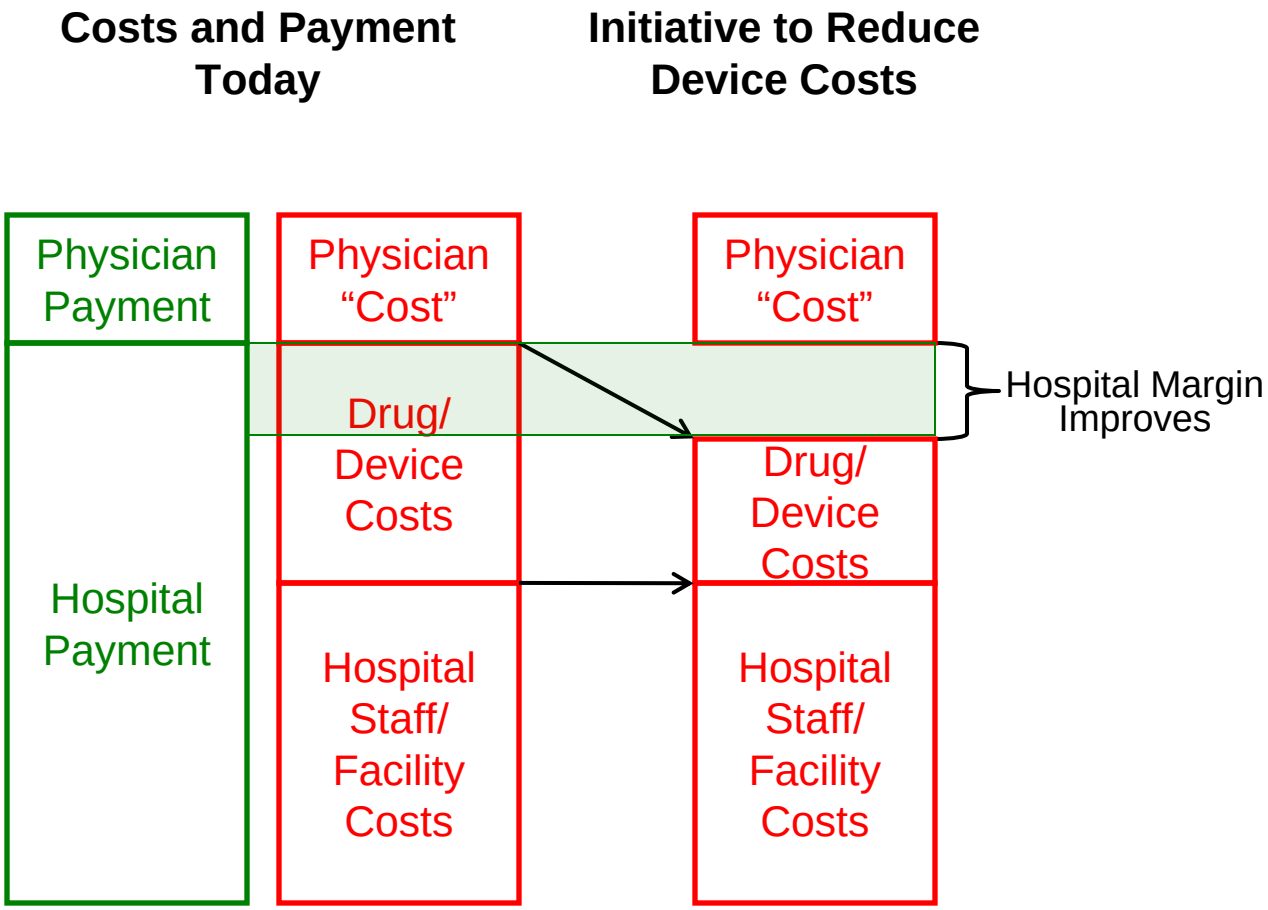
How Bundled Payment Can Reward MDs and Hospitals

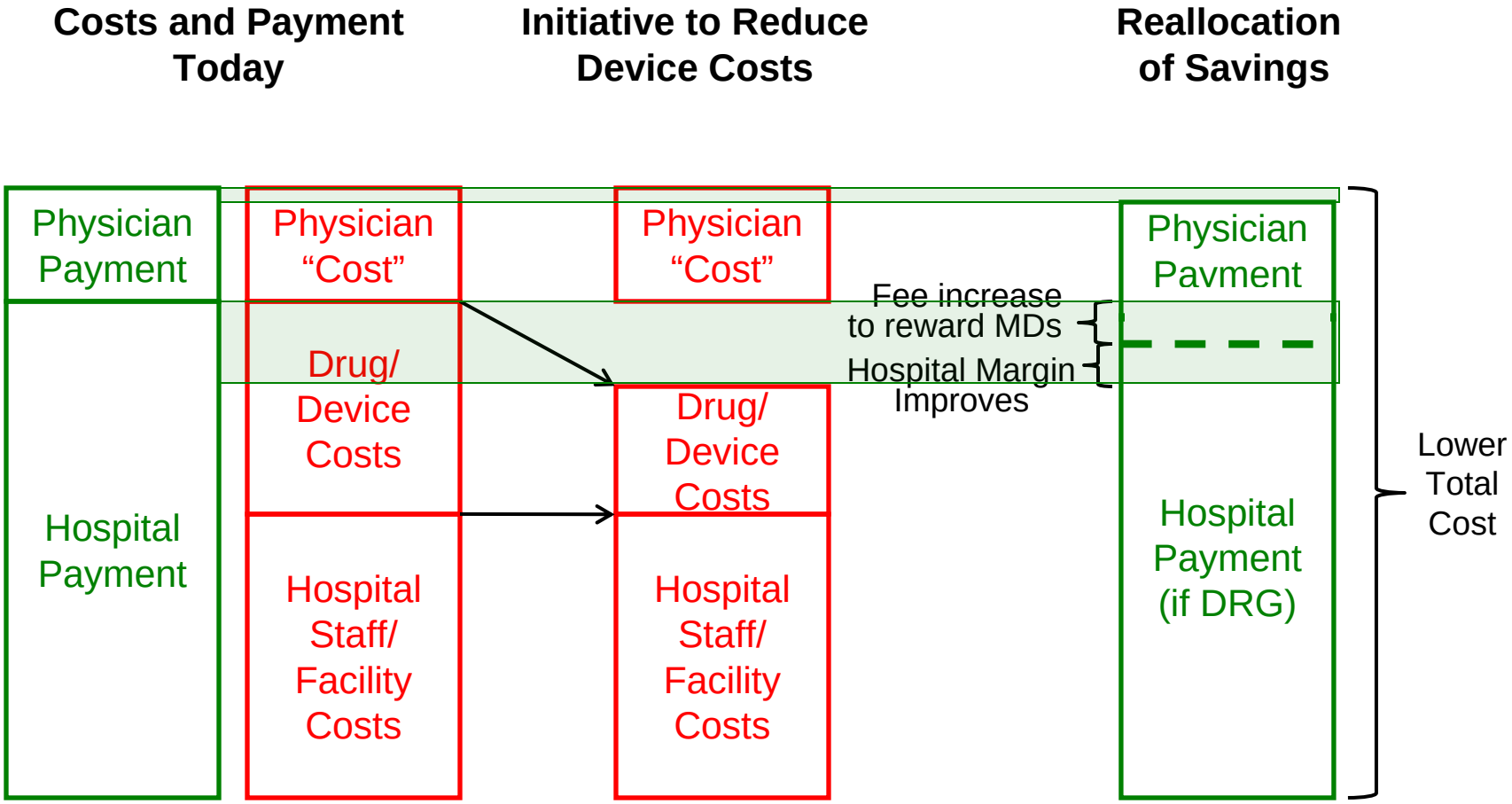
Costs and Payment Today



Aligned Incentives Can Encourage Greater Efficiency...



...Which Can Benefit Hospitals, Doctors, and Payers



Episode payment would give hospitals & MDs incentives to collaborate to reduce costs

Challenges to Bundling

- Difficult to Price If You Don't Know Current Cost
  - Most hospitals don't know how many/which physicians are involved with a case or how much they are getting paid
  - Only surgeons and obstetricians are getting paid on a case rate basis now; other physicians don't know themselves how much they're paid per case

Challenges to Bundling

- Difficult to Price If You Don't Know Current Cost
- Where to Set the Price?
  - Set the price at the average of the hospital + MD payments experienced so far?
    - Would reduce the outliers, but increase costs for the most efficient
    - Paying at the average doesn't reduce the average!
  - Set the price at the lowest combination of hospital + MD payments experienced so far?
    - Not clear whether the lowest cost combinations had good quality
    - Would significantly reduce physician payments

Challenges to Bundling

- Difficult to Price If You Don't Know Current Cost
- Where to Set the Price?
- Who Will Get the Bundled Payment?
  - Hospitals and doctors may have no mechanisms (e.g., a Physician-Hospital Organization) for accepting a single payment and dividing it up
  - "Virtual bundling" lets the payer continue to pay each provider separately, but adjust their payments so they total to the bundled price

A Single Case Rate for All or Different Rates by Severity?

- Severity adjustment is essential to episode payment
  - FFS implicitly adjusts for patient severity/risk/complexity by paying more for patients who have more complex problems
  - FFS doesn't distinguish which patients have higher needs from those the provider overtreats
  - Episode payment needs to make the distinction
- Are there severity adjustment systems?
  - DRGs, MS-DRGs, APR-DRGs for hospital episodes, HHRGs for home care, CMS-HCC for Medicare Advantage, etc.
  - Clinical category systems:
    - e.g., 3M® Potentially Preventable Readmissions, Clinical Risk Groups
  - Regression-based category systems:
    - e.g, CMS Readmission measures in development for Hospital Compare
    - e.g., PROMETHEUS™ system for Potentially Avoidable Complications

Ideal: Payment Based on Diagnosis, Not Treatment

- DRGs are “Diagnosis Related Groups” but many are based on the *treatment/procedure*, not the *diagnosis*
  - MS-DRG 234: Coronary bypass surgery with cardiac catheterization without major complications
  - MS-DRG 236: Coronary bypass surgery without cardiac catheterization without major complications
  - MS-DRG 247: Percutaneous cardiovascular procedure with drug-eluting stent without major complications
- Treatment-based payment gives no incentive for using less expensive treatment
- Diagnosis-based payment would still be severity-adjusted, so that providers would receive higher payment for patients with more co-morbidities or more severe disease

Warranties Are Challenging, But Alternatives Don't Work Well

Warranties Are Challenging, But Alternatives Don't Work Well

- P4P: Pay More for Lower Infections
  - incentive payments not enough to offset disincentives in FFS
  - requires accurate reporting
- Medicare: Don't Let Infections Bump Up Payment
  - infection alone generally doesn't bump up payment
  - infections cause other complications or outlier payments
- Medicare: Don't Pay Hospitals for Readmissions
  - most preventable readmissions aren't preventable by *the hospital*, they require better *primary care*
  - assumes hospital will continue to treat without payment

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  - assumes hospital will continue to treat without payment
- "Limited Warranty"
  - Internalizing the costs of failures into a single price gives the hospital both a financial AND a quality incentive to improve (similar to way DRGs internalized the incentive to reduce length of stay)
  - hospital can advertise that it is warranting its care (a positive selling point) rather than reporting its error rate or readmission rate (a negative selling point)

Payment *Level* (Price) is as Important as Payment *System*

Setting Prices for Bundled Episodes

Regulation	Would require regulation of more types of providers
Large Payer Dictation	Would give more providers more flexibility than today
Small Payer Negotiation	Could create stronger provider "bargaining units"
Competition	Easier for consumers to compare prices

Prices for Warranted Care Will Likely Be *Higher*

- Q: “Why should we pay more to get good-quality care??”
- A: In most industries, warrantied products cost more, but they’re desirable because TOTAL spending on the product (repairs & replacement) is lower than without the warranty

Prices for Warranted Care May Be Higher, But Spending Lower

- Q: “Why should we pay more to get good-quality care??”
- A: In most industries, warrantied products cost more, but they’re desirable because TOTAL spending on the product (repairs & replacement) is lower than without the warranty
- In healthcare, a DRG with a warranty would need to have a higher payment rate than the equivalent non-warrantied DRG, but the higher price would be offset by fewer DRGs w/ complications, outlier payments, and readmissions

How Do You Price a Warranty?

Cost of Success
$10,000

How Do You Price a Warranty?

Cost of Success	Added Cost of Defect	Rate of Defects
$10,000	$20,000	5%

How Do You Price a Warranty?

Cost of Success	Added Cost of Defect	Rate of Defects	Average Total Cost
$10,000	$20,000	5%	$11,000

How Do You Price a Warranty?

Cost of Success	Added Cost of Defect	Rate of Defects	Average Total Cost	Price Charged	Net Margin
$10,000	$20,000	5%	$11,000	$11,000	$0

Limited Warranty Gives Financial Incentive to Improve Quality

Cost of Success	Added Cost of Defect	Rate of Defects	Average Total Cost	Price Charged	Net Margin
$10,000	$20,000	5%	$11,000	$11,000	$0
$10,000	$20,000	**4%**	$10,800	$11,000	**$200**

Reducing Adverse Events…

...Reduces Costs...

…Improves The Bottom Line

With Ability to Improve Quality, Prices Can Go Down

Cost of Success	Added Cost of Defect	Rate of Defects	Average Total Cost	Price Charged	Net Margin
$10,000	$20,000	5%	$11,000	$11,000	$0
$10,000	$20,000	**4%**	$10,800	$11,000	**$200**
$10,000	$20,000	4%	$10,800	$10,800	$0

Enables Lower Prices

A Virtuous Cycle of Quality Improvement & Cost Reduction

Cost of Success	Added Cost of Defect	Rate of Defects	Average Total Cost	Price Charged	Net Margin
$10,000	$20,000	5%	$11,000	$11,000	$0
$10,000	$20,000	4%	$10,800	$11,000	$200
$10,000	$20,000	4%	$10,800	$10,800	$0
$10,000	$20,000	**3%**	$10,600	$10,800	**$200**

Reducing Adverse Events…

...Reduces Costs...

…Improves The Bottom Line

The Payment System Helps Cross the "Quality Chasm"

Cost of Success	Added Cost of Defect	Rate of Defects	Average Total Cost	Price Charged	Net Margin
$10,000	$20,000	5%	$11,000	$11,000	$0
$10,000	$20,000	4%	$10,800	$11,000	$200
$10,000	$20,000	4%	$10,800	$10,800	$0
$10,000	$20,000	3%	$10,600	$10,800	$200
$10,000	$20,000	3%	$10,600	$10,600	$0
$10,000	$20,000	**0%**	**$10,000**	**$10,600**	**$600**

Quality is Better...

Total Cost Is Lower...

But the Price Per Service May Be Higher Than It Is Today

Cost of Success	Added Cost of Defect	Rate of Defects	Average Total Cost	Price Charged	Net Margin
$10,000	$20,000	5%	$11,000	$11,000	$0
$10,000	$20,000	4%	$10,800	$11,000	$200
$10,000	$20,000	4%	$10,800	$10,800	$0
$10,000	$20,000	3%	$10,600	$10,800	$200
$10,000	$20,000	3%	$10,600	$10,600	$0
$10,000	$20,000	0%	$10,600	$10,600	$600

"Why should we have to pay more for higher quality care??"

Prices May Be Higher, But Spending Would Be Lower

Cost of Success	Added Cost of Defect	Rate of Defects	Average Total Cost	Price Charged	Net Margin
$10,000	$20,000	5%	$11,000	$11,000	$0
$10,000	$20,000	4%	$10,800	$11,000	$200
$10,000	$20,000	4%	$10,800	$10,800	$0
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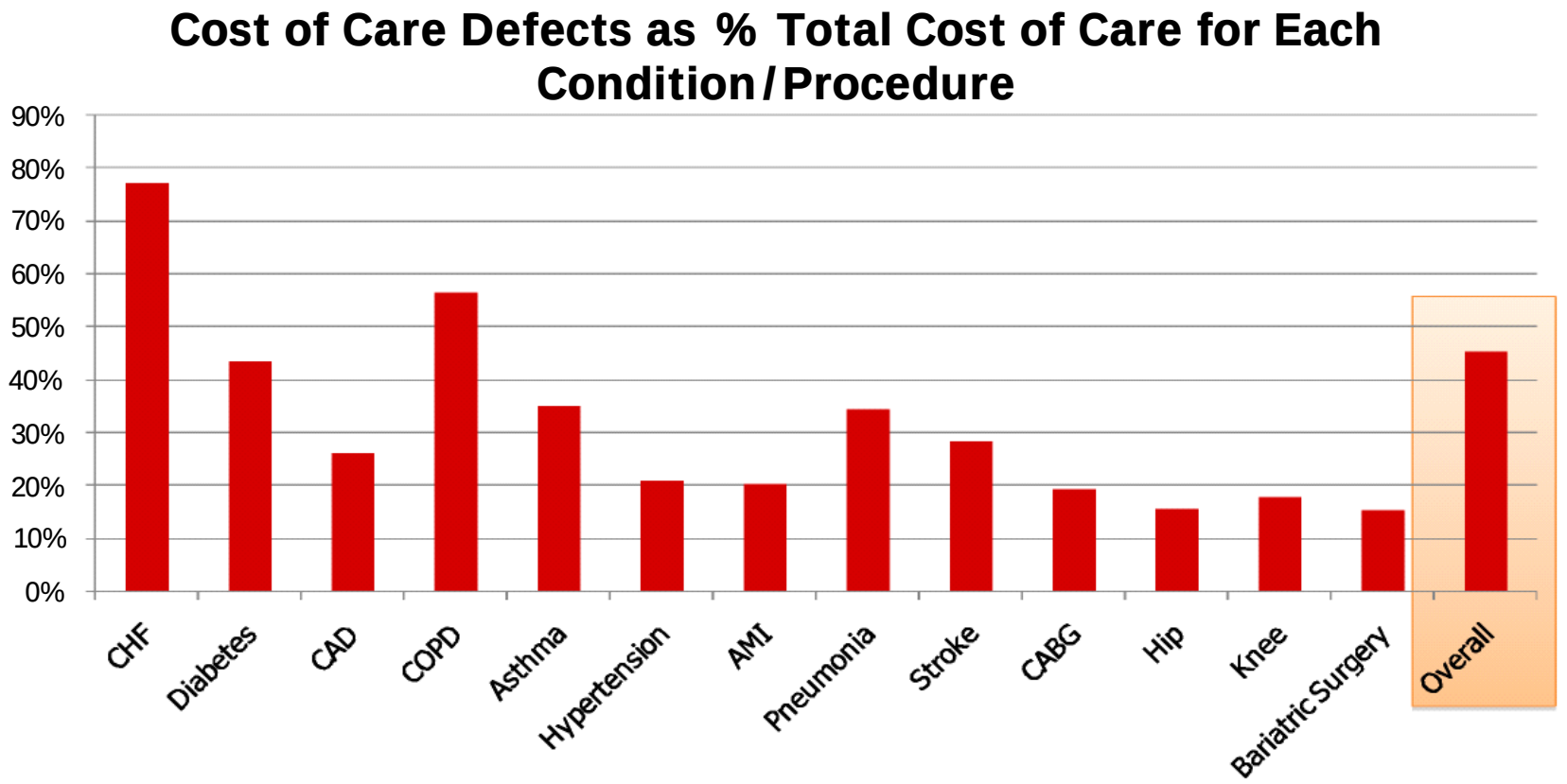
$10,000	$20,000	3%	$10,600	$10,600	$0
$10,000	$20,000	0%	$10,000	$10,600	$600

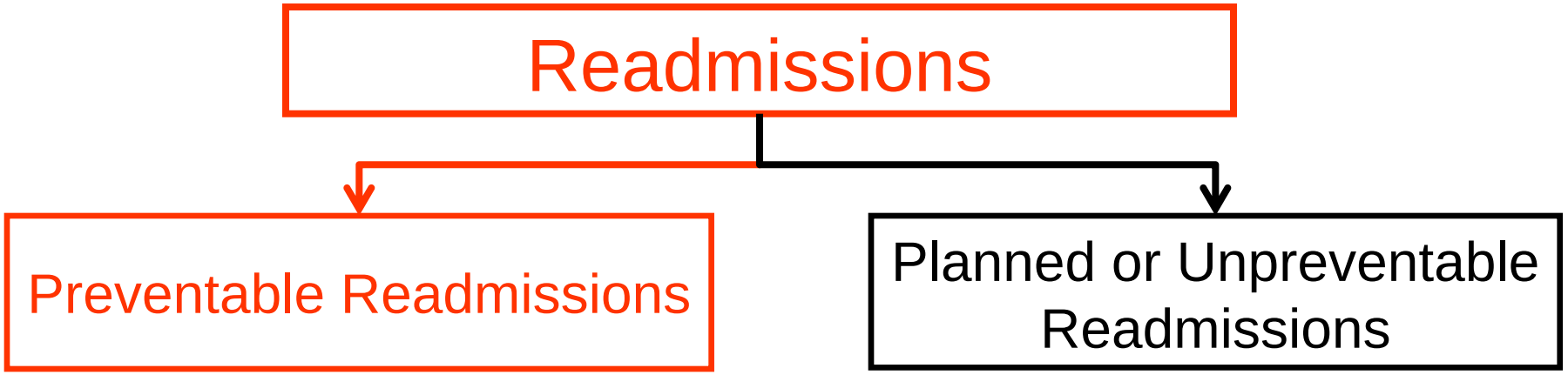
Answer: You're not paying more!

Significant Potential Savings Through Warrantied Care



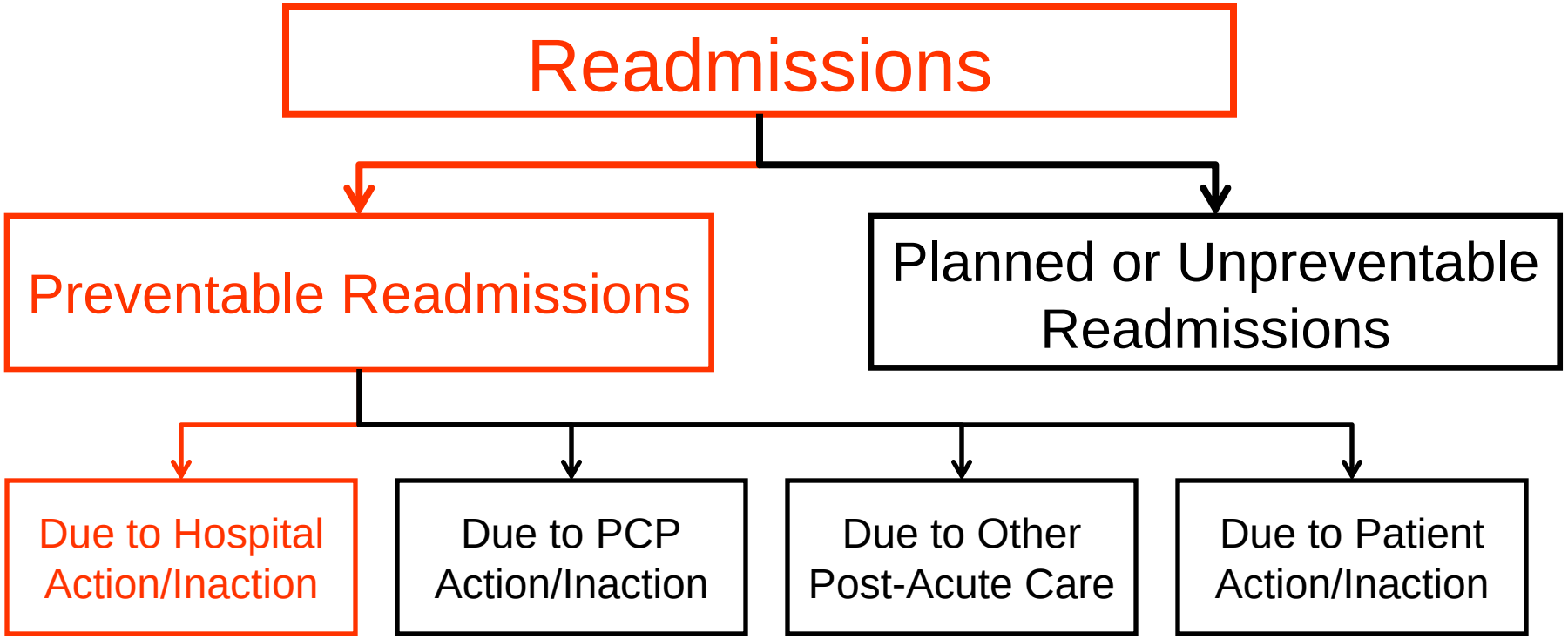
SOURCE: PROMETHEUS Payment, Inc.

Limited Warranty, Because Not All Readmissions Are Preventable...



Need a way of distinguishing preventable readmissions in order to determine which not to pay for

...And The Preventable Ones May Be Prevented by PCPs



Need a way of establishing locus of responsibility to determine which readmissions not to pay for, i.e., what's the limit of the limited warranty

Prices May Also Increase Because Lower Volume = Higher Cost/Case

If we're successful in reducing infections, readmissions, unnecessary surgeries, etc., hospital fixed costs will have to be spread over a smaller number of cases/days

A Small Percentage of Hospital Costs Vary With # of Patients

- Variable/Out-of-Pocket Costs **(10-20%)**
  (all costs saved with fewer patients)
  - Drugs
  - Materials (syringes, gowns, etc.)

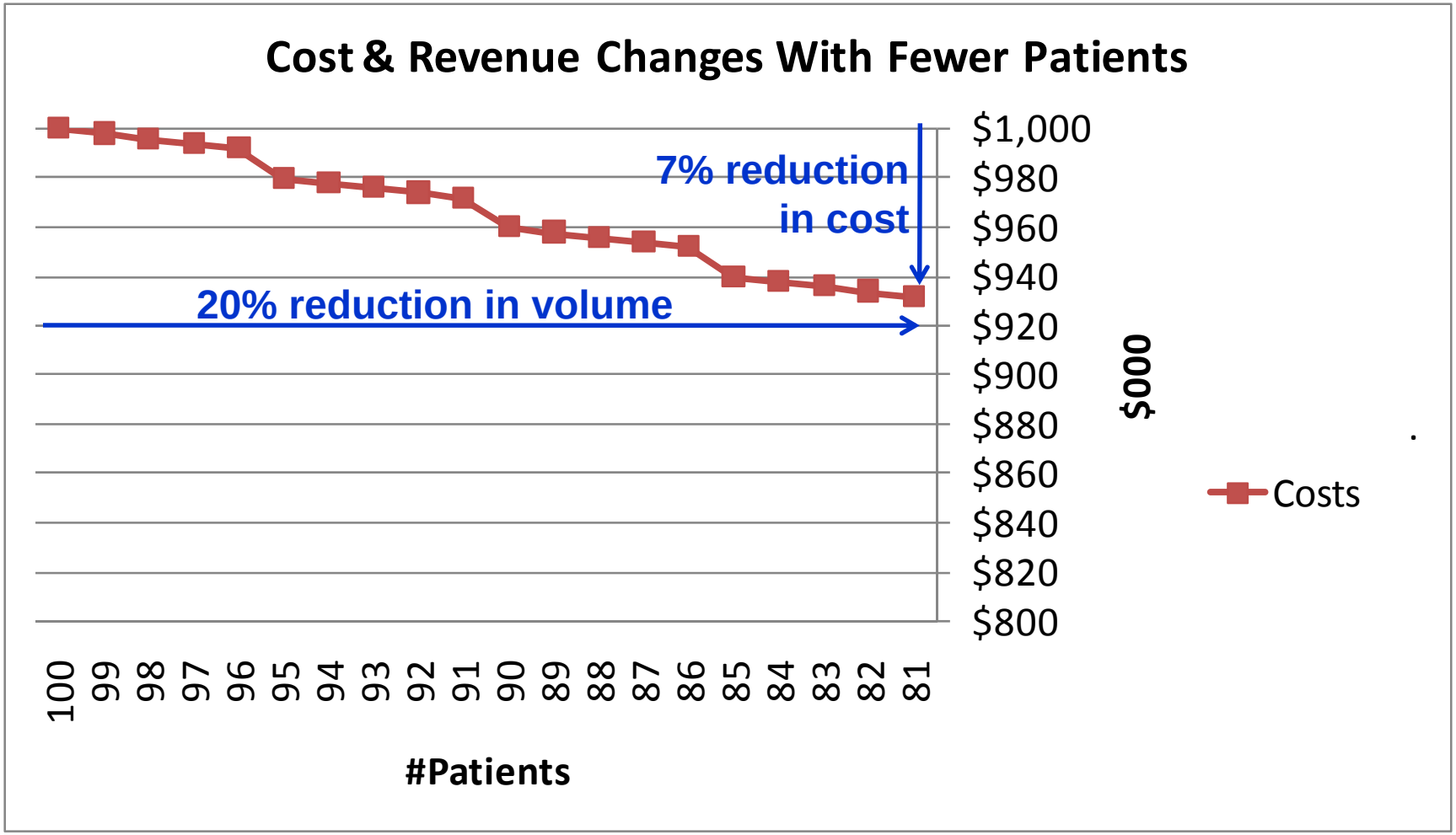
Many Costs Change Only With Large Changes in Patient Volume

- Variable/Out-of-Pocket Costs **(10-20%)**
  (all costs saved with fewer patients)
  - Drugs
  - Materials (syringes, gowns, etc.)
- Semi-Variable Costs **(40-50%)**
  (savings only if significantly fewer patient days)
  - Room Costs (Daily room costs – nursing care, etc.)
  - Services (Radiology, Lab work, etc.)
  - Procedures (Surgery, etc. performed on patient)

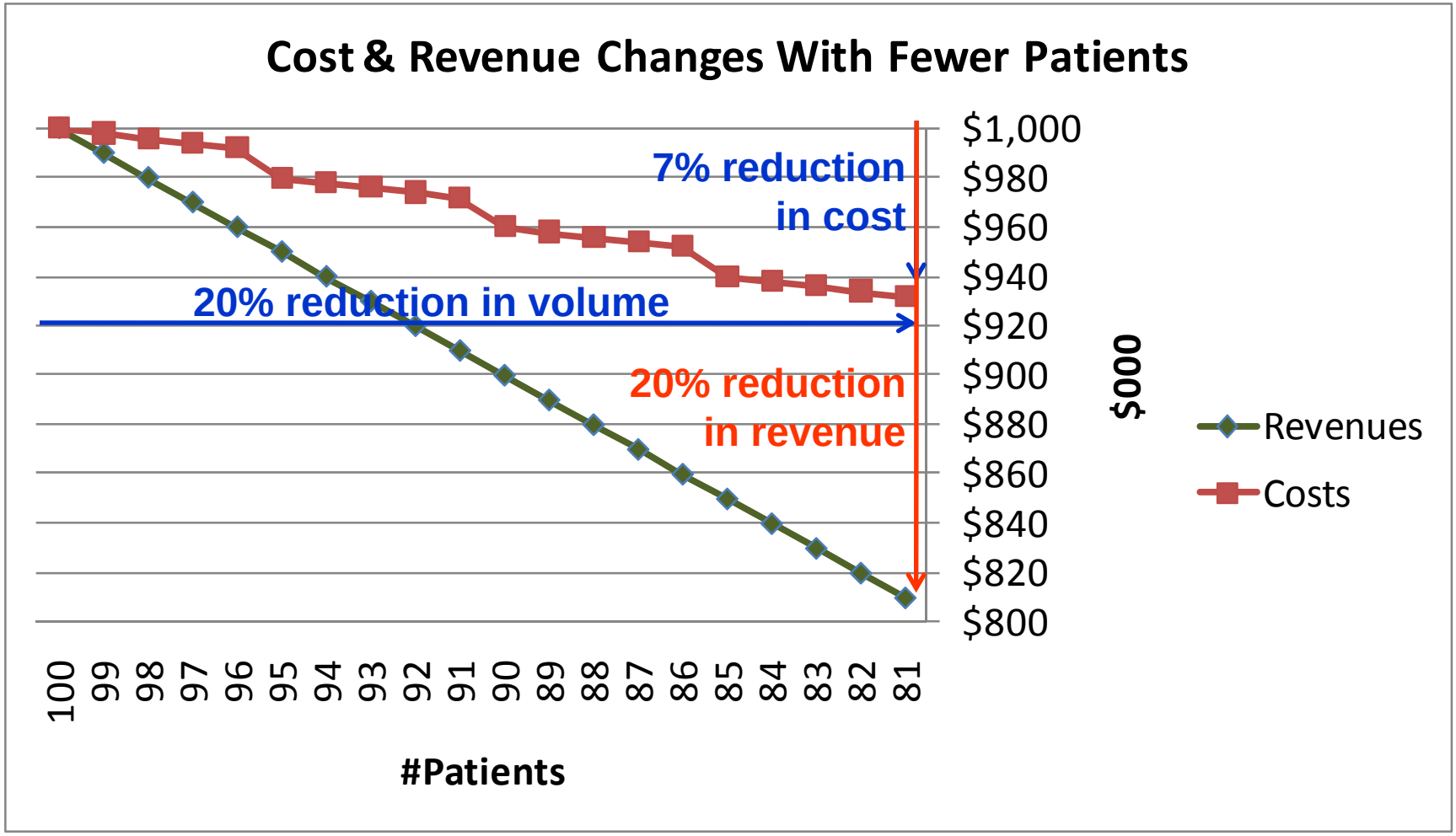
And Many Costs Cannot Change At All in the Short/Medium-Term

- Variable/Out-of-Pocket Costs **(10-20%)**
  (all costs saved with fewer patients)
  - Drugs
  - Materials (syringes, gowns, etc.)
- Semi-Variable Costs **(40-50%)**
  (savings only if significantly fewer patient days)
  - Room Costs (Daily room costs – nursing care, etc.)
  - Services (Radiology, Lab work, etc.)
  - Procedures (Surgery, etc. performed on patient)
- Fixed Costs **(30-50%)**
  (little savings with fewer patients)
  - Indirect Costs (Administration, hospital-wide services)
  - Facility Capital Costs

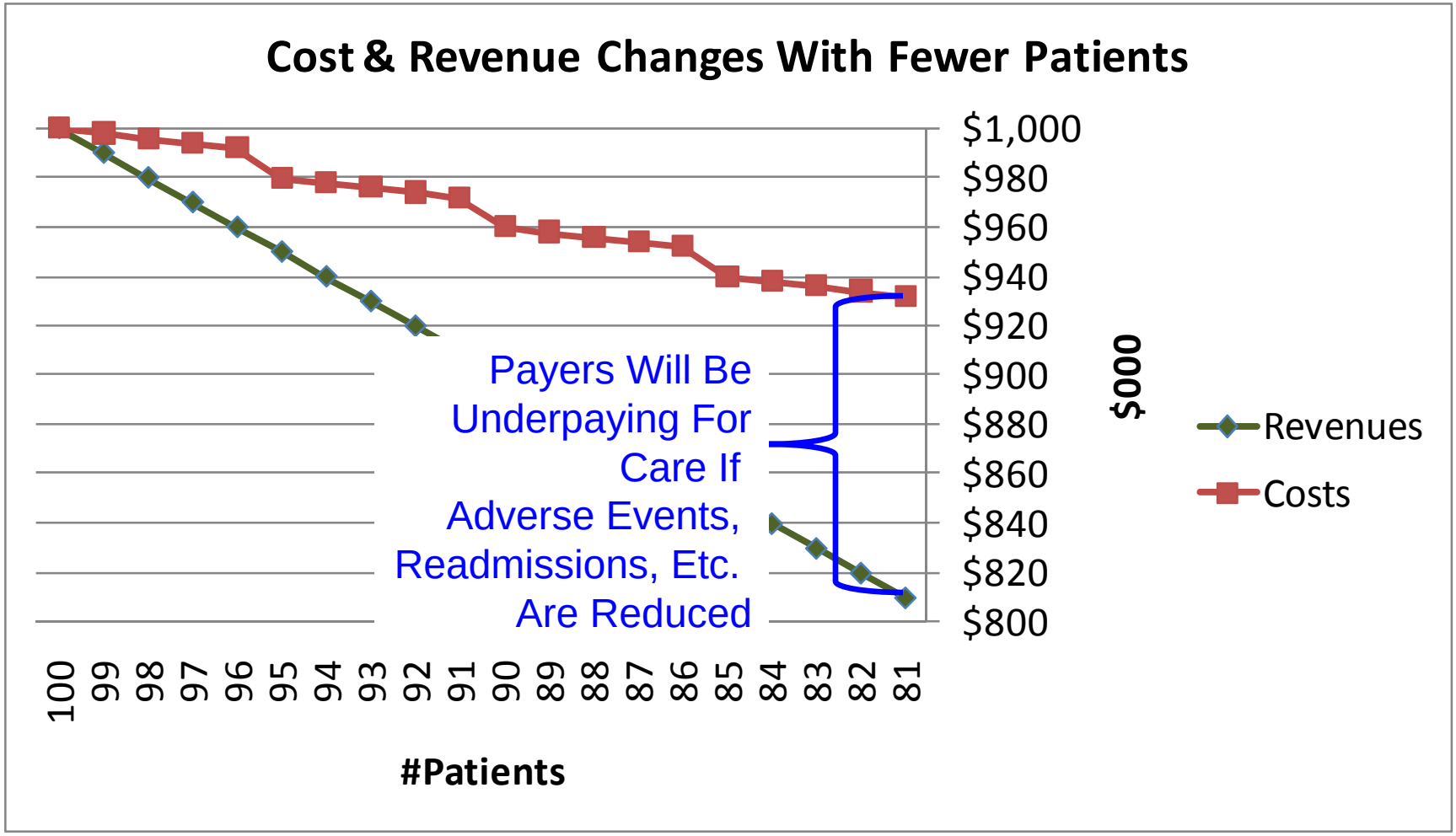
Hospital Costs Do Not Decrease Proportionally With # Patients



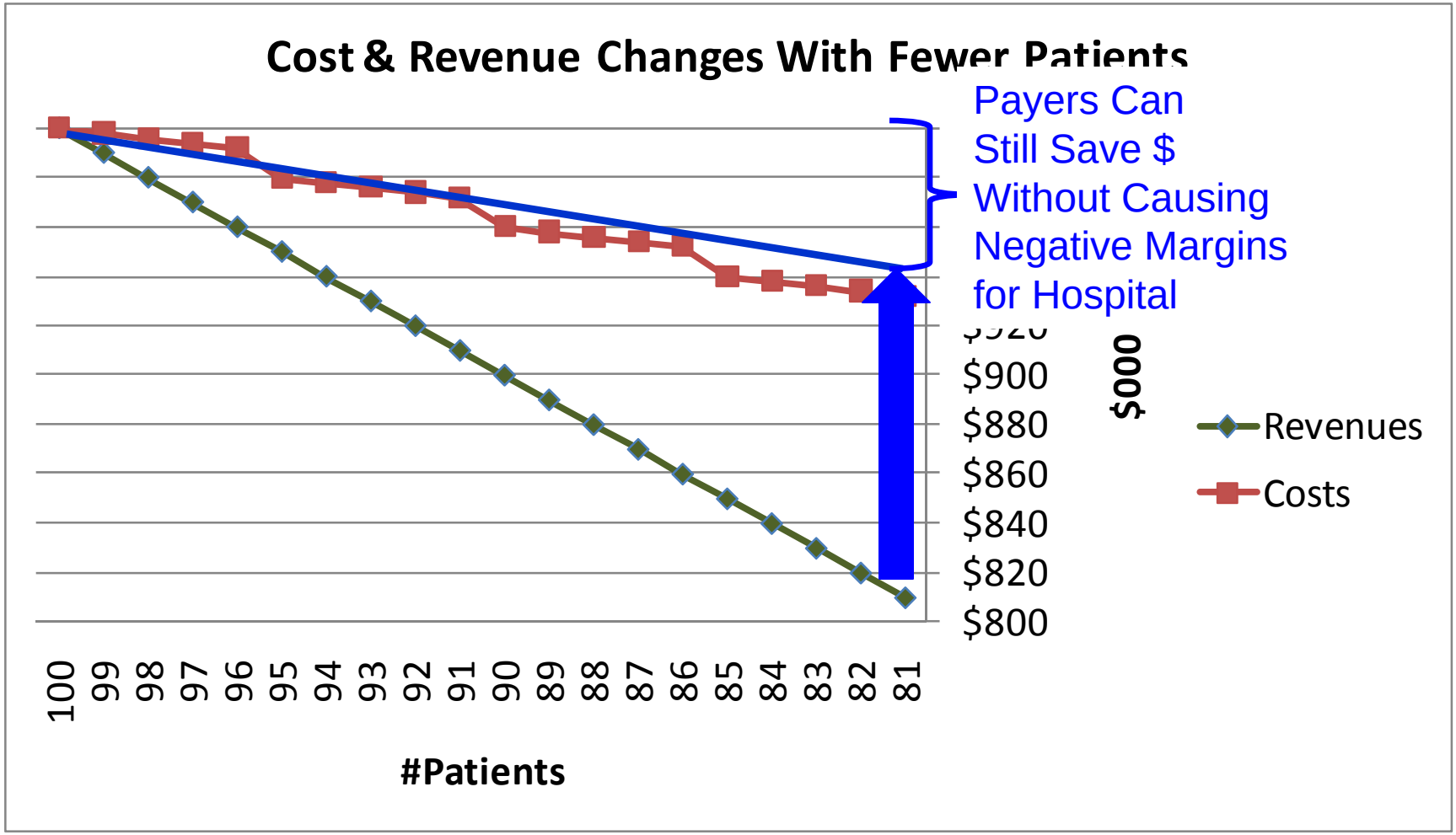
But Payments from Payers Do



Causing Negative Margins for Hospitals



So Prices Need to Be Re-Set Under Payment Reform



Example: A Simulation for a Hypothetical Hospital Unit

- Patient Unit Characteristics:
  - 36 Bed Medical-Surgical Unit
  - Fixed Staff: Unit Manager, LPNs, Secretary
  - RN/Patient Ratio: 1:6 24/7
  - Expected Occupancy: 95%
  - Hospital Overhead Rate: 50%
- Patient Costs and Revenues
  - Average LOS: 6 Days
  - Cost Per Patient Stay: $4,675
  - Revenue Per Patient: $4,800
  - Net Margin: 2.7%
  - Readmission Rate: 20%

Starting Point: Small Net Margin

	Hospital Profitability			Payer Savings
	Revenues	**Expenses**	**Net Margin**	
Current Payment & Readmit Rates	$9,986,400	$9,726,227	$260,173	$0

What If We Eliminated Readmissions?

	Hospital Profitability			Payer Savings
	Revenues	**Expenses**	**Net Margin**	
Current Payment & Readmit Rates	$9,986,400	$9,726,227	$260,173	$0
No Readmissions	$8,322,000			$1,664,400

Revenues Decrease Significantly....

...Benefiting the Payers Significantly

Simply Reducing Readmissions is Win-Win-Lose

	Hospital Profitability			Payer Savings
	Revenues	Expenses	Net Margin	
Current Payment & Readmit Rates	$9,986,400	$9,726,227	$260,173	$0
No Readmissions	$8,322,000	$8,722,967	($400,967)	$1,664,400

Costs Decrease Less Because Fixed Costs Remain...

...So Hospital Experiences Negative Margins

Solution: Recognize That Per Case "Price" Has to Increase

	Hospital Profitability			Payer Savings
	Revenues	Expenses	Net Margin	
Current Payment & Readmit Rates	$9,986,400	$9,726,227	$260,173	$0
No Readmissions	$8,322,000	$8,722,967	($400,967)	$1,664,400
No Readmissions + 7.3% Higher Payment/Case	$8,928,813	$8,722,967		

Pay the Hospital More Per Case (Since Average Costs Have Increased With Smaller Volume)...

...So Revenue Goes Down Less Than It Otherwise Would Have...

Adjusting Payments Appropriately Can Let Everyone "Win"

	Hospital Profitability			Payer Savings
	Revenues	Expenses	Net Margin	
Current Payment & Readmit Rates	$9,986,400	$9,726,227	$260,173	$0
No Readmissions	$8,322,000	$8,722,967	($400,967)	$1,664,400
No Readmissions + 7.3% Higher Payment/Case	$8,928,813	$8,722,967	$205,846	$1,057,587 (10.6% savings)

Pay the Hospital More Per Case (Since Average Costs Have Increased With Smaller Volume)...

...So Revenue Goes Down Less Than It Otherwise Would Have...

...and the Hospital Remains Solvent...

...Still Leaving Sufficient Savings to Reduce Spending by Payers and Support Medical Home Services

Opportunity Costs And Other Issues

- For a hospital that's constantly full and growing, a reduction in chronic disease admissions may be welcome, particularly since they may be less profitable than elective surgery cases
- But for small community hospitals with empty beds, and hospitals with narrow operating margins, reductions in readmissions could cause serious financial problems, particularly in the short run
- In the long run, with sufficient reductions in admissions, a hospital could restructure to reduce its fixed costs (close units, etc.), but it will take time

Consumer Protection

PROBLEM: Episode payments theoretically give the provider an incentive to provide fewer services or poorer quality care to a patient, since payment stays the same regardless.

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PROBLEM: Episode payments theoretically give the provider an incentive to provide fewer services or poorer quality care to a patient, since payment stays the same regardless.

SOLUTIONS:

- Report publicly on quality of care, using FFS data
- Include pay-for-performance based on quality measures
- Permit outlier payments & refine risk-adjustment to avoid disincentives to treat complex patients

Has It Ever Been Tried? Yes, Over 20 Years Ago

- In 1987, an orthopedic surgeon in Lansing, Mich., collaborated with his principal hospital, Ingham Medical Center, to offer a fixed total price for surgical services for shoulder and knee problems. The price included a warranty for any subsequent services needed for a two-year period, including repeat visits, imaging, rehospitalization and additional surgery.
- A study found that the payer paid 40 percent less than it would have expected to pay otherwise, while the surgeon received over 80 percent more in payment than he would have otherwise expected. The savings for the payer were achieved by reducing unnecessary auxiliary services such as radiography and physical therapy, reducing the length of stay in the hospital and reducing complications and readmissions.
- The hospital actually received 13 percent more in payment for the cases it cared for than it would have otherwise, but the number of hospitalizations decreased.

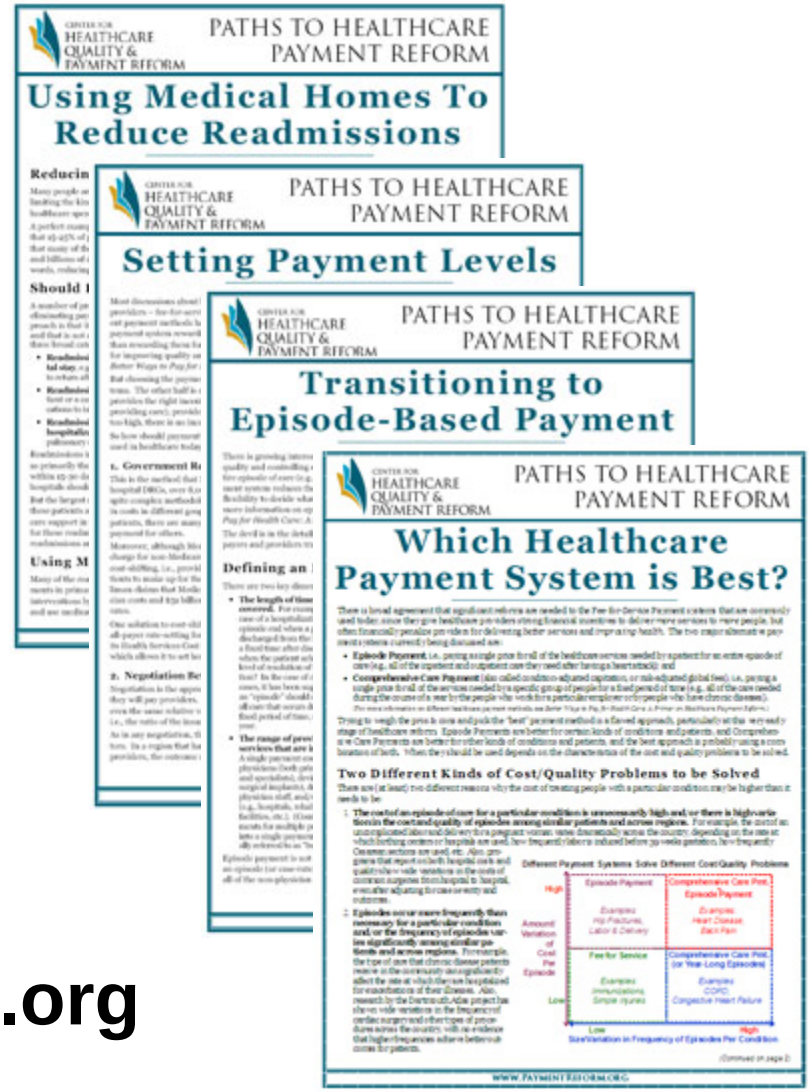
Has It Ever Been Tried? Yes, by Medicare, and It Worked

- 1991 Participating Heart Bypass Center Demo
  - Four hospitals in Ann Arbor, Atlanta, Boston, Columbus (later expanded to Houston, Indianapolis, Portland)
  - Received a single payment covering both Part A (hospital) and Part B (physician) services for CABG; no outlier payments permitted
  - Amount of combined payment was negotiated to be below current payment levels (discounts: 10-37%)
  - Hospital & physicians free to split combined payment
- Results: Payers, Providers, Patients All Benefited
  - Physicians identified ways to reduce length of stay and unnecessary hospital costs
  - Costs decreased by 2% -23% in nominal terms in 3 of 4 hospitals
  - Post-discharge outpatient expenses decreased
  - Patients preferred the single copay

Current Episode-of-Care Initiatives

- **Medicare Acute Care Episode (ACE) Demonstration**
  - will pay a single amount to cover both hospital and physician services for cardiac and orthopedic surgeries
  - patients receive share of savings through lower copays
- **Geisinger ProvenCare℠**
  - "warranty" covers any follow-up care needed for avoidable complications within 90 days at no additional charge
  - Initially for coronary artery bypass graft surgery. Expanding to hip replacement, cataract surgery, angioplasty, etc.
  - working only within an integrated system and its own health plan
- **Prometheus Payment™**
  - covers *full* episode of care and *all* providers; chronic care + major acute care
  - deals with both integrated and non-integrated providers by providing default scheme for allocating payment
  - estimates the appropriate payment amount based on historical costs and any guidelines for evidence-based care
  - Pilot sites in Rockford, IL; Minneapolis, MN; Philadelphia; Utah

For More Information on Alternative Payment Systems



www.PaymentReform.org

For More Information:

Harold D. Miller

President & CEO, Network for Regional Healthcare Improvement
and
Executive Director, Center for Healthcare Quality and Payment Reform

Miller.Harold@GMail.com

(412) 803-3650

www.NRHI.org

www.CHQPR.org

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