

**The Ohio State University**  
**Fisher College of Business**

**Master, Business Operational Excellence- Healthcare Capstone Project Review**

Patricia C. Mahoney  
12/10/2012



- **A Process Improvement Initiative in a Medical Faculty Group Practice (FGP) Central Business Office (CBO)**
- FGP : Approximately 600 clinical FTE physicians
- Annual Gross Charges FY2011: \$841+M
- Annual Insurance Claims Produced: 2M+
- Specialty Patient Care Provided at 5 Hospitals; Primary & Specialty Care at 11 Outpatient & Rehab clinical venues
- Internal KPI & Industry metrics for RVU, Charges, Collections, Lags, Claim denial rate, etc.
- Faculty Group Practice CBO:
  - Produce & transmit claims, patient statements; post payments; respond to customer billing inquires
  - Fix claim defects & resolve claim denials to obtain payment – “rework”
  - **Corrections**- a hidden cost & statistic, often result of internal processes, behaviors,

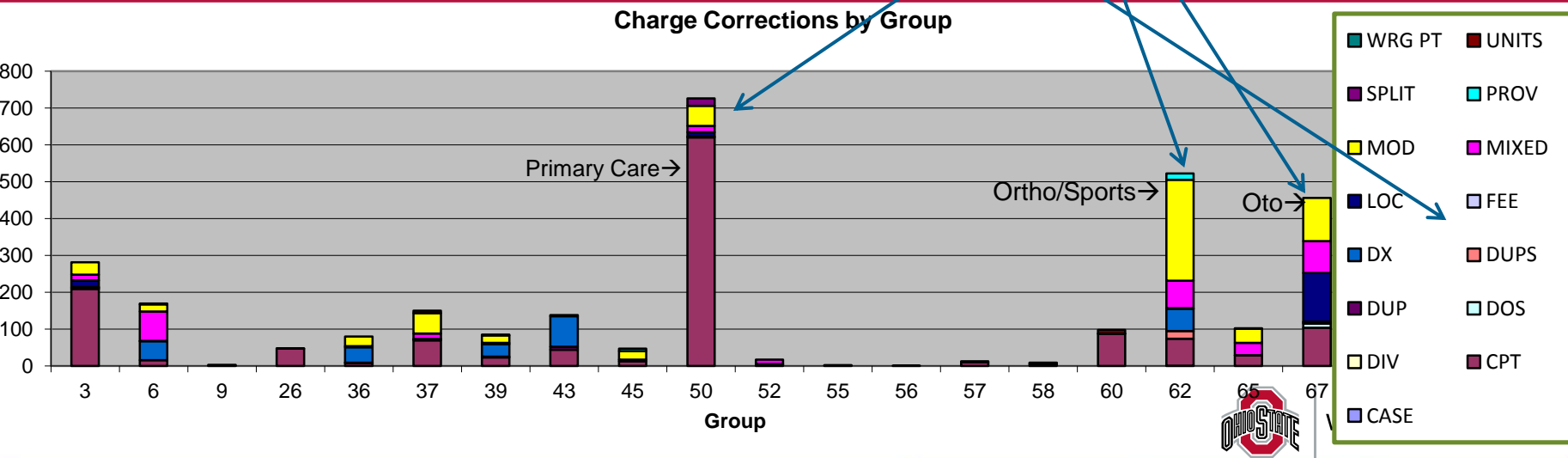
**Capstone Project: Study of a Flow problem and a Cause problem: Corrections**

**TITLE: Charge Correction Process  
Improvement at FGP Physicians Corporate  
Business Office**

Date: 12/10/12      A3 (v4)    pg 1  
Owner: Pat Mahoney    Coach: B.K.    Sponsor: G.S.  
Team: M. M., B. O., T. P., L. S., J. T., E. W., A. W., S.T., T. A., K.D.

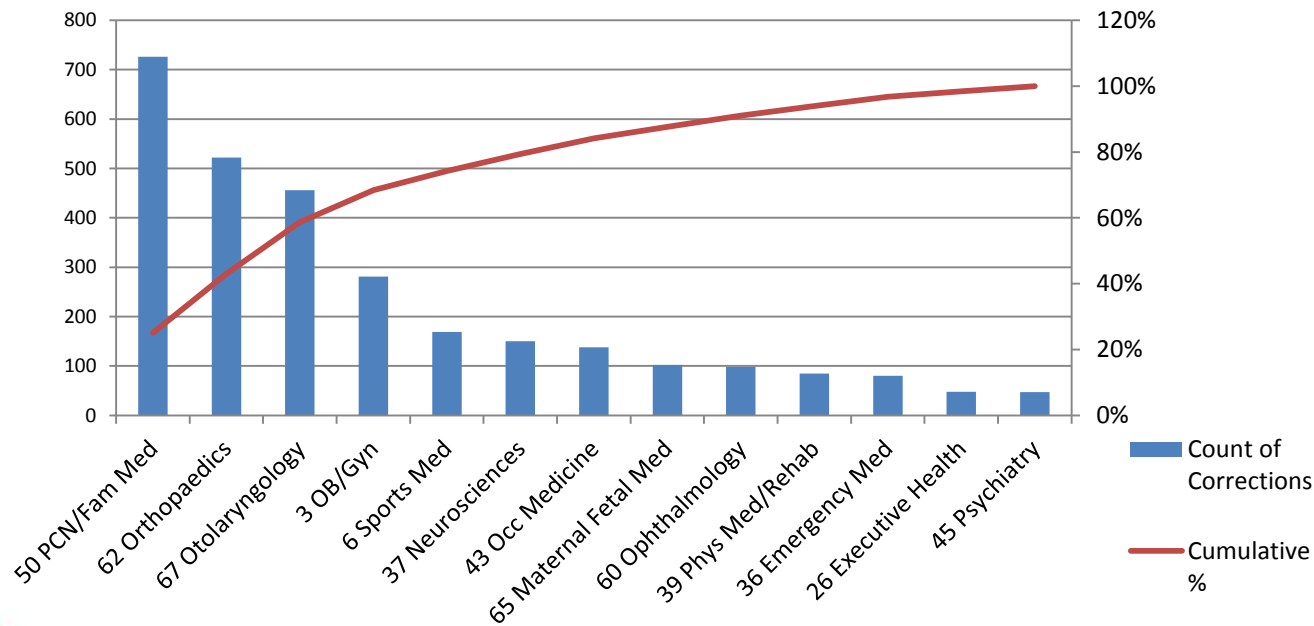
**Background and Problem Statement:**

- Appx. 225 Charge Corrections are generated weekly based on 13 week sample in 2011
- Accounts receivable impact: **\$90K estimated weekly** for corrections & rework
- Cost associated with processing corrections: **1.5 FTE+**
- No standard measures & tracking of the activity in place.... \$\$ impact could be more!
- Charges are corrected for a variety of reasons.  Some Clinical Departments' activity - denoted by Group # - generates more corrections than others. 
- **PROBLEM: A/R management focus on Corrections vs. Collections. Staff doing non-value added re-work . A/R \$dollars are tied-up in receivable delaying cash collections.**

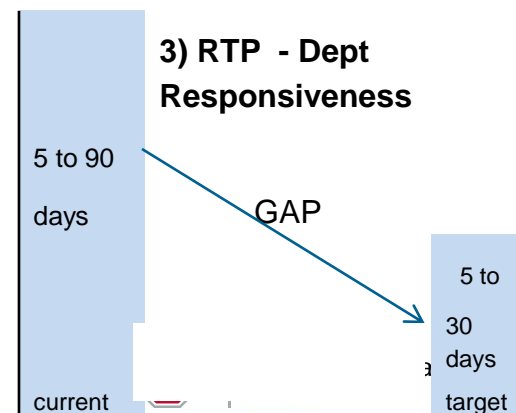
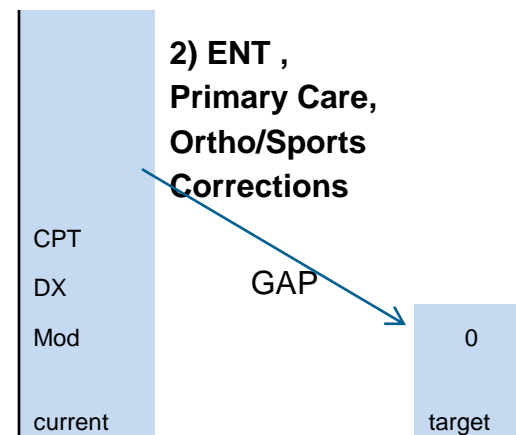
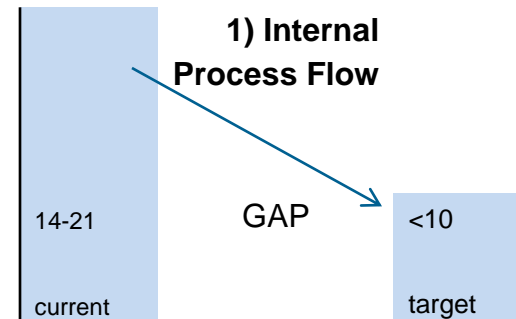


## Current Conditions:

- Typical lead time to complete charge corrections during A/R follow-up: 14-21+ days (105 day outliers occur!)
- Current correction processing time: 56 minutes
- **Multiple information flows** drive charge corrections
- **Periodic back-logs** occur at various points of the office workflow
- 3 Collection teams (27 employees) initiate the work. Volume varies by team. **A 4<sup>th</sup> team is on-boarding June 2012, increasing expected activity.**
- 3 Clinical Departments/Groups activity comprises/generates most charge corrections

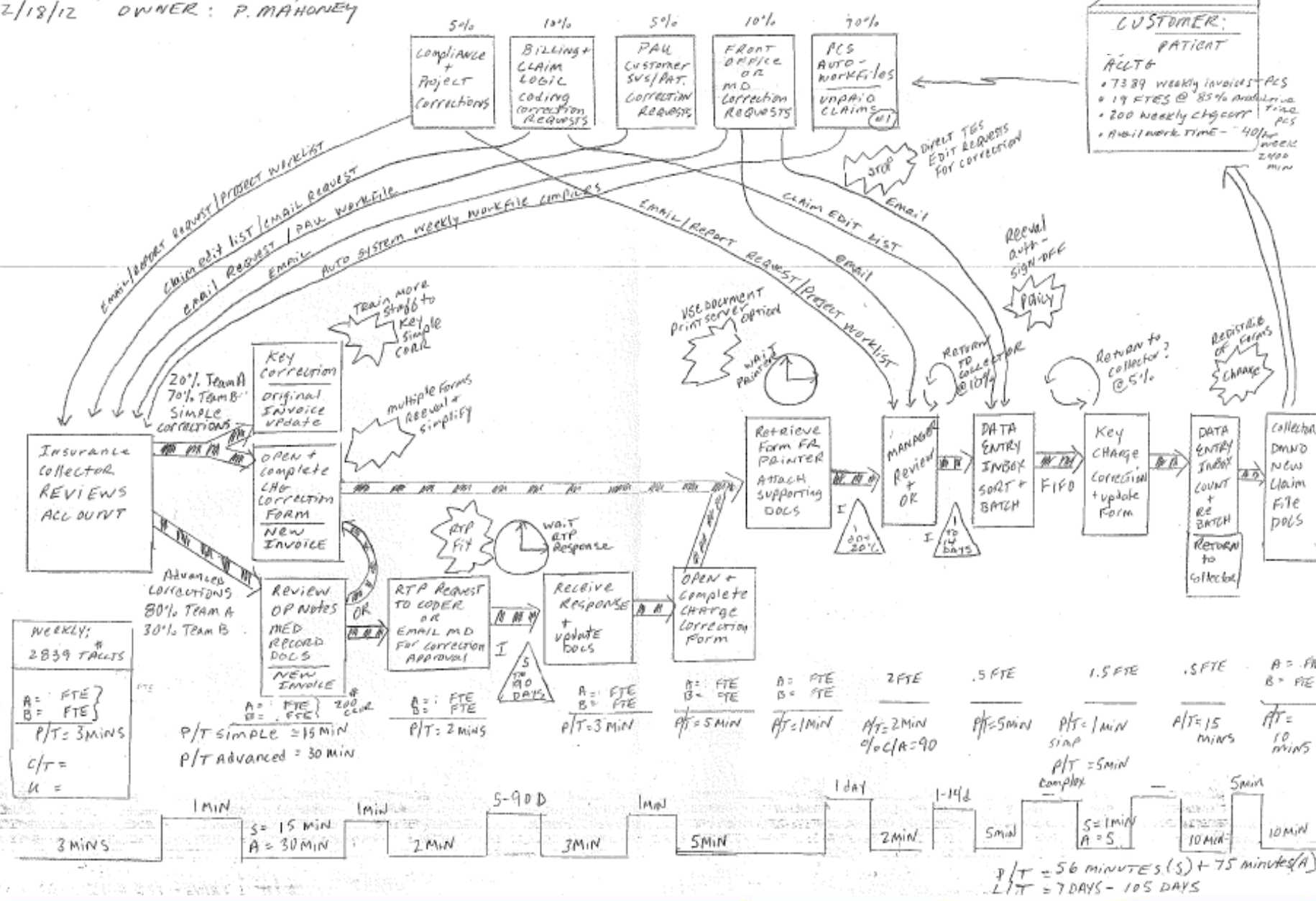


## 3 Fundamental Issues:



CURRENT VS MAP - DRAFT #2

Corporate Revenue Cycle - Charge Corrections Process  
 2/18/12 OWNER: P. MAHONEY



**CUSTOMER: PATIENT**  
 ACTG  
 • 7389 weekly invoices - PCS  
 • 19 FTEs @ 85% productivity  
 • 200 weekly chgcorr  
 • Avail work time - 40hr/week  
 2400 min

- 5% Compliance + Project Corrections
- 10% Billing + CLAIM LOGIC coding correction requests
- 5% PAU Customer Svc/PAT. Correction Requests
- 10% FRONT OFFICE OR MD Correction Requests
- 70% PCS AUTO-WORKFILES UNPAID CLAIMS

Insurance Collector REVIEWS ALL QUIT

WEEKLY; # 2839 FACTS  
 A = FTE }  
 B = FTE }  
 P/T = 3MINS  
 C/T =  
 U =

Advanced Corrections 80% Team A 30% Team B  
 P/T SIMPLE = 15 MIN  
 P/T Advanced = 30 MIN

A = FTE }  
 B = FTE }  
 P/T = 2 MIN

A = FTE }  
 B = FTE }  
 P/T = 3 MIN

A = FTE }  
 B = FTE }  
 P/T = 5 MIN

A = FTE }  
 B = FTE }  
 P/T = 1 MIN

2 FTE  
 P/T = 2 MIN  
 % CLR = 90

.5 FTE  
 P/T = 5 MIN

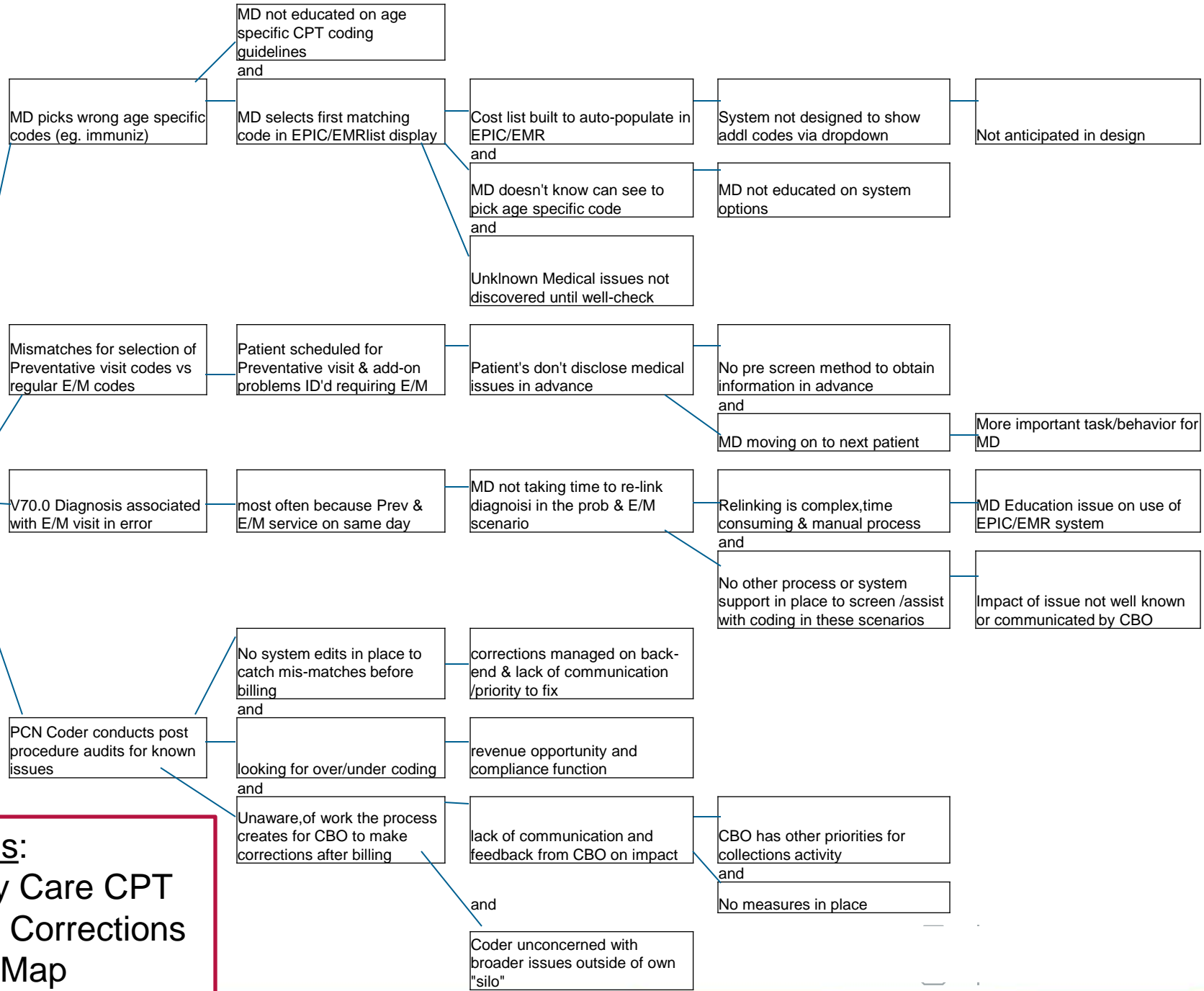
1.5 FTE  
 P/T = 1 MIN  
 P/T = 5 MIN  
 complex

.5 FTE  
 P/T = 15 MINS

A = FR }  
 B = FTE }  
 P/T = 10 MINS

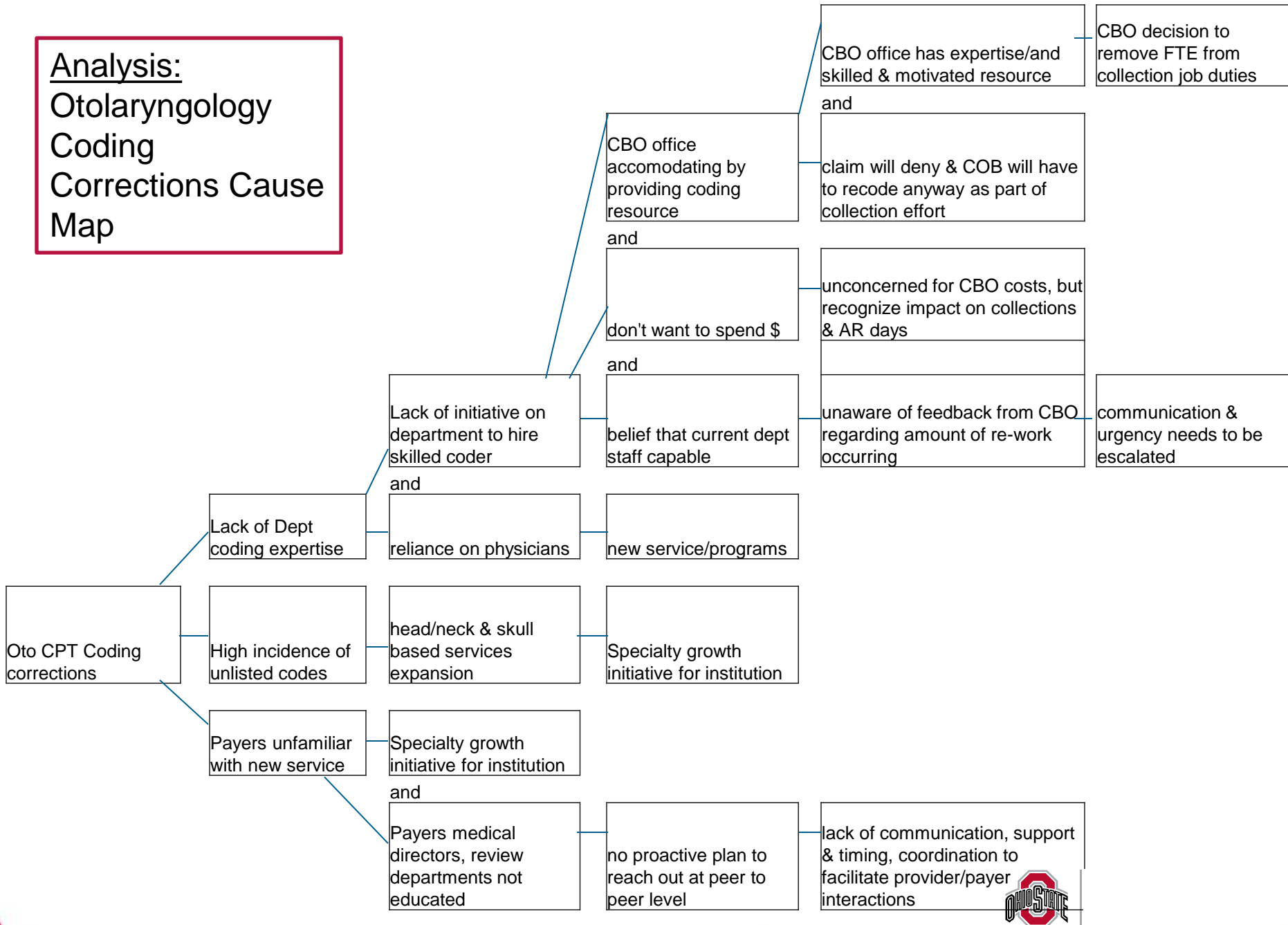
P/T = 56 MINUTES (S) + 75 MINUTES (A)  
 L/T = 7 DAYS - 105 DAYS

PCN- Correct CPT Procedure Code



**Analysis:**  
**Primary Care CPT Coding Corrections Cause Map**

# Analysis: Otolaryngology Coding Corrections Cause Map



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**PROBLEMS:**

- A/R management focus on Corrections **vs. Collections.**
- Staff doing non-value added re-work via untimely & inefficient process
- A/R \$dollars are tied-up in receivable delaying cash collections.

**Charge Correction Improvement Project**  
**Goal/Targets:**

- 1) Reduce (process) lead time from 14-21+ days to <10 days. Move necessary corrections through the system more efficiently.  
Target date: FY2013 Q1
- 2) Reduce incoming charge corrections and A/R \$dollar impact for 3 key groups by 50%.  
Target date: FY 2013 Q1
- 3) Shore-up the measurement system to produce reliable, consistent charge correction data and reports. Validate sample.  
Target date: FY2012 Q4

**COUNTER MEASURES**

Scale= (0 Poor,difficult) (4 Excellent) (\$-low, \$\$\$-high)

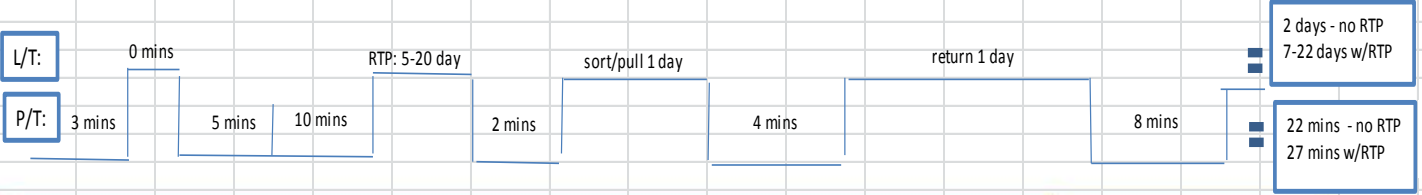
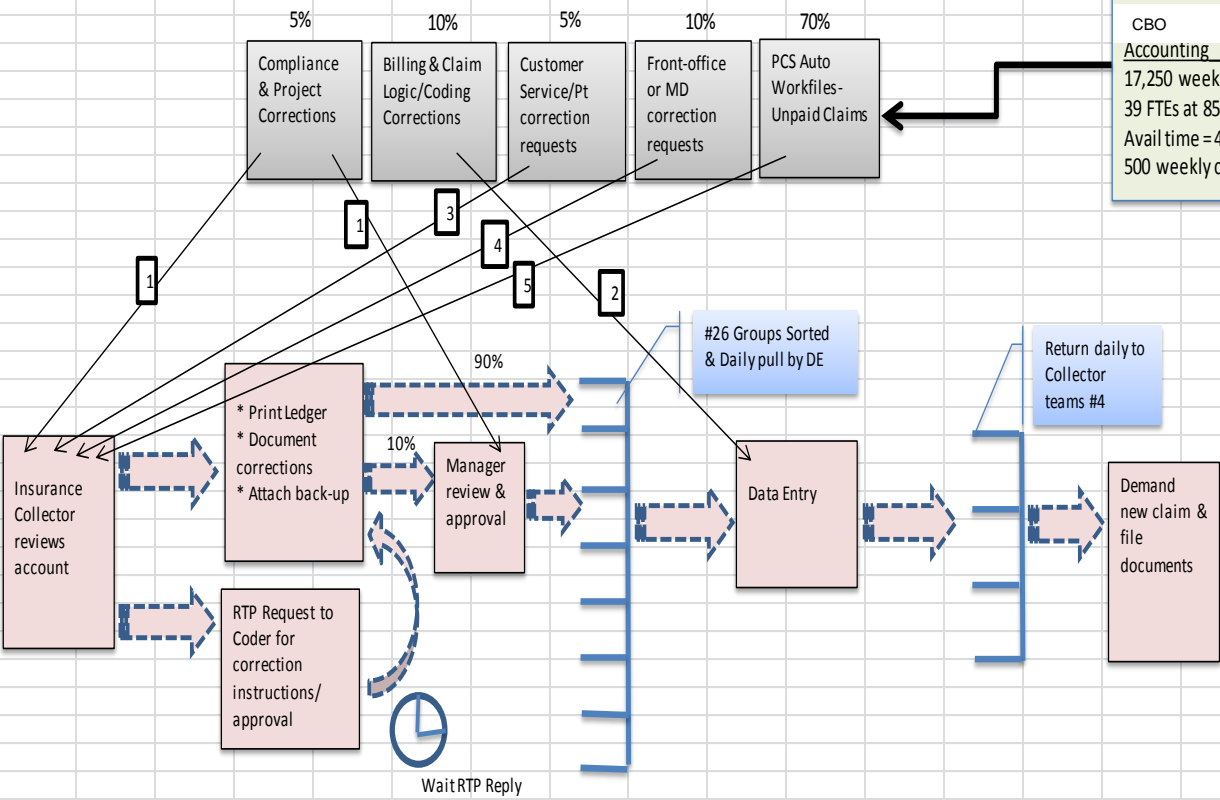
Item	Reference	Cause	Counter measure	Effective	Feasibility	Implement	Cost	Total Eval
1	Goal #3	Absence of Measures/Data collection system	* Build Data Capture methodology. *Obtain consensus & approval. * Load to system, train staff & test process. *Populate database & produce trending reports	4	4	4	none	12
2	Goal #1/& VSMMap FLOW	Multiple forms in use by CBO staff	*Redesign transmittal forms to include drop-down boxes, less key entry, less paper.* Project team to lead experimental beta beginning 6/14.	3	4	4	none	11
3	Goal #1/& VSMMap FLOW	Bottleneck for 100% Manager review & approval	Identify FAST TRACK vs. Review correction criteria. FT/no review items direct to Key punch. *Determine service turn-around commitment. * Balance Mgr workload by involving Team Leads in approval process. Develop visual cues/andon to trigger help.	4	4	3	none	11
4	Goal #1/& VSMMap FLOW	Bottleneck for key punch	Service agreement in place for daily submittal of work. Trial supermarket type set-up to manage "pull" system based on FIFO. Standardize processing by group to eliminate extra "sorting" by key punch. Cross train addl. Key punch resources.	4	3	2		9
5	Goal #1/& VSMMap FLOW	Paper flow	Implement electronic request system	4	1	1	\$	6
6	Goal #2 CAUSE	Groups unaware of correction volume, rework and A/R \$ impact	Reporting solution (item 1). Communication and further 5 why at Rev Cycle sessions. Work with PCN coders to develop system/process (TES) for holding charges "upstream" for audits.	4	3	2	none	9
7	Goal #1/& VSMMap FLOW	RTP Response time from coders variable and without standard or accountability. SCN/sports & Ortho.	Set standard/expectation for RTP turnaround & hold groups accountable. Communicate to Rev Cycle leaders. Formalize internal escalation process. Report outliers for action.	4	4	3	none	11
8	Goal #2 CAUSE	Business office coding & re-coding ENT activity (skull based surgeries & H/Neck surgeries)	Stop coding in CBO. ENT department will hire a subject matter expert to perform this activity in support of MDs & it will occur PRE charge entry.	4	4	4	\$\$	12
9	Goal #2 CAUSE	MD Education- coding & system use.	Work with PCN and EPIC EMR facilitators to identify & implement training	4	2	2	?	8
10	Goal #2 CAUSE	System issues- Faulty system design (EMR coding selector?) and billing system coding safety net under-utilized (TES/Claims manager)	Gemba MD EMR workflows with PCN to confirm. Pull correction examples for no safety catch and review with TES/CM work group for solution.	3	3	2	none	8












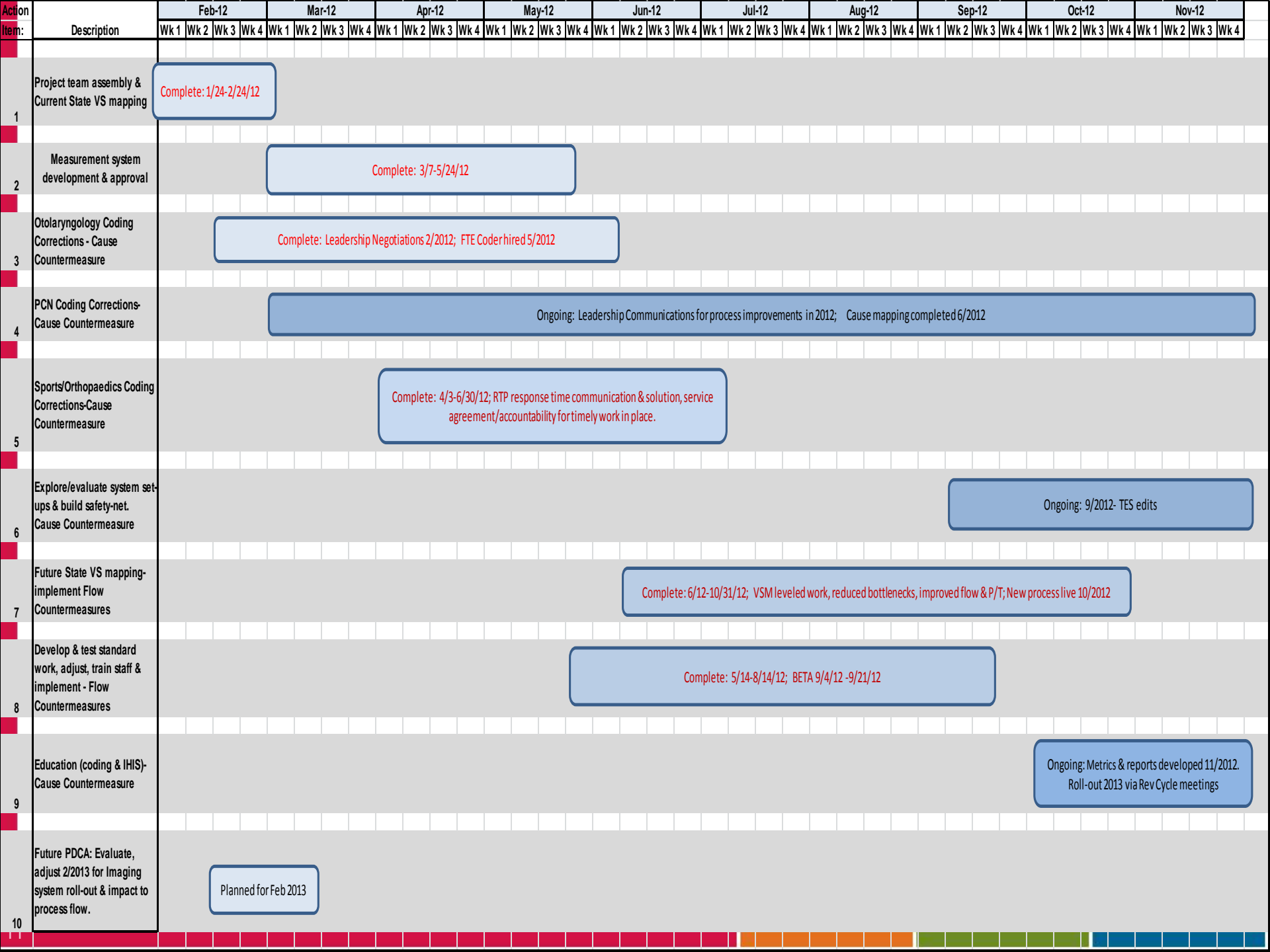
**Future VSM: CBO - Corporate Revenue Cycle- CHARGE CORRECTION PROCESS**  
 Date: 12/3/12 Owner: Patricia Mahoney Coach: B.K. Sponsor: G.S.

**CUSTOMER:**  
 CBO Corporate Patient  
 Accounting  
 17,250 weekly invoices in PCS  
 39 FTEs at 85% productive time  
 Avail time = 40 hr week  
 500 weekly chg corrections

- Information Flow Footnotes:
- 1- Email/report request/project worklist
  - 2- Claim Edit list
  - 3- Email/PAU workfile
  - 4- Email
  - 5- System weekly workfile autocompiles



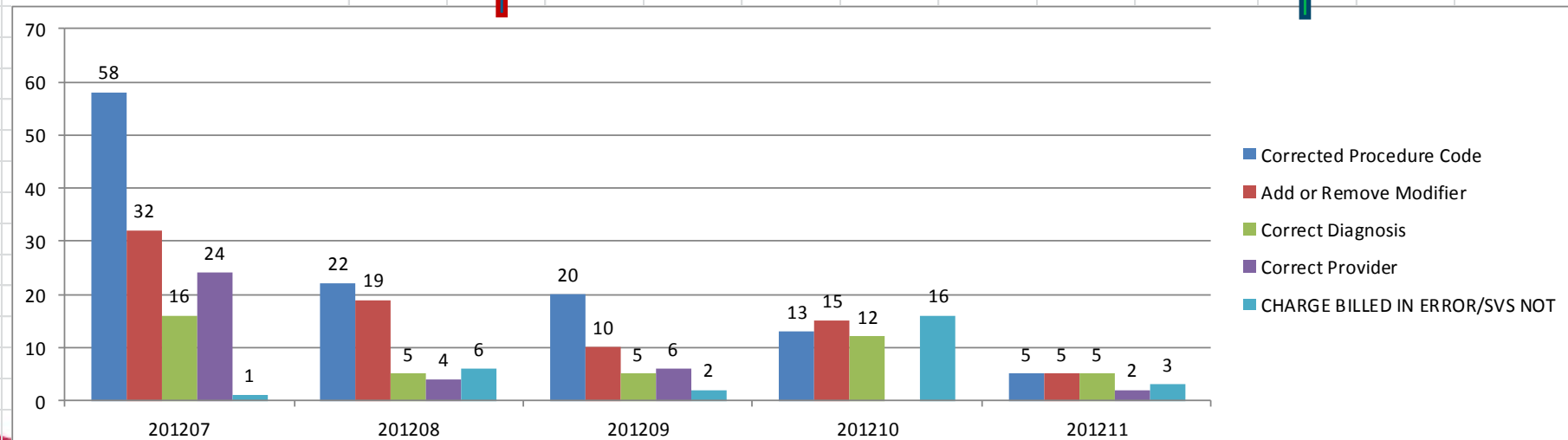
COUNTER MEASURES				Priority	Status 9/9/2012	Status 12/3/2012
Item	Reference	Cause	Counter Measure	Score		
1	Goal #3	Absence of Measures/Data collection system	* Build Data Capture methodology. *Obtain consensus & approval. * Load to system, train staff & test process. *Populate database & produce trending reports	12	<b>85% Complete.</b> Background work complete. Database in place. Monthly trending report to be finalized & rolled out.	<b>100% COMPLETE</b> 
2	Goal #1/& VSMap FLOW	Multiple forms in use by CBO staff	*Redesign transmittal forms to include drop-down boxes, less keyentry, less paper.* Project team to lead experimental beta beginning 6/14.	11	<b>90% Complete.</b> Single screen shot Ledger form selected after trial of 3 options. Standard work flow developed with document. <b>Resolved printer equipment barrier to this countermeasure.</b> Team training & implementation 9/10-9/28 for all teams.	<b>100% COMPLETE. Live in Production 10/2012</b> 
3	Goal #1/& VSMap FLOW	Bottleneck for 100% Manager review & approval	Identify FAST TRACK vs. Review correction criteria. FT/no review items direct to Key punch. *Determine service turn-around commitment. * Balance Mgr workload by involving Team Leads in approval process. Develop visual cues/andon to trigger help.	11	<b>95% Complete.</b> Re-categorized Manager review requirements & added Team Leads to review process, reducing bottleneck. New flow will be implemented with forms (item #2) roll-out. Visual management of process to be finalized.	<b>100% COMPLETE. Live in Production 10/2012</b> 
4	Goal #1/& VSMap FLOW	Bottleneck for keypunch	Service agreement in place for daily submittal of work. Trial supermarket type set-up to manage "pull" system based on FIFO. Standardize processing by group to eliminate extra "sorting" by keypunch. Cross train addl. Key punch resources.	9	<b>75% Complete.</b> Pull & sort system will be adjusted/finalized as part of roll-out (item #2). Position duties in Key punch realigned creating capacity for cross training/back-up charge correction FTE in 8/2012.	<b>100% COMPLETE</b> 
5	Goal #1/& VSMap FLOW	Paper flow	Implement electronic request system	6	No action- Determined countermeasure not feasible at this stage.	No action- countermeasure out of scope
6	Goal #2 CAUSE	Groups unaware of correction volume, rework and AVR \$ impact	Reporting solution (item 1). Communication and further 5 why at Rev Cycle sessions. Work with PCN coders to develop system/process (TES) for holding charges "upstream" for audits.	9	 <b>30% Complete.</b>	<b>60% Complete.</b> Reporting roll-out scheduled for January 2013 Revenue Cycle meetings. CFO Monthly Corporate KPI reports updated to include Charge Correction metric effective 12/2012.
7	Goal #1/& VSMap FLOW	RTP Response time from coders variable and without standard or accountability. SCN/sports & ortho.	Set standard/expectation for RTP turnaround & hold groups accountable. Communicate to Rev Cycle leaders. Formalize internal escalation process. Report outliers for action.	11	<b>100% Complete.</b> Rolled out expectations at May/June Revenue Cycle Meetings. Internal escalation process established between staff/Managers. Improvements noted with Ortho/Sports. Need to establish on-going reminders/reporting to assure accountability & compliance (add to Control phase/chart).	<b>100% COMPLETE</b> 
8	Goal #2 CAUSE	Business office coding & re-coding ENT activity (skull based surgeries & H/Neck surgeries)	Stop coding in CBO. ENT department will hire a subject matter expert to perform this activity in support of MDs & it will occur PRE charge entry.	12	<b>100% Complete.</b> New coder started 5/2012. Positive impact reported by staff. Allowing COB employee opportunity to assume F/U work with addl. Groups. <b>Need to validate outcome with objective measure of charge corrections data and AVR aging improvements.</b>	<b>100% COMPLETE. 56% decrease in volume of average monthly corrections processed FY2013 YTD Nov vs. FY2012</b> 
9	Goal #2 CAUSE	MD Education- coding & system use.	Work with PCN and EPIC EMR facilitators to identify & implement training	8	<b>10% Complete</b> 	<b>25% Complete</b>
10	Goal #2 CAUSE	System issues- Faulty system design (EMR coding selector?) and billing system coding safety net under- utilized (TES/Claims manager)	Gemba MD EMR workflows with PCN/Other groups to confirm. Pull correction examples for no safety catch and review with TES/CM work group for solution.	8	 <b>5% Complete</b>	<b>25% Complete.</b> Tes edits in place



# Correction Project Win: Otolaryngology

## Otolaryngology Summary by Reason Trending

Row Labels	FY 2012 Total	FY 2012 Monthly Avg	FY2012 Total % by Reason	201207	201208	201209	201210	201211	FY 2013 Total	FY 2013 Monthly Avg	FY 2013 Total % by Reason	Grand Total
Corrected Procedure Code	449	37	21.74%	58	22	20	13	5	118	24	31.47%	567
Add or Remove Modifier	457	38	22.13%	32	19	10	15	5	81	16	21.60%	538
Correct Diagnosis	105	10	5.08%	16	5	5	12	5	43	9	11.47%	148
Correct Provider	551	55	26.68%	24	4	6		2	36	9	9.60%	587
CHARGE BILLED IN ERROR/SVS NOT	69	17	3.34%	1	6	2	16	3	28	6	7.47%	97
Misc/Other	77	7	3.73%	2	5		13		20	7	5.33%	97
Corrected Dollar Amount	50	5	2.42%	3	3	3	2	5	16	3	4.27%	66
Correct units	13	2	0.63%				2	13	15	8	4.00%	28
CORRECT HOSPITAL/LOCATION	161	13	7.80%	3	4	1	1		9	2	2.40%	170
Duplicate Charge	30	3	1.45%	1	1		2	1	5	1	1.33%	35
Linking diagnosis	34	4	1.65%	2	2				4	2	1.07%	38
Add Supervising Provider	39	13	1.89%							#DIV/0!	0.00%	39
Correct date of service	23	3	1.11%							#DIV/0!	0.00%	23
Wrong Patient	2	1	0.10%							#DIV/0!	0.00%	2
(blank)	5	3	0.24%							#DIV/0!	0.00%	5
<b>Grand Total</b>	<b>2065</b>	<b>172</b>	<b>100.00%</b>	<b>142</b>	<b>71</b>	<b>47</b>	<b>76</b>	<b>39</b>	<b>375</b>	<b>75</b>	<b>100.00%</b>	<b>2440</b>



# Project Close-out, Follow-up & Ongoing PDCA

## Plan:

- January 2013- Charge corrections report review a standing agenda item at monthly Revenue Cycle meetings. GOAL: Raise awareness & continued collaborative problem-solving for Cause. Responsible Party: Collection Managers.
- January 2013- QA Audit program begins. Monthly sample of transactions will be audited for accuracy and appropriateness. GOAL: Satisfy external auditing & policy/procedure requirements.



## Do:

- Visual tracking of WIP and Flow in business office. Reports/data posted to team huddleboards. GOAL: Employee engagement. Continued problem-solving for Cause, continuous checks for Flow, & adherence to standard work. Responsible Party: Collection Managers.

## Check:

- Charge correction team continues to meet monthly. GOAL: Regular assessment of categorical coding for correction reasons, identify appropriateness & opportunities. Responsible party: Charge Correction Team.

## Adjust/Act:

- Evaluate & adjust workflows for alignment with Imaging system. GOAL: Test workflow adjustments & realize additional process lead time by deployment of Imaging functionality- January/February 2013. Responsible Party: Collection Managers & project teams.