



Fundamental Management: Revenue Cycle Management & Revenue Calculations



Rosemary Sheehan, Vice President Revenue Cycle Operations September 2017



Agenda

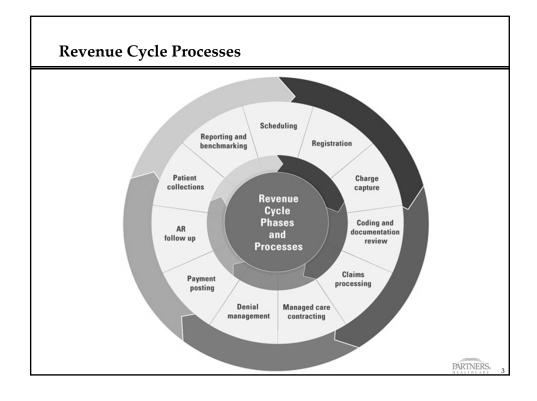
Part I: Revenue Cycle Management

- -Need to get it right up front!
- -Future Payment Methodologies
 - •Physicians and hospitals will need to work together

Part II: Net Revenue & Reserves

- Difference Between Gross and Net
- Setting Reserve Levels
 - »Contractual Allowances
 - »Denials
 - »Charity Care
 - »Bad Debt





PHS Revenue Cycle Operations

Front End:

• Patient Access/Patient Service Center (PSC)

Middle:

- Revenue Integrity (Charge Master, Error Resolution, Audit Functions)
- Hospital Coding

Back End:

- Acute Hospital Central Billing Office
- Sub Acute Hospital Central Billing Office
- Professional Billing Office (Includes coding, charge entry, billing, collections and self-pay)

Support Teams:

- Reimbursement and Revenue Analysis
- RCO Training
- Analysis and Administration
- Payer Relations

Total Staff:

- 810 staff supporting the Hospital Functions
- 370 staff supporting the Physician Functions

Revenue Cycle Operations (continued)

Hospital Tools:

- Epic (MGH, BWH, NWH, FH and Home Health)
- 6 additional billing and accounts receivable systems
- Additional bolt on systems
 - ✓ Huron Work listing Insurance Follow up and Denial Management
 - ✓ VRS Remittance Posting
 - ✓ XClaims Claims Editing and Transport
 - ✓ Hyland Onbase Document Imaging
 - ✓ Harvest Contract Management
 - ✓ MedeAnalytics Reporting & AR Analysis

Physician Billing Office Tools:

- Epic
- Additional bolt on systems
 - ✓ Ingenix Claims Manager Claims Editing
 - ✓ Hyland Onbase Document Imaging

Facts:

- FY16 Projected Payments \$6B
- Bad Debt (less Charity) \$72M
- Charity Care \$329M
- Total Physicians/Providers billed through the MGPO: 3200

PHS is in the process of implementing Epic's revenue cycle and enterprise-wide clinical applications.



Impact of Epic on the Revenue Cycle

Epic Improvements

One patient friendly statement/customer service team

Data integrity (enterprise patient demographic updates)

Exception based workflows

More efficient and standard charging practices

Transparency of revenue cycle metrics

Standard billing workflows; clearer handoffs between teams

Ease and flexibility meeting payer rules and eliminating manual work

Future Benefits

Improved patient engagement (registration, self-directed patient estimates, collections, results, communication, etc.)

More effective capture of complex charging, such as infusion (still enhancing this workflow)

Staff efficiencies and lower cost long

Smaller hospitals will benefit from all the editing and work listing functionality

Simplicity of meeting future regulatory and payer changes

HEALTH CARE

Revenue Cycle Operation (RCO) Goals

There are three main goals in RCO. Everything we do is to drive improvement in these 3 goals.

Optimize Collection of Cash -> Increasing Net Revenue

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RCO Goals

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Optimize Collection of Cash -> Increasing Net Revenue

Increase Efficiency -> Reduce Cost of Operations

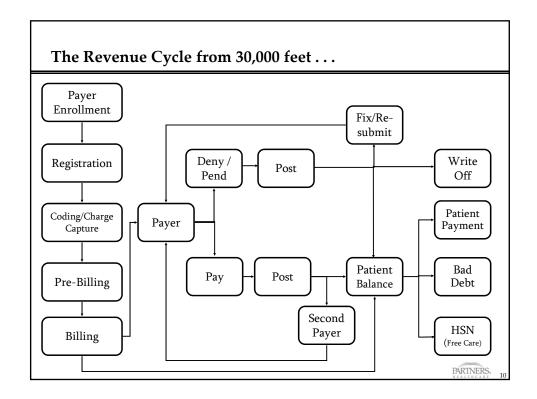
RCO Goals

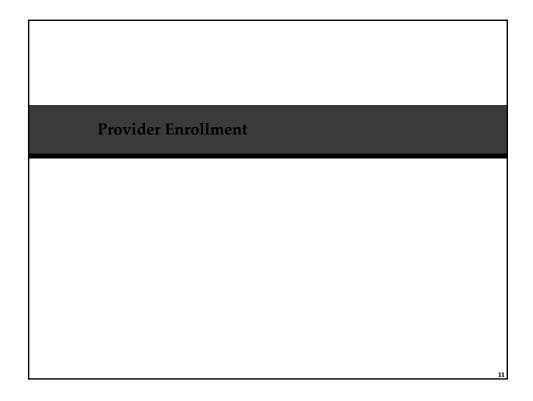
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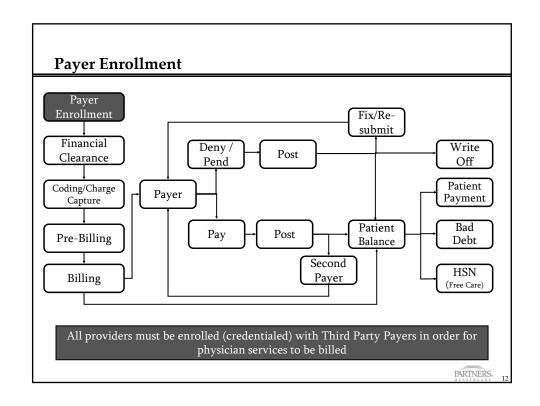
Optimize Collection of Cash -> Increasing Net Revenue

Increase Efficiency -> Reduce Cost of Operations

Provide Highest Level of Service to our Patients -> Improve Engagement







Payer Enrollment

- Providers must be enrolled with all payers before we can bill their services
- This function is currently decentralized and managed by each hospital
- For some payers, the hospitals are delegated, which means that the payer delegates the full enrollment responsibility to the Hospital. Once a provider is credentialed with the hospital, they become immediately enrolled with the payer.

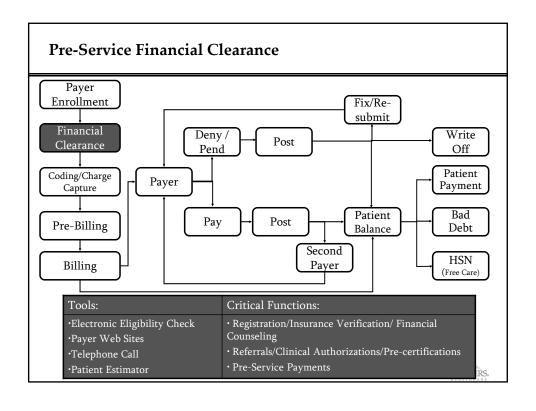


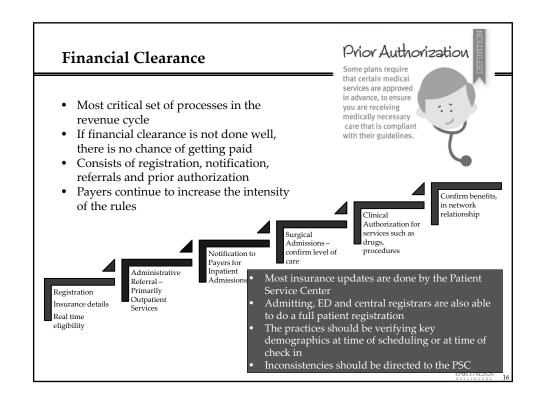
 A provider can be enrolled but still be out of network with a specific employer group or be considered a higher tier or copayments



Patient Access

14





Real Time Eligibility



- We use NEHEN (New England Healthcare Exchange Network) for our daily RTE transactions
- Partners Healthcare was a founding member of NEHEN in 1998
- On a weekly basis, we conduct between 1.8 2.1 million Real Time Eligibility transactions



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Top Workqueue Edits

- Business Model → Exception Based
- In our "Eligibility Needs Review" workqueues, we capture RTE statuses that comeback in a "Needs Review" status
- We have our RTE set up to fire a "needs review" status when any of these data elements do not match:
 - Subscriber DOB
 - Subscriber Name
 - Subscriber ID/Member ID
 - Plan Mismatch
- These Eligibility Needs Review WQs generate more than 15,000 accounts a week
- We have more than 25 dedicated work queue users within central registration that work more than 9,500 accounts a week

Top Workqueue Edits

- Our "No Coverage" WQs capture patients that do not have any insurance coverage on their account
- The weekly volume of these WQs is over 10,000
- We have 25 users that add coverage or mark the patients as self pay for over 6,000 of these accounts per week



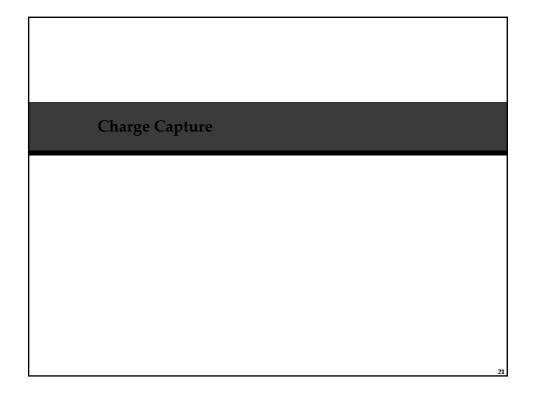
Key Definitions in Epic

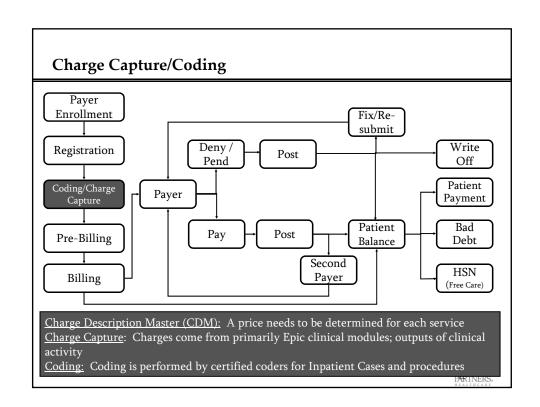
CSN - (contact serial number) - aka visit #

• Represents an encounter with patient (admission, clinic visit, etc.)

HAR - (hospital account record)

- Account used to group all charges for billing purposes
- · Associated to one or more patient visits
- A HAR is typically assigned to a visit during the scheduling/registration process. The HAR Advisor is used to recommend when to create a new HAR or assign to an existing HAR.
- A visit can only be associated to a single HAR





Revenue Integrity/Charging

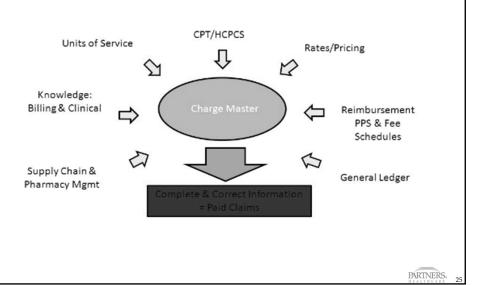
- The goal is to ensure that all services that are performed are captured appropriately in Epic
- The revenue integrity team is responsible for all charging decisions, policies and the QA of the charging build in Epic
- Services can be billed:
 - Hospital Global
 - Hospital Split (health centers)
 - PO/Hospital Split
- Revenue Capture:
 - Most services are billed through selection of codes on a preference list
 - OR services are charged using a combination of team size and time
 - Pharmacy is charged using a mark up of cost +
 - Room and Board is calculated based on the patients who are in beds at midnight
 - Many hospital procedures are generated once the tech completes the exam (cardiology procedures)

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Charge Codes

- The charge description master (CDM) houses all the charge codes for hospital services
- Charge codes are built in Epic and linked to cost centers
- Each charge code has a number of characteristics, such as revenue code and CPT code
- A separate Masterfile in Epic details all cost centers (Cost Center Assignment Table)
- The linkages of these two tables allows CPT codes to be used in specific cost centers
- When we transitioned to Epic, we also moved to one charge master
- The charge router can manipulate charge and cpt codes:
 - 5 cpt codes can be rolled up into one panel to meet specific payer rules
- If changes to codes need to be made, the teams reverse the wrong code and add the new code

Components of Revenue Integrity/Charging



Coding

Coding

Coding for Inpatient Services

- All services are coded by a certified hospital coder
- They code using the DRG (Diagnosis Related Grouper) terminology; to calculate DRG, they identify the:
 - · Admission diagnosis
 - · Principal diagnosis
 - Secondary diagnosis(es)
 - · Comorbidity
 - Complication
 - Principal procedure
 - Secondary procedure(s)

Coding for Outpatient Services

- Primarily exception based review of edits
- · Generally medical necessity or diagnosis based edits

Risk Coding

• Capture of chronic diagnosis codes



History of DRGs

A **Diagnosis-Related Group** (**DRG**) is a statistical system of classifying any inpatient stay into groups for the purposes of payment. The **DRG** classification system divides possible diagnoses into more than 20 major body systems and subdivides them into almost 500 groups for the purpose of Medicare reimbursement.

A DRG, or diagnostic related grouping, is how Medicare and some health insurance companies categorize hospitalization costs and determine how much to pay for a patient's hospital stay. Rather than paying the hospital for what it spent caring for a hospitalized patient, Medicare pays the hospital a fixed amount based on the patient's DRG or diagnosis.

If the hospital treats the patient while spending less than the DRG payment, it makes a profit.

If the hospital spends more than the DRG payment treating the patient, it loses money.

History of DRGs

In **October 2007**, Medicare Severity DRGs (MS-DRGs) were implemented for Medicare inpatient discharges. CMS replaced 538 DRGs with 745 new DRGs. Every DRG was re-categorized and had different meanings.

MS-DRGs moved from a two tier (CC/no CC) method of determining severity of illness to a three tier method which expanded the ability to effectively demonstrate severity of illness. The three tier method of Major Complication or Co-Morbid Condition (MCC), Complication or Co-Morbid Condition (CC), or no MCC/CC, provided 3 levels of severity determination for reimbursement.

With implementation of ICD-10 in October 2015, CMS and 3M developed and tested new grouper versions for MS-DRGs and APR-DRGs for use with ICD-10 diagnosis and procedure codes.

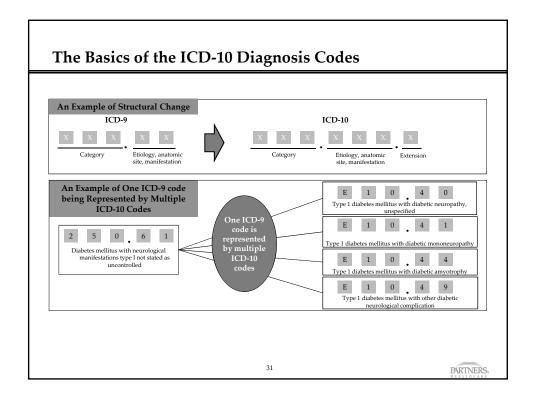


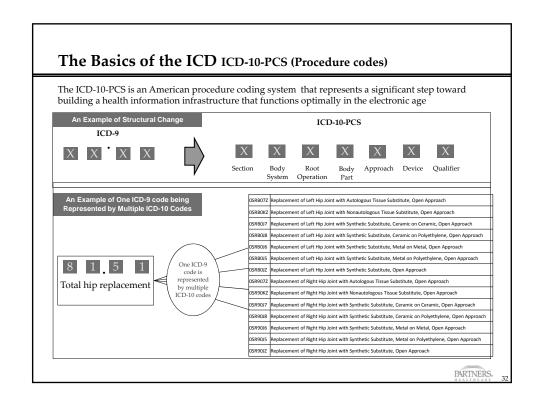
Coding

- Clinical documentation is critical to coding processes
- If it is not documented, it did not happen
- Each hospital has a clinical documentation team (comprised of nurses)
 that work to ensure all Medicare cases are well documented to
 optimize the DRG payment(s) and the quality metrics under value
 based incentive programs

Example 1 - L3-L4 Spinal Fusion with "Anemia"

	Principal Diagnosis ICD-9-CM Code	Secondary Diagnoses ICD-9-CM Code	Operative Procedure ICD-9-CM Code	DRG	Description	DRG Payment
Original Documentation Coding	Lumbar stenosis 724.02	Anemia 285.9	PLIF L3-L4 81.08 81.62 BMP with Interbody Fusion Cages 84.51 84.52	498	SPINAL FUSION EXCEPT CERVICAL WITHOUT CC	\$17,928.00
Revised Documentation Coding	Same	Post operative blood loss anemia 280.0	Same	497	SPINAL FUSION EXCEPT CERVICAL WITH CC	\$22,902.60





What is Risk Adjustment?

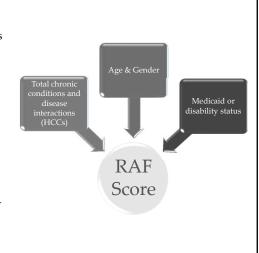
- Fundamentally, it is an actuarial tool used to calibrate the payments from CMS to Medicare Advantage Plans based on the relative health of their at-risk population
- The goal is to reflect the expected costs of providing care to their patients and to ensure that appropriate compensation for the health status of the patients
- Risk adjustment focuses on a subset of ICD 10 codes which are bucketed into HCCs, or hierarchical condition categories (HCCs)
- There are currently 69,823 ICD-10 codes that link to 87 HCCs. These HCCs are ranked from
 most severe to least severe. The HCCs summarize the patient's diagnostic profile. (There are 70
 HCCs of concern to PHS Primary Care.)
- CMS' model is accumulative, meaning that a patient can have more than one HCC category
 assigned to them and the are additive in that the risk weights of different HCCs are added
 together to produce a risk score or RAF (Risk Adjustment Factor)
- The HCCs must be captured every calendar year for CMS to impact the risk adjustment and therefore the Medicare Advantage payment
- This model or a similar model is used to risk adjust the Accountable Care Organization, Medicaid and Commercial Risk contracts

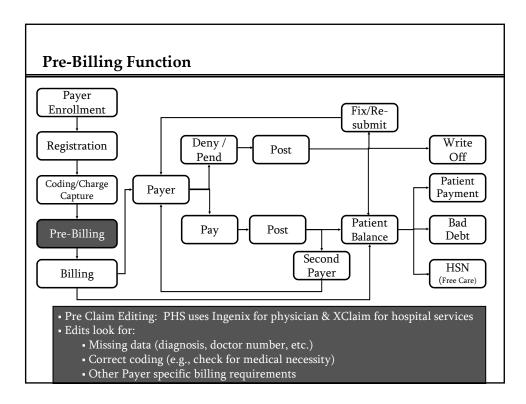
The ABCs of HCCs: Decoding CMS's Hierarchical Condition Categories By Holly J. Cassano, CPC $\,$ April 14, 2011



The RAF Score

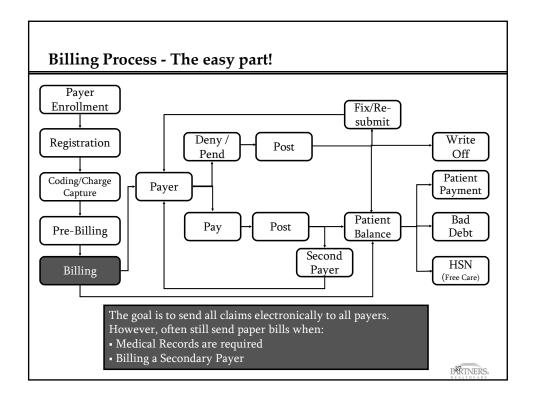
- The combination of HCC diagnosis codes with demographic data comprise the Risk Adjustment Factor or RAF Score, and this communicates health severity
- The RAF score acts as a multiplier when CMS calculates its payments
- Conditions must be documented and billed at least once per calendar year for inclusion in the risk model
- Variations on the RAF Score are a key part of how risk adjusted panels are calculated by our commercial payers as well





Pre Billing

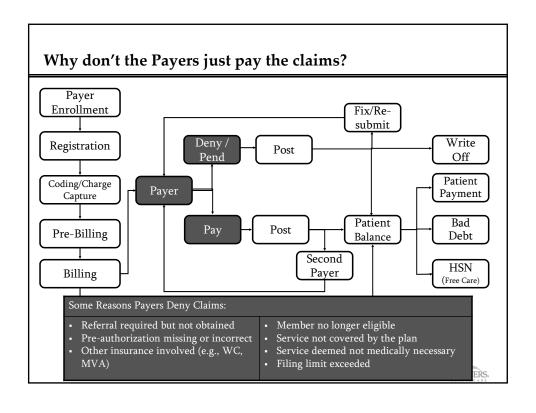
- All hospital services run through a number of edits to ensure that claims are clean before they are sent to the payer
- Editing Tools:
 - Epic edits
 - Xclaim edits (Nthrive Product)
- The edits are disbursed to the teams most capable of resolving the edits quickly
- $\bullet\,$ Currently the clean claim rate is around 86%

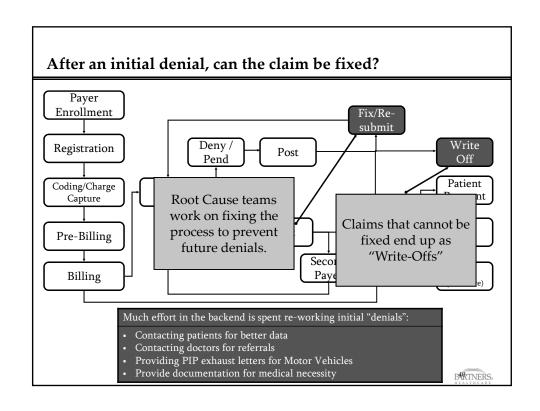


Claims Processing

- Claims are sent electronically to the payers via a standard HIPAA transaction (837)
- For inpatient services, we capture all services and combine them onto one claim with to and from dates
- Any outpatient services performed within 72 hours of the inpatient admissions are also combined on the inpatient claim
- Partners uses Nthrive's Xclaim product as the claims clearing house

Total Imports Count	1,280,361
Total Imports Dollars	\$ 5,242,721,669
Total Imported Dirty Count	174,187
Total Imported Dirty Dollars	\$ 1,035,926,615
% Imported Dirty (Count)	14%
% Imported Dirty (Volume)	20%
Annualized Claim Count	5,121,444
Annualized Claim Dollars	\$ 20,970,886,677





Insurance Follow Up

Responses from payers are posted to Epic through an electronic file, called an 835 The file contains the following information:

- Payment
- Allowed amount
- Rejection code (if the claim doesn't pay or partially pays)
- Patient Liability

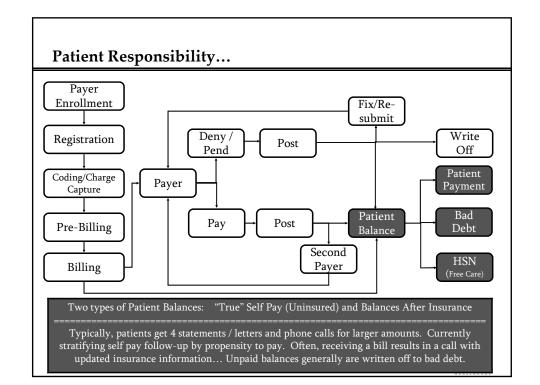
Once the detail is posted to Epic, logic determines what the next actions are:

- Patient Liability → bill patient
- Partial Pay (80%) Co-insurance due → bill secondary
- Claim Rejects → file to a work queue for third party reviewer processing

Top rejections:

- Auth/Referral
- Coordination of Benefits
- Patient not covered
- Not Medically Necessary
- Filing Limit





Self Pay Approach

Customer Service

• PBS is handling ~40,000 calls per month; call abandonment rate of 5-6%

Collections

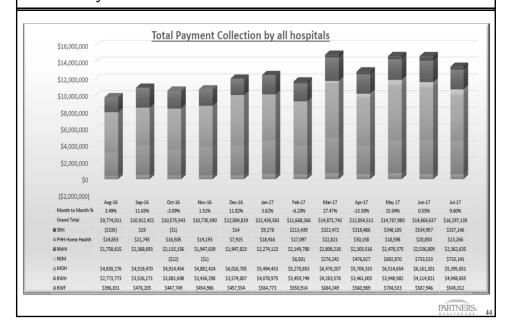
- Self Pay balances flow into a series of follow up workqueues for action either through calls or targeted letters
- Accounts are prioritized for action using a Propensity to Pay/Expected Value analysis provided by our contracted vendor, Connance

Trends in Benefit structures:

- High Deductible plans (\$2K-\$5K)
- Co-insurance plans (80%/20%)
- There is no approach to track patients with these types of plans
- There is no indicator in Epic to identify these plans, at this point



Self Pay Collections



Self Pay Approach

Epic SBO Process Settings

- Guarantors are mailed one statement per month whenever there is a qualifying balance at the account (HAR) level in the patient 'bucket'.
- SBO function is based on the creation of a Hospital Accounts receivable (HAR). This is done for both hospital (HB) and professional (PB) accounts. Each HAR can have both insurance balances and patient balances pending.
- A HAR will only qualify for a statement when the entire balance is in the patient bucket. The account will not qualify for a statement is there are any balances pending in insurance within the HAR.
- Statements generate every 30 days and include all qualifying HAR's. Accounts are included on the next available statement if there is a statement cycle running. If there have been no recent statements then they start a new cycle and immediately bill to the patient.
- The total guarantor balance must be greater than zero for any statement to be produced including any deposits or pre-visit payments.
- Accounts process through 4 dunning levels (4 statements). Accounts will not qualify for additional statements unless the statement cycle is manually reset.
- After 4 statements, accounts still unpaid will be sent to one of 2 collection vendors



Self Pay Approach

Patient Engagement

- Patients have two opportunities to review their accounts without engaging with Customer Service by using our Pay-by-Phone IVR or through Partners Patient Gateway (PPG)
- IVR Patients can call Customer Service and choose an option off the phone menu to review or pay their account balance. The system will confirm their last statement balance and current account balance. Patients can pay they balances by credit card over the phone. System operates 24/7.
- Partners Patient Gateway Patients can log into their Partners Patient Gateway account for multiple actions:
 - View a copy of their last statement. Paperless billing is possible using this feature
 - View current account balances. The patient can see some details of their accounts that can't be printed on the statement
 - Pay their account by credit card. They can either pay the entire balance or selected
 - Prepay copays for future visits
- Future PPG Enhancements are expected to include the ability for a patient to update their insurance, demographics, set up a payment plan and request estimates.

Major Patient Engagement Initiatives

Technology

- Expand texting and email use for appointment confirmations
- Expand functionality in the PatientGateway
 - Online payments Establish payment plans

 - Check in to appointments
 - Update demographics/insurance
- Expand the use of Epic Welcome Kiosks

Patient Estimates

- Expand Epic functionality to BWH and FH Financial Counselor teams
- Currently live at MGH and NWH
- Expand to outpatient departments such as Radiology
- Proactively push out estimates to patients for scheduled appointments



Patient Statements

- Continue to improve the Patient Statement
- Convene annual patient focus groups to capture feedback to ensure that our statements remain patient-friendly



Typical Revenue Operations Metrics

Days in AR:

• Measures how fast cash is being collected - PHS Goal <50 days for the AMCs, 36 days for the Community Hospitals

AR Aging:

• Measures health of AR; the older the AR, the less likely it is that it will be collected - PHS Goal AR older than 90 days should be < 15%

Cash Collection Rate:

• Goal should be to collect 100% of target (after deduction for budgeted uncollectible amounts of bad debt, denials, charity)

Denial Percentage:

■ Will depend on payer mix – PHS Goal 1% of Net Revenue

Bad Debt Percentage:

 Will depend on payer mix, charity care policy & demographics – PHS Goal 1-2% of Net Revenue



Agenda

Part I: Revenue Cycle Management

- -Need to get it right up front!
- -Future Payment Methodologies
 - •Physicians and hospitals will need to work together

Part II: Net Revenue & Reserves

- Difference Between Gross and Net
- Setting Reserve Levels
 - »Contractual Allowances
 - »Denials
 - »Charity Care
 - »Bad Debt

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Financial Reporting

Gross vs. Net

- Key question: How much of our Gross Revenue do we really expect to collect?
- Start with Gross Revenue; but then need to
 - Deduct: Provision for Contractual Allowances
 - Deduct: Provision for Denials
 - Deduct: Provision for Charity Care
 - Deduct: Provision for Bad Debt



Income Statement vs. Balance Sheet Model

Two options:

- <u>Income Statement</u> approach looks at new revenue each month and provides a reserve for expected non-collectables
- <u>Balance Sheet</u> approach looks at the AR by Payer and aging bucket each month and estimates how much reserve is required for each "bucket". Each month, an entry is made to true up the provision to the most current estimated need
- Some entities use both
 - Use Income Statement method each month
 - Then validate with the Balance sheet method on quarterly basis



Two versions of the Income Statement Approach

- Contractual provisions often determined from:
 - Contract Management System
 - » Each Payer contract modeled and loaded
 - Note need to update the model for contract changes, price increases,
 - » System reviews each claim & models contractual allowance need and "expected net revenue"
 - Historical payment history
 - » Does not model expected payment claims by claim
 - » Uses history of cash collection to estimate future collections
 - » Updated periodically to "true up" estimates to actual cash collections

Example of Contractuals via Cash Studies

Contractual Provision via historical cash studies (Column 1 times Column 3 = Column 5)

D	Gross	C/A	Net Cash	C/A	Billing
Payer	Revenue 1		(from study) 2	Res	Revenue 3
Medicaid	20	70%	30%	14	6
Medicare	25	50%	50%	12.5	12.5
Commercial	15	30%	70%	4.5	10.5
Managed Care	30	40%	60%	12	18
Other	10	10%	90%	1	9
Total	100			44	56

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Quick Balance Sheet Example - One Payer

1. Start with AR Balance for Payer by aging bucket . . .

	Payer	0-60	60-120	120-180	180-365	>365	Total
	Managed Care AR	3,000,000	1,600,000	1,000,000	500,000	200,000	6,300,000
\rangle	Denial Need %	10%	25%	50%	65%	100%	
	Need	300,000	400,000	500,000	300,000	200,000	1,700,000

2. Apply estimates of reserve need calculated from historical run outs

Note that the assumed need percentage increases with the age of the receivable. This exercise would be completed for every Payer to determine the total need.

How Do You Estimate the "Denial Need"?

How to Conduct a "Run Out Analysis"

- 1. Identify all AR accounts as of a point in time
 - » Say, 2 years ago. . .
- 2. Watch what happens to the AR over time
 - » What transactions hit these accounts?
 - » See how much from each Payer / aging bucket ended up as contractual, bad debt, denial, charity
- 3. Translate into percentages to use in balance sheet model



Run Out Example by Aging . . .

		0 - 30	31 - 60	61 - 90	91 - 120
Beginning AR Balance		\$ 243,792,152		\$ 24,162,335	
Transactions					
	2 Allowances - Third Party	\$ (150,370,096)	\$(31,300,795)	\$(10,919,079)	\$ (7,459,102)
	3 Denial Writeoffs	\$ (1,731,250)			
	4 Bad Debt Writeoffs	\$ (2,202,147)	\$ (542,427)	\$ (980,412)	\$ (583,659)
	5 Charity Care Writeoffs	\$ (10,220,692)	\$ (3,817,466)	\$ (3,600,592)	\$ (1,548,006)
	7 Refund	\$ 464,713	\$ 469,437	\$ 147,135	\$ 131,678
	9 Cash - Posted	\$ (78,690,791)	\$(20,818,568)	\$ (6,533,378)	\$ (5,103,258)
	Other	\$ 19,106	\$ -	\$ 200	\$ -
	Special Billing	\$ (54,503)	\$ (43,943)	\$ (23,196)	\$ (859)
	BAD DEBT RECOVERIES	\$ 37,479	\$ 57,986	\$ 43,038	\$ 42,705
		0 - 30	31 - 60	61 - 90	91 - 120
Beginning AR Balance		\$ 243,792,152	\$ 57,877,004	\$ 24,162,335	\$ 15,963,949
Transactions					
	2 Allowances - Third Party	-61.7%	-54.1%	-45.2%	-46.7%
	3 Denial Writeoffs	-0.7%	-0.9%	-2.2%	-3.2%
	4 Bad Debt Writeoffs	-0.9%	-0.9%	-4.1%	-3.7%
	5 Charity Care Writeoffs	-4.2%	-6.6%	-14.9%	-9.7%
	7 Refund	0.2%	0.8%	0.6%	0.8%
	9 Cash - Posted	-32.3%	-36.0%	-27.0%	-32.0%
	Other	0.0%	0.0%	0.0%	0.0%
	Special Billing	0.0%	-0.1%	-0.1%	0.0%
	BAD DEBT RECOVERIES	2.070		0.2%	0.3%

Quick Note on Third Party Liabilities

- Other adjustments to net revenue may be required due to things like:
 - Risk contracts, e.g., pay for performance
 - Price protected PAF's

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Pulling it Together: A Simple Example

Gross Revenue:

\$50 million

• Set aside 40% for Contractual Allowance <u>\$20 million</u>

\$30 million

Less Other Billing Reserves:

Set aside 10% Charity Care
 Set aside 2% Denials
 Set aside 2% Bad Debt
 \$ 1 million
 \$ 1 million

\$7 million

Subtotal (NPSR) \$23 million

• 3rd Party: Add P4P \$1 million

\$1 million

Net Revenue \$24 million

Questions? Thank you for your time!