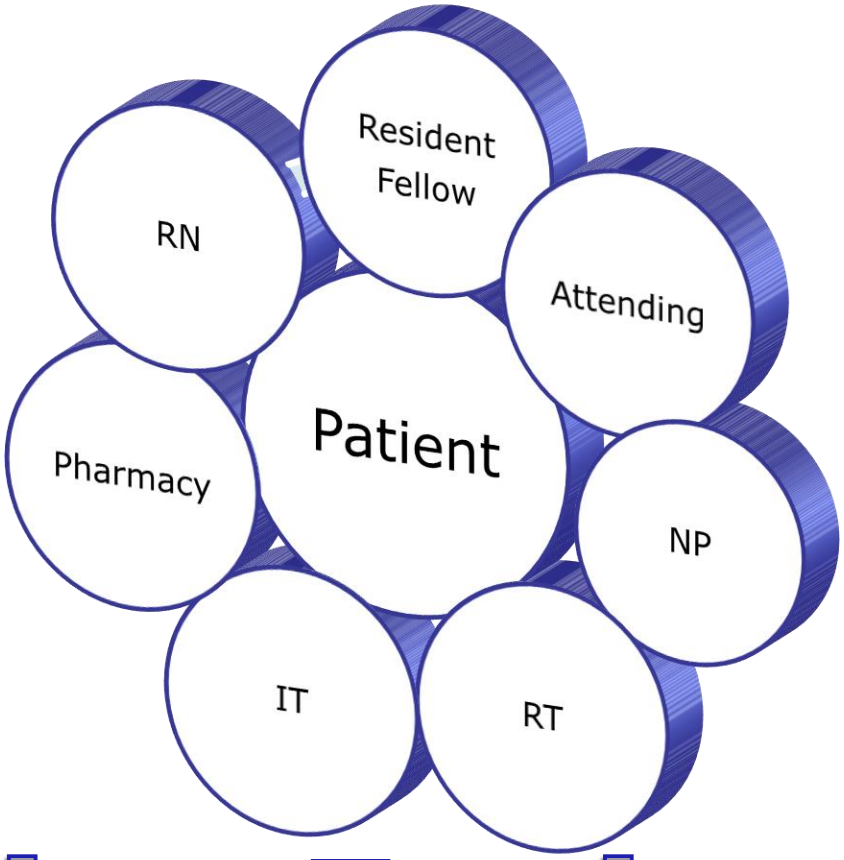
Patient Safety and Quality Improvement Symposium

University of Maryland Medical Center

May 12, 2014

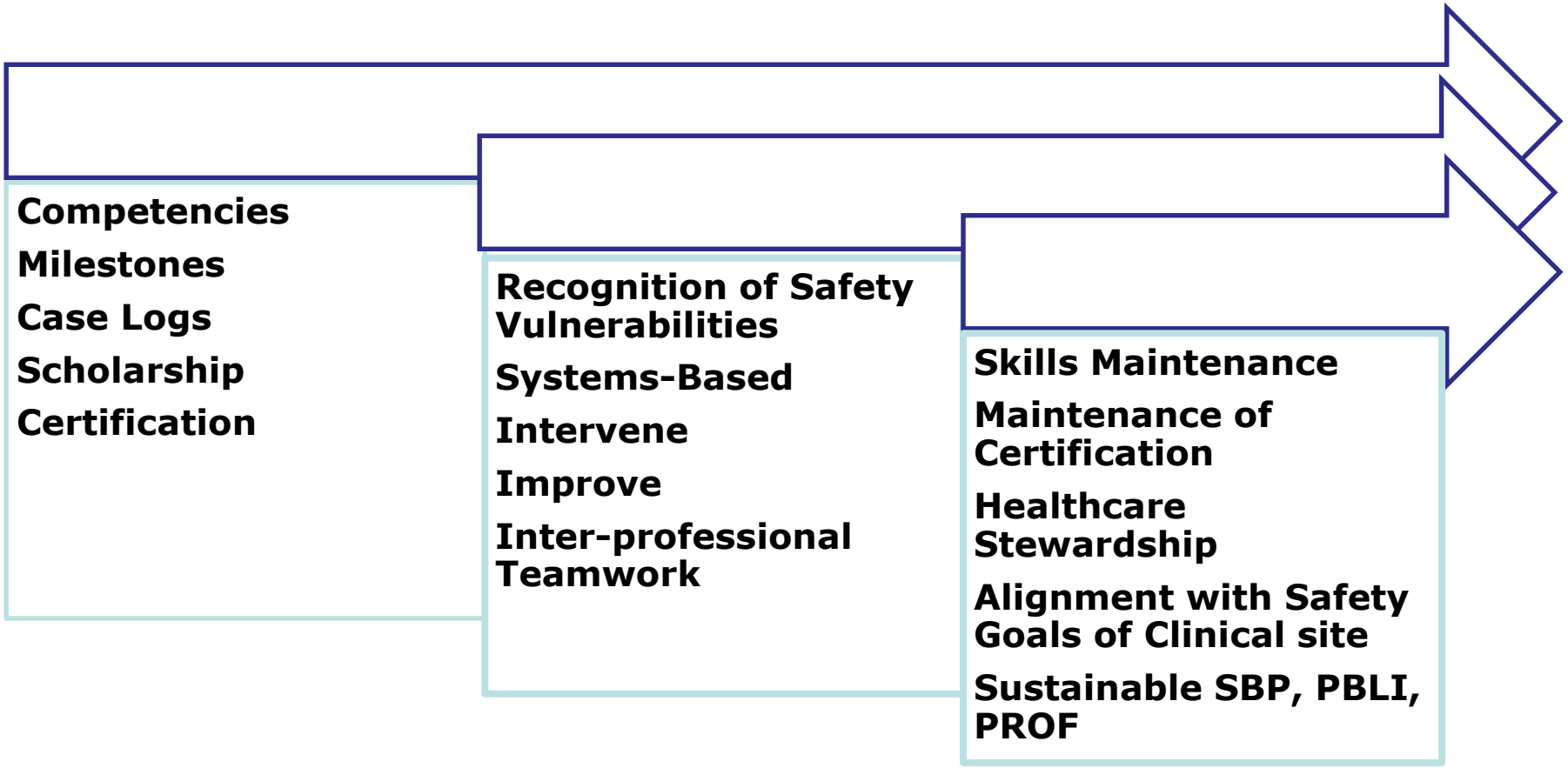
Introduction & Welcome

Clinical Environment

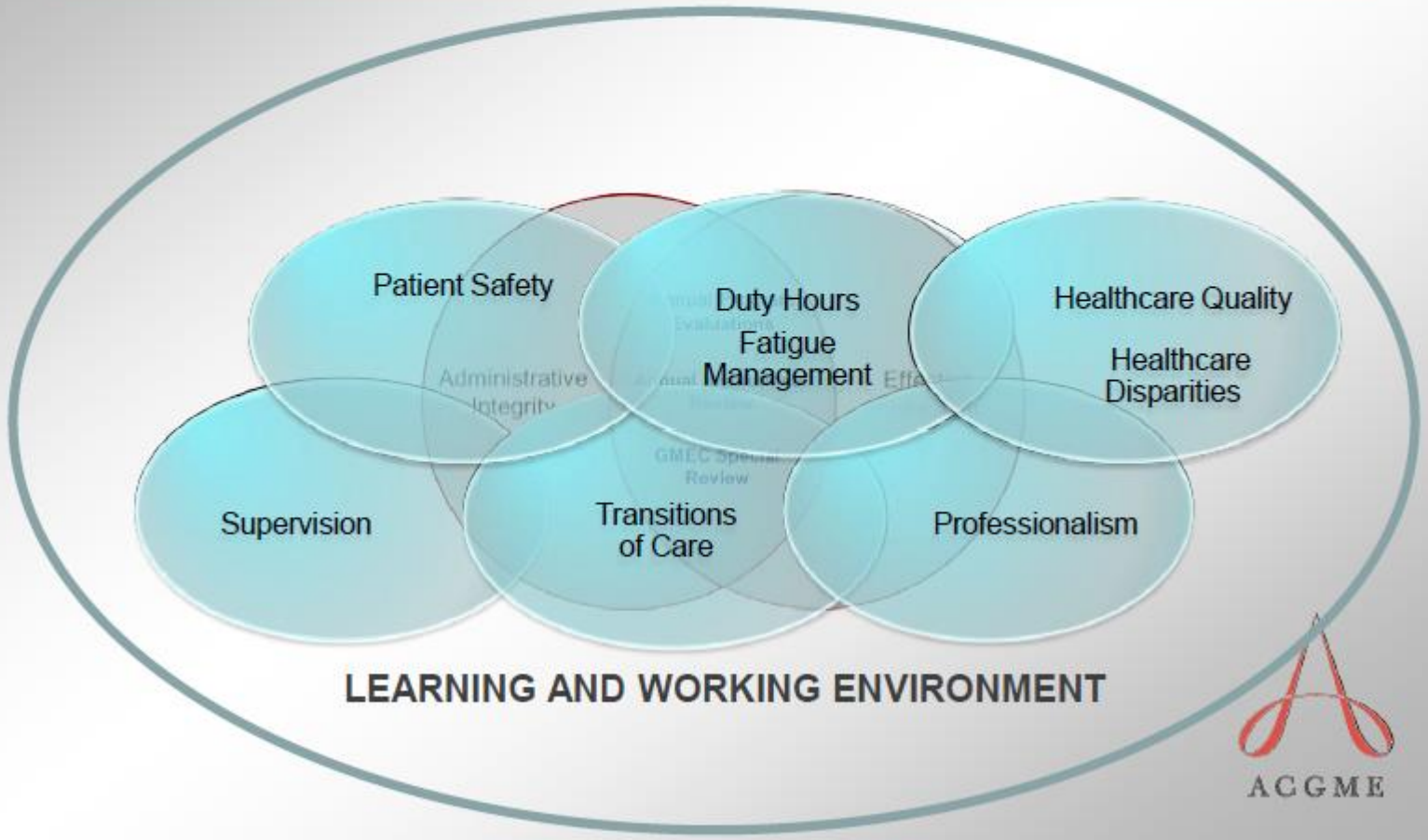


Learning Environment

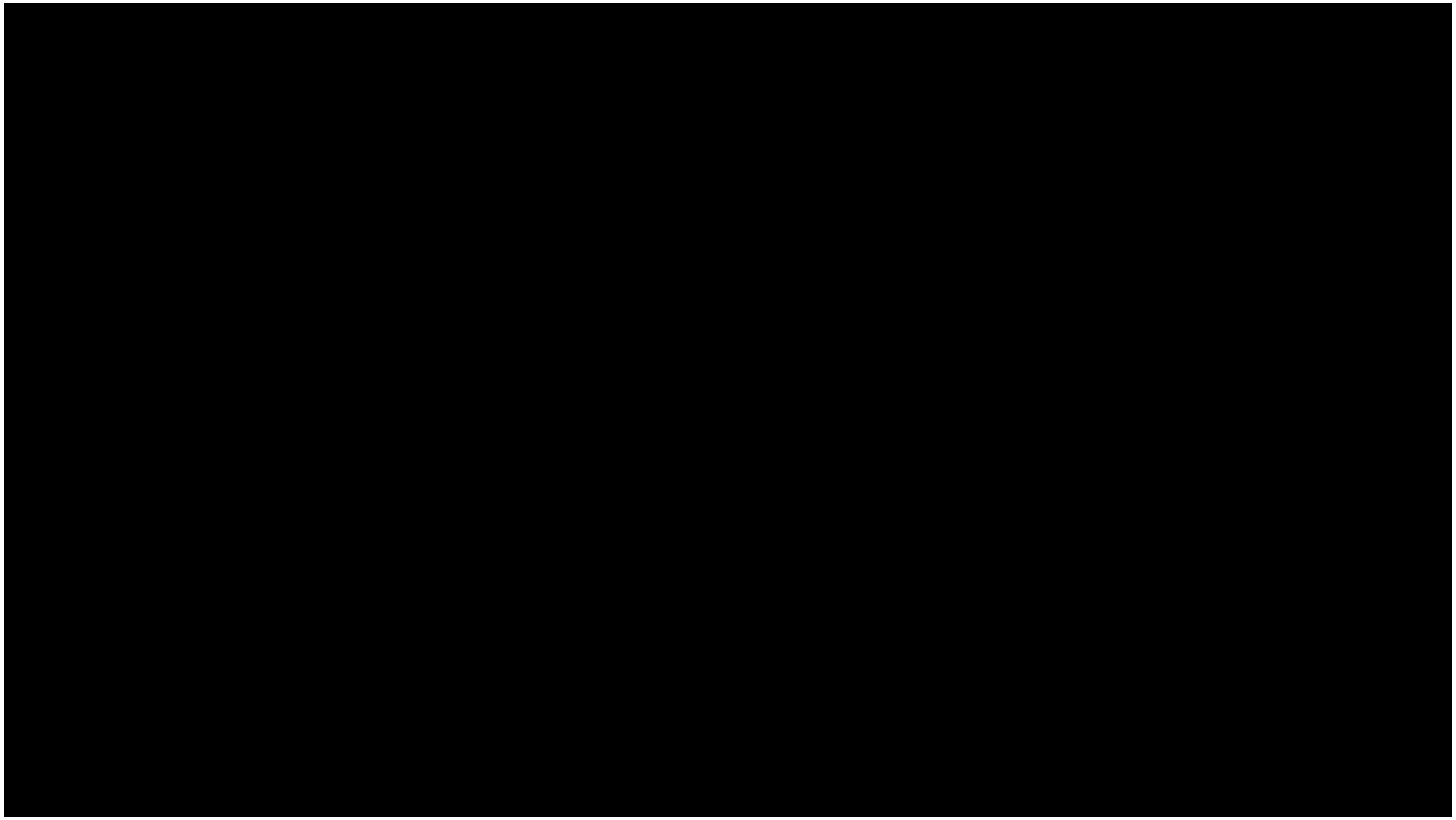
Anticipated Outcomes: Post-Graduate Education



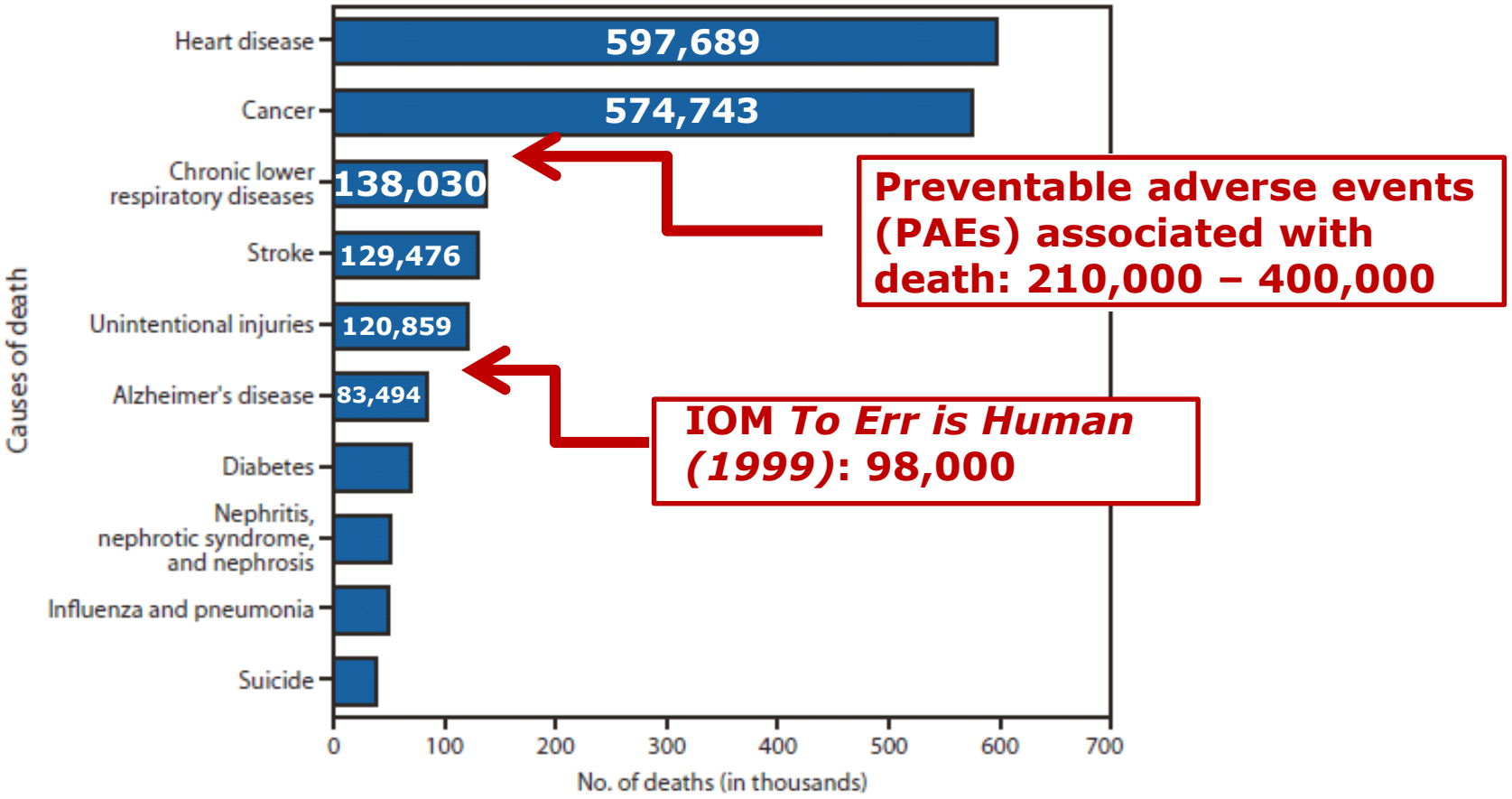
The Clinical Learning Environment and CLER



Medical Error: A Patient's Story



Leading Causes of Death



Hoyert DL, Xu J. Deaths: Preliminary Data for 2010. National Vital Statistics Reports; 2012: 61(6).
James JT. A new, evidence-based estimate of patient harms associated with hospital care. *J Patient Saf*; 2013: 9(3).

GME and Public Responsibility

"The ACGME's public stakeholders have heightened expectations of physicians. No longer accepting them as independent actors, they expect physicians to function as leaders and participants in team-oriented care."

Institutional Requirements:

Oversight, education and implementation of PSQI.

Core Program Requirements:

"The program director must ensure that residents are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs."

Clinical Learning Environment Reviews

Patient Safety – including opportunities for residents to report errors, unsafe conditions, and near misses, and to participate in inter-professional teams to promote and enhance safe care.

Quality Improvement – including how sponsoring institutions engage residents in the use of data to improve systems of care, reduce health care disparities and improve patient outcomes.

Transitions in Care – including how sponsoring institutions demonstrate effective standardization and oversight of transitions of care

*Residents/fellows receive progressive education and training on quality improvement that involves experiential learning..

Medical Error: Hand-overs of Care

- Close to 70% of sentinel events are due to failures in communication.
- At least half of these result from failures in communication during handoffs.

Joint Commission International. Robert Wood Johnson Foundation [online]. [cited 2009 Apr 13]. Available from Internet: http://www.jointcommissioninternational.org/Robert-Wood-Johnson-Foundation.

Improving Care Processes at UMMC: Performance Innovation

*PI Vocabulary: **Safety***

Safety: freedom from preventable harm; involves undesirable outcome

- Healthcare acquired infections
- Falls with injury
- Medication errors with harm
- Pressure ulcers
- Procedural misadventures (wrong site, retained objects)
- Delays in diagnosis or treatment (FTR)
- Failure to prevent (CLABSI, VTE)

*PI Vocabulary: **Quality***

Quality: maximizing the likelihood of a desirable outcome

- Evidence-based care
- Core measures
- Safety
- Reliability
- Minimization of unintended variation

*PI Vocabulary: **High reliability***

A highly reliable organization demonstrates:

Prevention: Preoccupation with failure through a continuous search for "near misses" and detailed prevention strategies

Resilience: the ability to react to and deal with adverse events

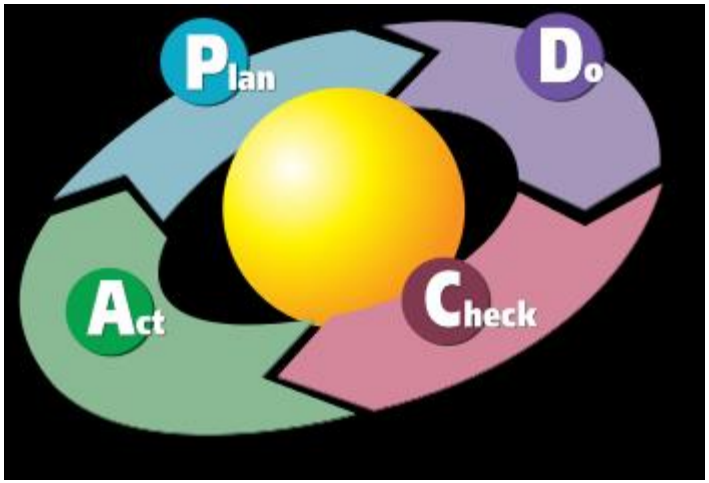
Reluctance to simplify: invite "fresh eyes;" root cause analysis

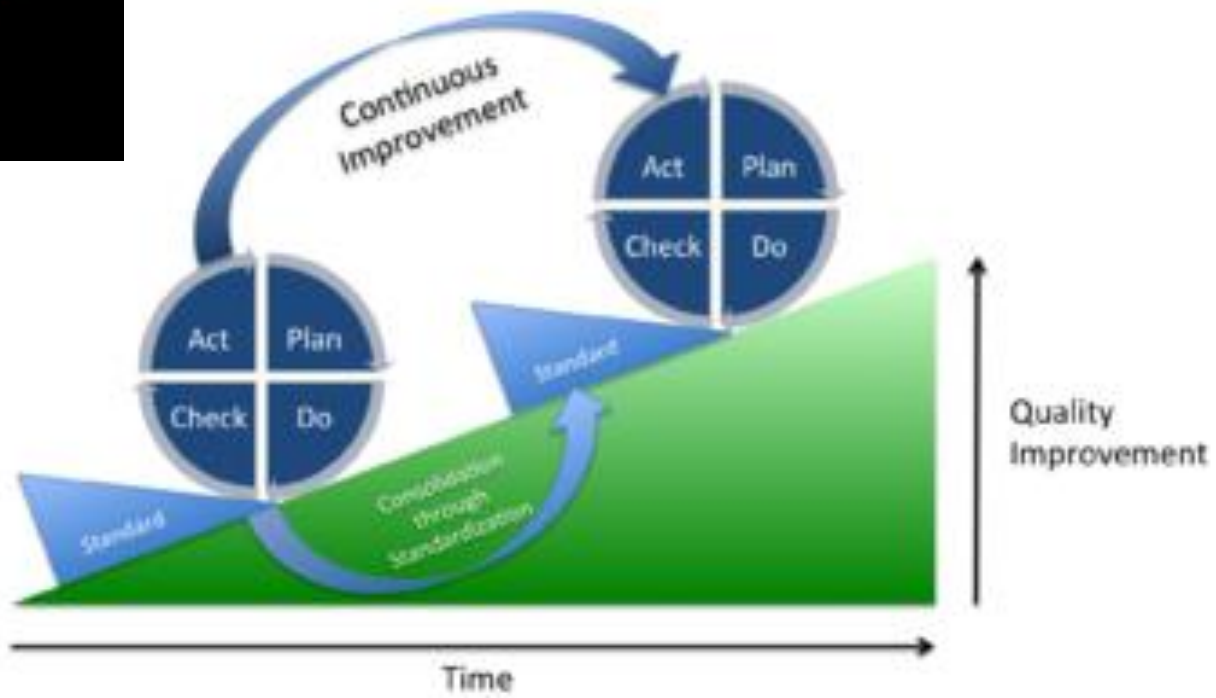
Organization around teams that are trained to work collaboratively

Situational awareness, mindfulness and flexible decision structures; deference to expertise (ground truth, front line)

Change management and *robust process improvement (Lean and Six Sigma)*; (JC)

Robust Process Improvement: W. Edwards Deming





Elementary Principles of Statistical Control Quality The Union of Japanese Scientists and Engineers (transcript of Deming's 1950 lectures)

- Shewhart, Walter Andrew (1939). *Statistical Method from the Viewpoint of Quality Control*. New Yo

Lean / Six Sigma

"Lean and 6-σ are like the Democrats and the Republicans in the U.S. Congress"

- they both think they are right, and that you are wrong if you don't agree with them
- very few from one side ever change sides
- some of their methods and decisions are sub-optimal
- each adds balance to the process when applied reasonably and knowledgeably

Lean

Reducing or eliminating waste

Improving flow

Increasing speed

Requires both technical and cultural change

Mile-wide, foot-deep

2-4 weeks

First-pass

1. Easier ⇨ 2. Better ⇨ 3. Faster ⇨ 4. Cheaper

Six Sigma

Reducing process variation

Reducing defects

Addressing complex problems

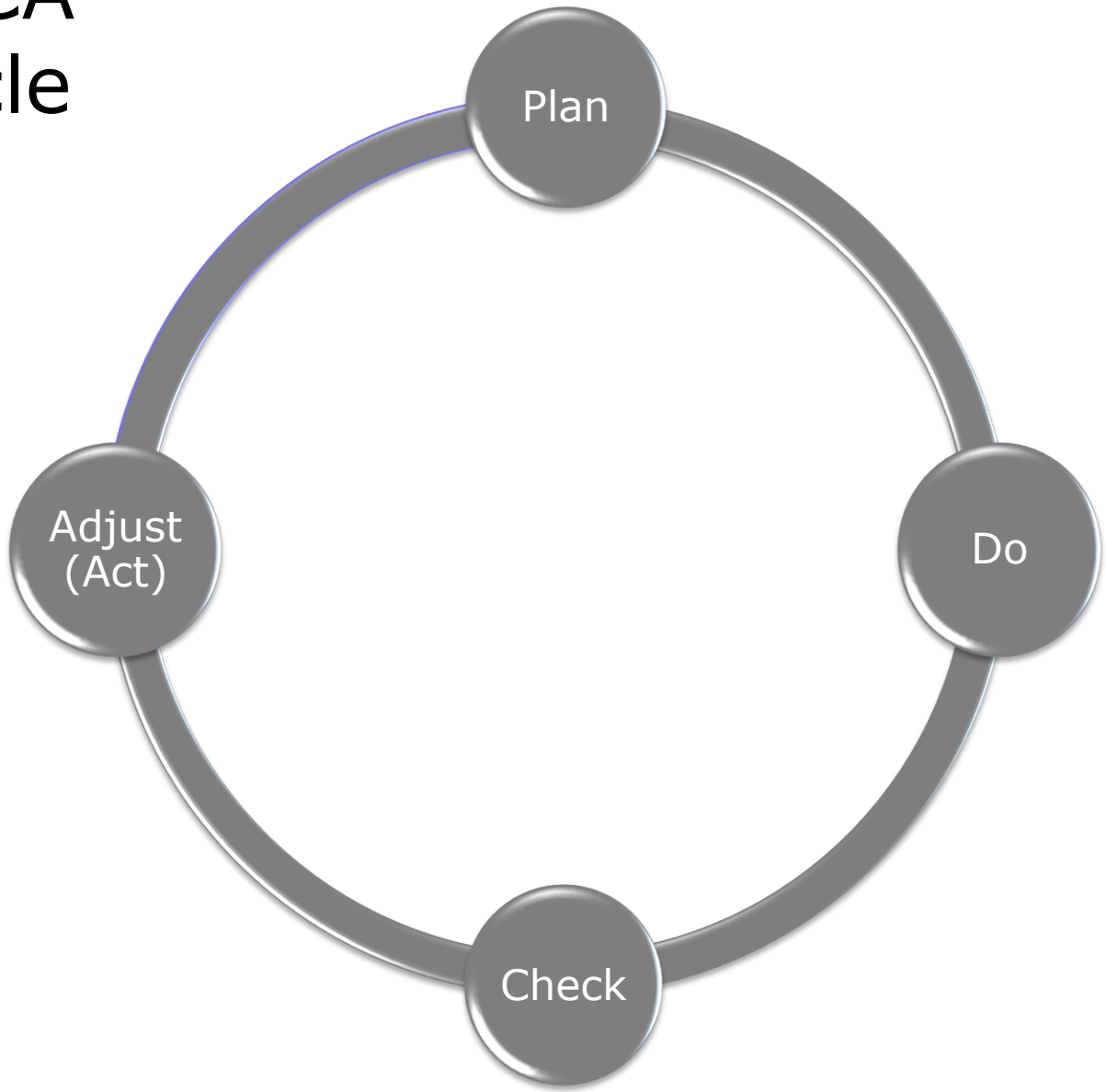
Requires both technical and cultural change

Foot-wide, mile-deep

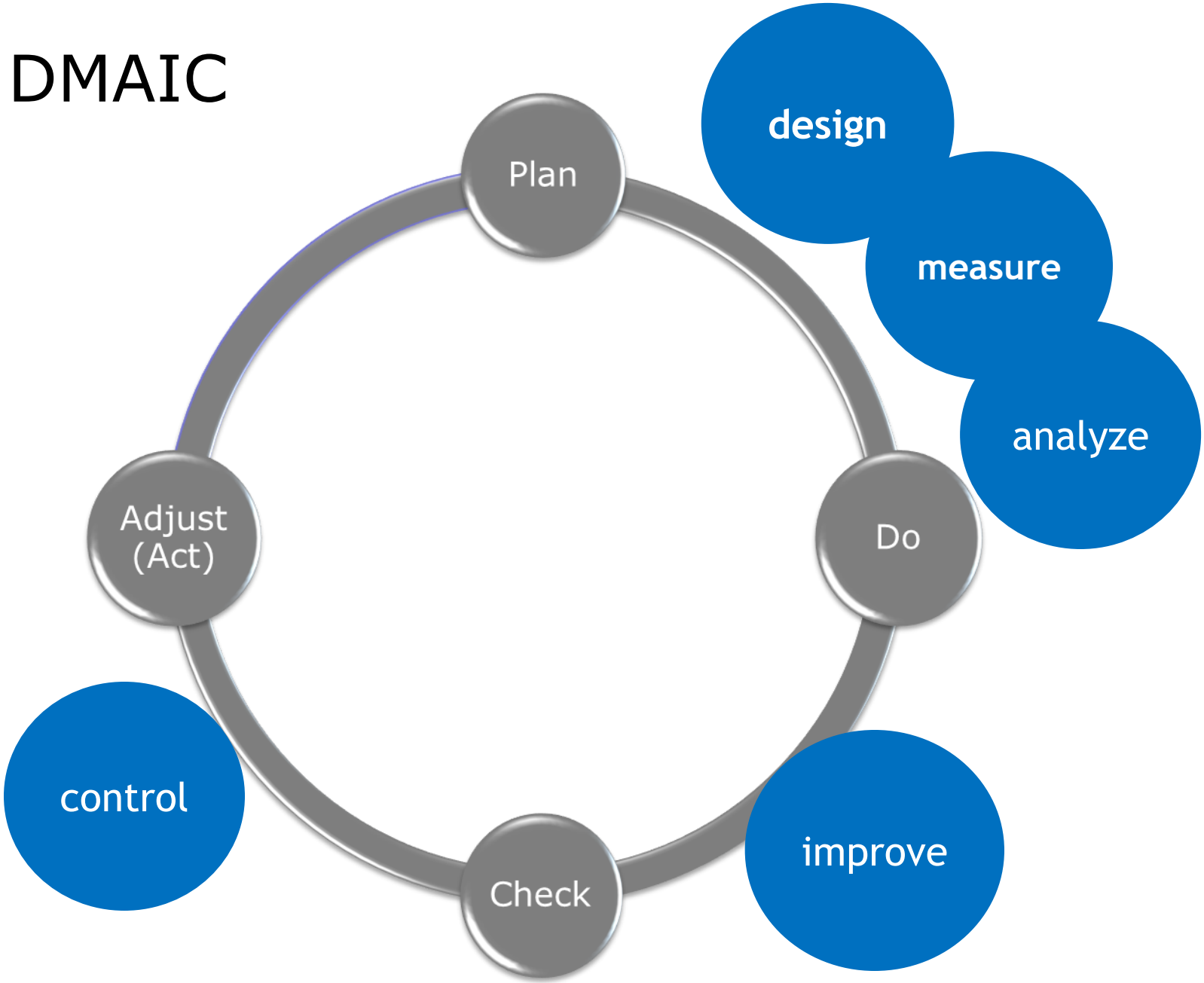
Three-six months

Refine the improvement

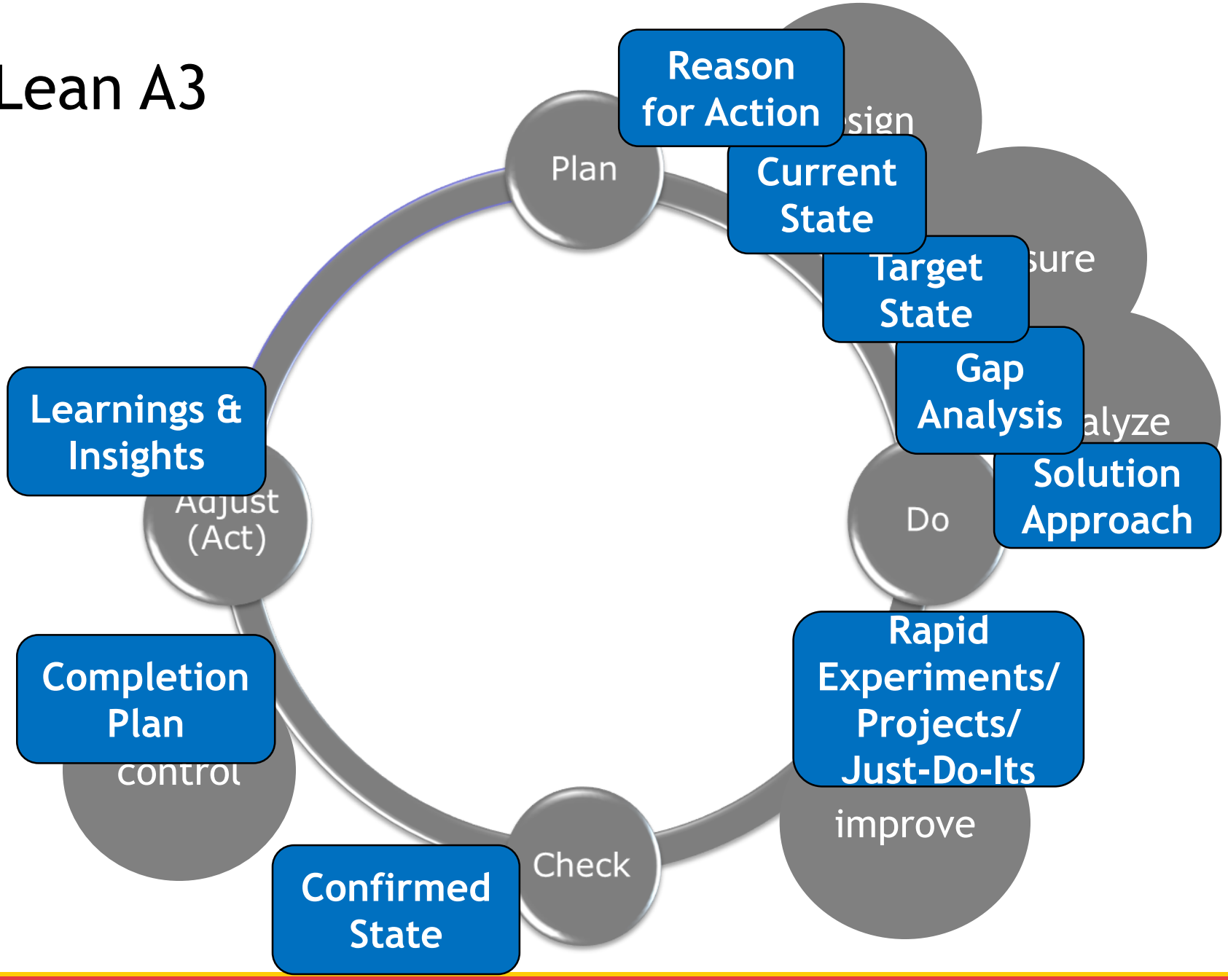
PDCA Cycle



6-σ DMAIC


Plan
Do
Check
Adjust (Act)
design
measure
analyze
improve
control

Lean A3


Reason for Action
Current State
Target State
Gap Analysis
Solution Approach
Rapid Experiments/ Projects/ Just-Do-Its
Confirmed State
Completion Plan
Learnings & Insights
Plan
Do
Check
Adjust (Act)
improve
control

Lean Timeline

15th Century	1905	1945-1973	1973	1974-2005	1973-2005
The Republic of Venice	"Today and Tomorrow" by Henry Ford	The Toyota Production System W. Edwards Deming	Oil Embargo	Books about : JIT Cellular Manufacturing Visual Factory Agile Manufacturing Flexible Manufacturing Synchronous Mfg Pull Production Rapid Continuous Improvement Kaizen Group Technology MIT "The Machine That Changed the World" "Lean Thinking" by James Womack	Boeing Danaher U.S. Navy U.S. Air Force Airbus Dell Computer Maytag Whirlpool McDonald's Microsoft And most companies that have tried Theory of Constraints and Six Sigma LEAN SIX SIGMA

Lean fundamentals: Waste

- Defects
- Over-production
- Waiting
- Non utilized talent
- Transportation
- Inventory
- Motion
- Excess Processing

Lean fundamentals: Waste

Defects: *medication errors, CLABSI*

Over-production: *unnecessary testing*

Waiting: *duh*

Non utilized talent: *searching, counting*

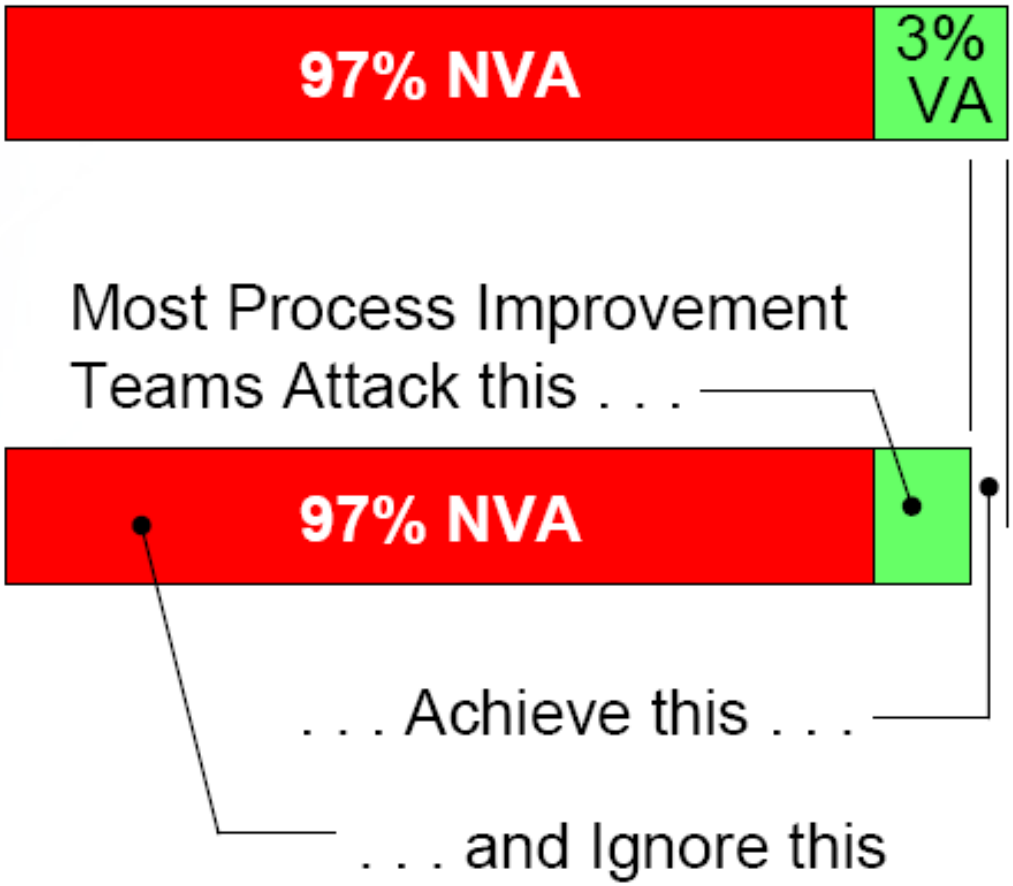
Transportation: *movement of patients*

Inventory: *overstocked medications*

Motion: *rounding on many units*

Excess Processing: *filling out duplicate forms*

Lean fundamentals: Waste



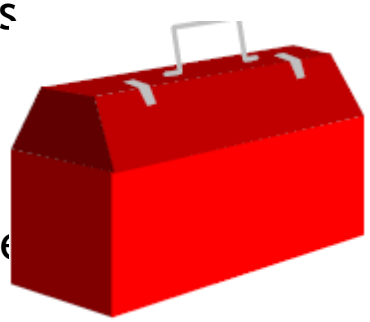
C. Fiore;*Lean Strategies for Product Development*, ASQ, 2003

Lean fundamentals: Root Causes of Waste

1. Layout (distance)
2. Long set-up time
3. Poor work methods
4. Lack of training
5. Functional organizations
6. Technology Gaps
7. Little understanding of the entire process
8. Historic supervisory roles
9. Irrelevant performance measures
10. Lack of workplace organization
11. Supplier quality/reliability
12. Poor communication
13. Avoidable interruptions
14. Complexity

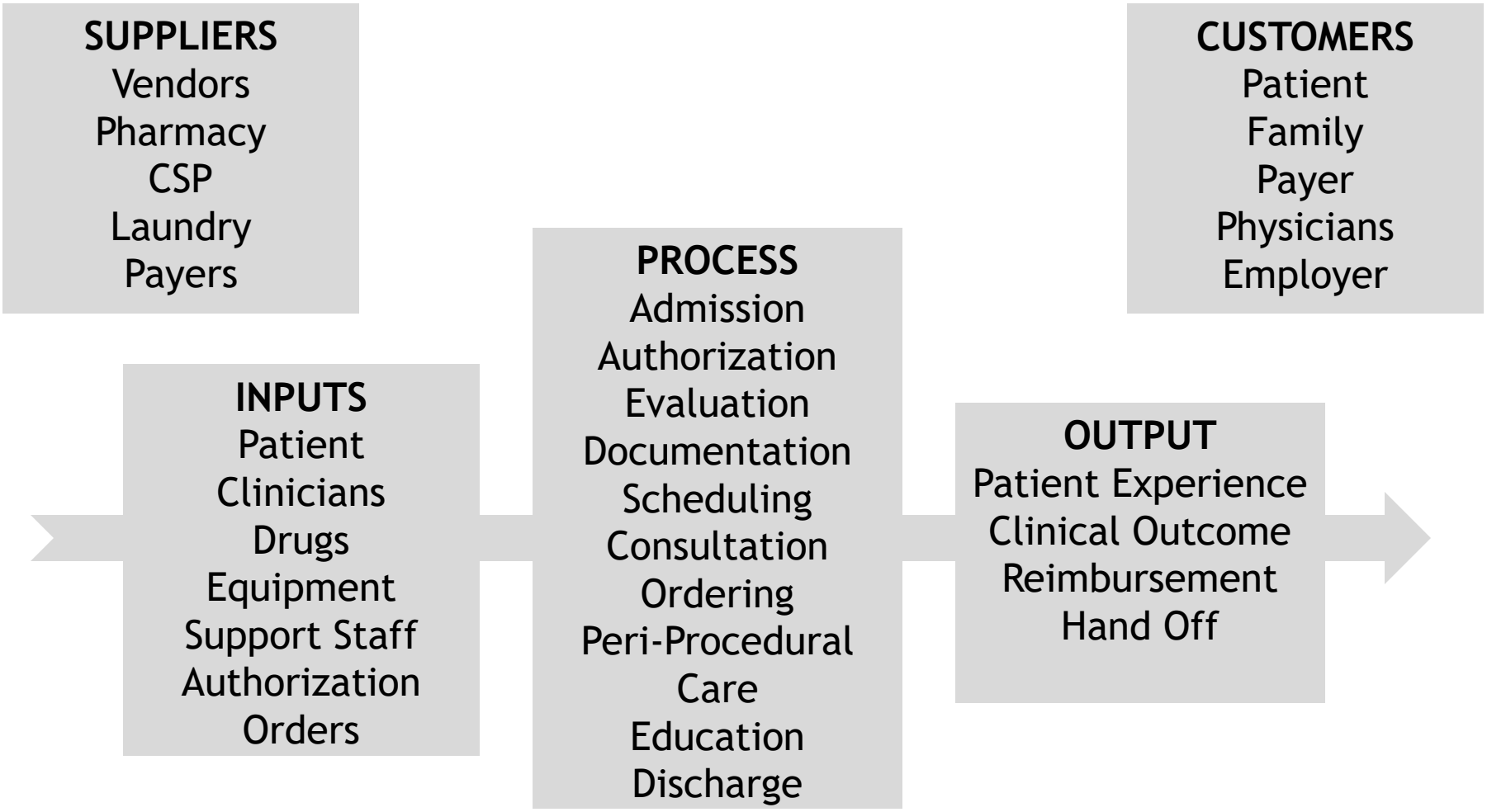
Lean Toolbox:

1. Value Stream Maps
2. Rapid Improvement (Kaizen) Events
3. Education
4. Employee Involvement
5. Metrics and Alignment
6. Flow Cells
7. Standard Work
   - Capacity Analysis
   - Takt Time / Cycle Time
     - Standard Ops Worksheet
   - Production Control Board
8. 5S / Visual Controls
9. Pull/Kanban Systems
10. Brainstorming
11. Prioritization
12. Spaghetti Chart
13. Poka-Yoke / Mistake
14. Set-up Reduction
15. Total Productive



11. Prioritization
12. Spaghetti Chart
13. Poka-Yoke / Mistake Proofing
14. Set-up Reduction
15. Total Productive Maintenance
16. Change Management
17. SIX SIGMA
18. Chaku-Chaku / Load-Load
19. Heijunka / Load Leveling
20. Bottlenecks
21. Point-of-Use Delivery
22. DFMA
23. Control Charting
24. Pareto Analysis2
5. Histograms
26. Root Cause Analysis
27. 5 Why's
28. Hypothesis Testing
29. Production Process Preparation (3P)

Lean fundamentals: Process Map



UMMC Process Map: Inpatient Medicine

Lean fundamentals: Metrics

Cycle Time (Laboratory Turnaround Time; ED LOS)
Inventory (expired meds)
Productivity (scans/MRI scanner/day)
Defects
Square Feet (foot print)
Set-up Time (housekeeping bed turnover time)
Quality Metrics (% AMI patients discharged with ASA)
People Travel
Product Travel
Volume
Crew Size (FTE)
Safety/Ergonomics
Cost (dollar value)

Lean fundamentals: Metrics

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Cost (dollar value)

- **If it's not measured it can't be improved**
- **Measure results, not compliance**
- **Don't reward "A" but hope for "B"**
- **Expose, measure and confront problems**
- **Don't substitute workarounds for standard work**

Lean Leadership

Boeing 737 Final Assembly: Before

Boeing 737 Final Assembly: After

Lean fundamentals: the "A3"

The "A3" started life as a communication tool for quality improvements and to get consensus when making decisions

Toyota used the "A3" to systematically guide people through the decision making process

The Use of the "A3"

It should be a presentation- without a presenter

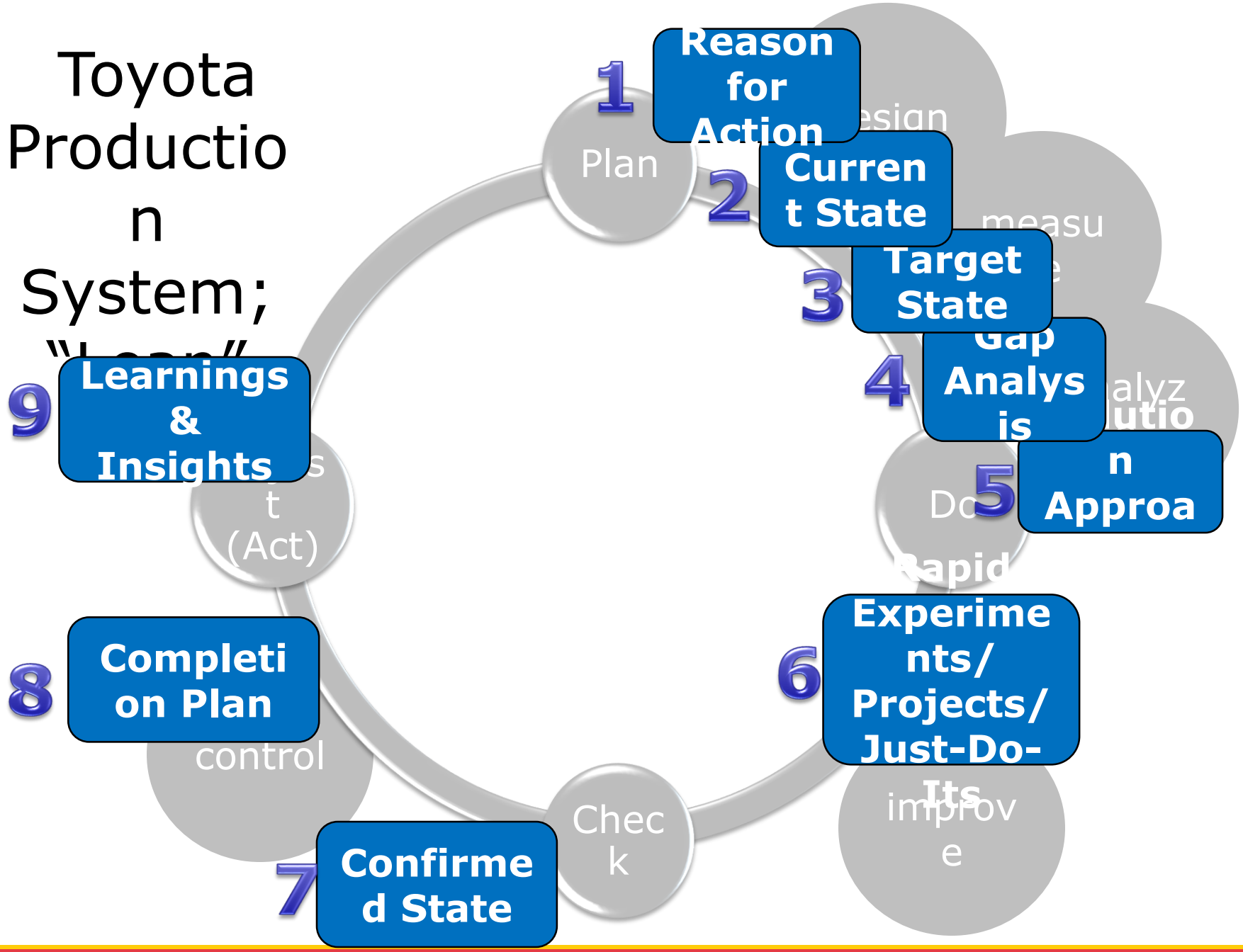
Just reading it should convey the story

Too many words will bore people

The Story

- The critical part of a “A3” is that it tells the story (like a story board for a film)
  - Use pictures, diagrams, graphs….
- It is rooted in PDCA, and will reflect a sound grasp and mastery of lean tools
- It follows a logical and standard structure (improved over the years)
  - Yet there are many different versions
- Remember the purpose of your “A3”, and tell the story

Toyota Production System; "Lean"



TITLE: Create a reliable hand-off process

Date Started: 12 May 2014 Current Date: 12 May 2014

Team: GME Committee and Colleagues

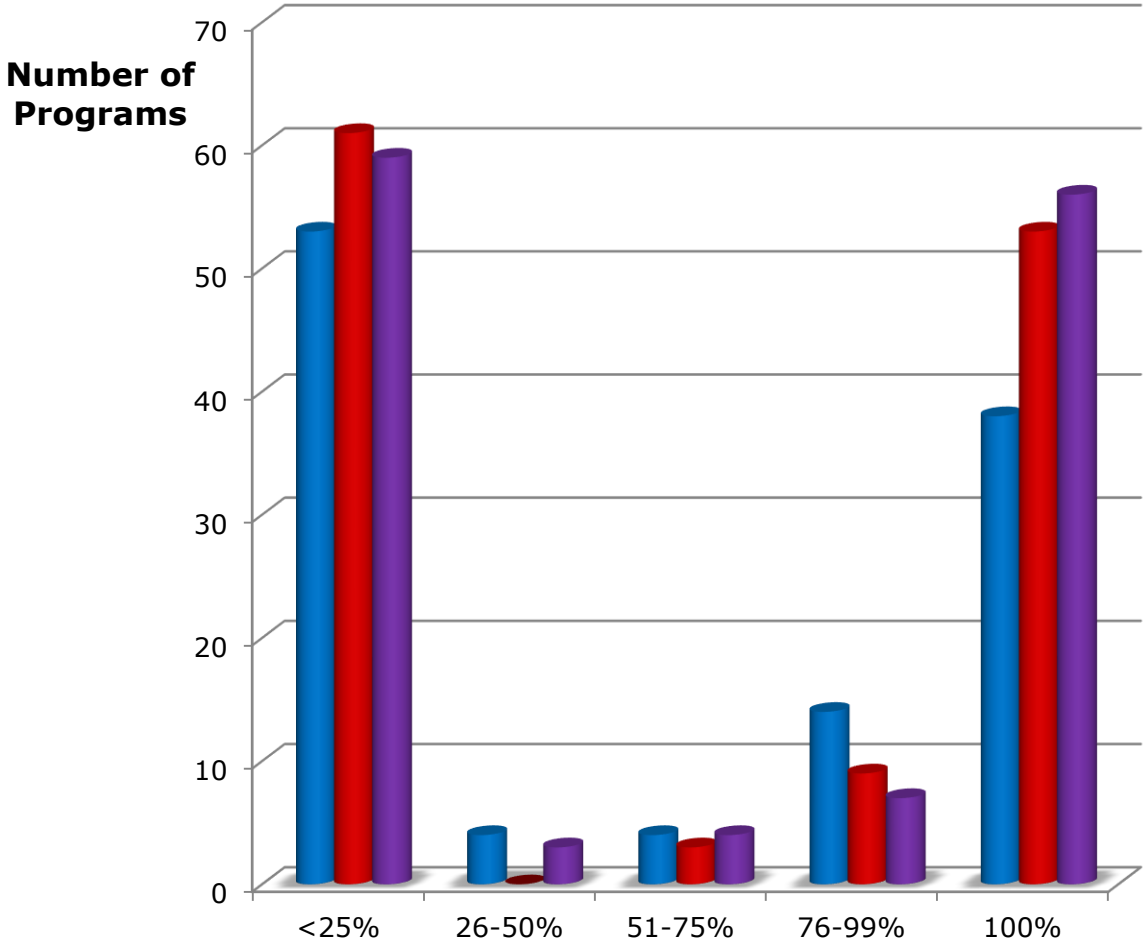
Review Team:

1. Reason for Action	**4. Gap Analysis**	**7. Completion Plans**
2. Initial State	**5. Solution Approach**	**8. Confirmed State**
3. Target State	**6. Rapid Experiments**	**9. Insights**

Initial State: Where are we at UMMC?

Time for a Poll

Percentage of Resident/Fellow Participation in Safety/QI



- **Percentage of residents/fellows that report errors and near misses**
- **Percentage of residents/fellows that participate in interprofessional teams to measureable improve safety**
- **Percentage of residents/fellows actively engaged in quality improvement activities**

To risk management

Dedicated conference to report collections of errors/near misses

Morning report

Rounds

Directly reporting errors to the appropriate personnel (ex. Pharmacy)

Daily chart audits

Sign out

Monthly QA

How do residents report errors?

Via specific departmental protocols

Program director notified

Team debriefing

M&M conference (weekly, monthly, quarterly, yearly)

Built in error reporting system on PACS

Attending notified

Chief residents notified

Team discussions

Presenting M&M conferences

Presenting QI grand rounds

Departmental longitudinal projects

Individual projects

Root cause analysis presentations

Resident QI Activities

Involvement in departmental QI task force

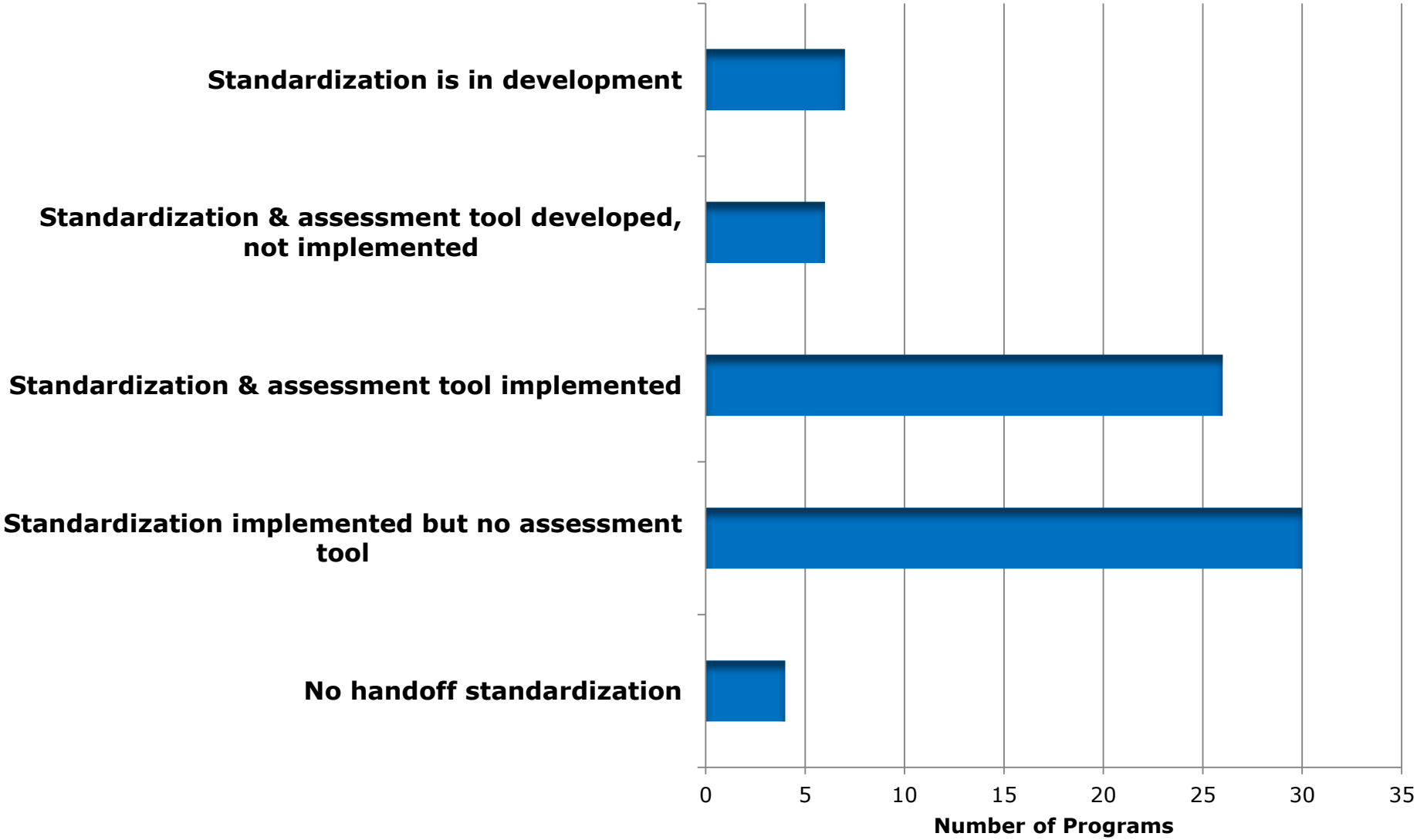
Assigned projects

Committee participation

Involvement in hospital initiatives (CAUTI/CLABSI)

Formatting bundles/checklists

Transitions of care (Handoffs): Current State



Patient Care Hand-overs: Current State

-3 programs observed

Content

- Team and resident contact info not present on any hand-over documents for 2 programs
- 1 program without **any** of the following:
  - Medications
  - Allergies
  - Code status
  - Active clinical issues
  - Anticipated issues and what to do
  - Pre-populated to-do list
  - Team follow-up list
  - Family contact info

Patient Care Hand-overs: Current State

Delivery

- 1 program: 20% of hand-overs, no active clinical issues communicated
- 1 program: 50% of hand-overs absent HPI, only active clinical issues
- All programs: 50% without anticipatory guidance (If/then)
- All programs: Read back performed < 5% of the time

Patient Care Hand-overs: Current State

Environmental

- *Distractions* occurred > 95% of the time
  - Overhead paging/announcements
  - Multiple people signing out in same room at same time
  - General chatter

- *Interruptions* occurred > 20% of the time
  - Answer pages
  - Answer phone
  - General chatter

Patient Care Hand-overs: Current State Medicine Intern Hand-over Outcomes by Site January 2012

Variable	Full Cohort	Site 1	Site 2	Adjusted p – value*
Face-to-Face	99.5% (211/212)	100% (109/109)	99% (102/103)	†
Questions asked	85.3% (180/211)	93.5 % (101/108)	76.7% (79/103)	<0.01
Number of Questions Mean (SD)	1.4 (3)	1.5 (3.8)	1.2 (2)	0.14
Private Location	91% (193/212)	96.3% (105/109)	85.4% (88/103)	†
Written Document	95.8% (203/212)	96.3% (105/109)	95.1% (98/103)	0.67
Distracting Location	12.3% (26/212)	6.4% (7/109)	18.5% (19/103)	0.06
Interruptions	41.3% (86/208)	49.1% (53/108)	33% (33/100)	0.03
Number of Interruptions Mean (SD)	0.8 (1.4)	1.1 (1.8)	0.5 (0.8)	<0.01

* comparing site 1 and site 2. All values adjusted for repeated sampling by clustering at the intern and observer levels
† results too collinear to perform adjusted analysis

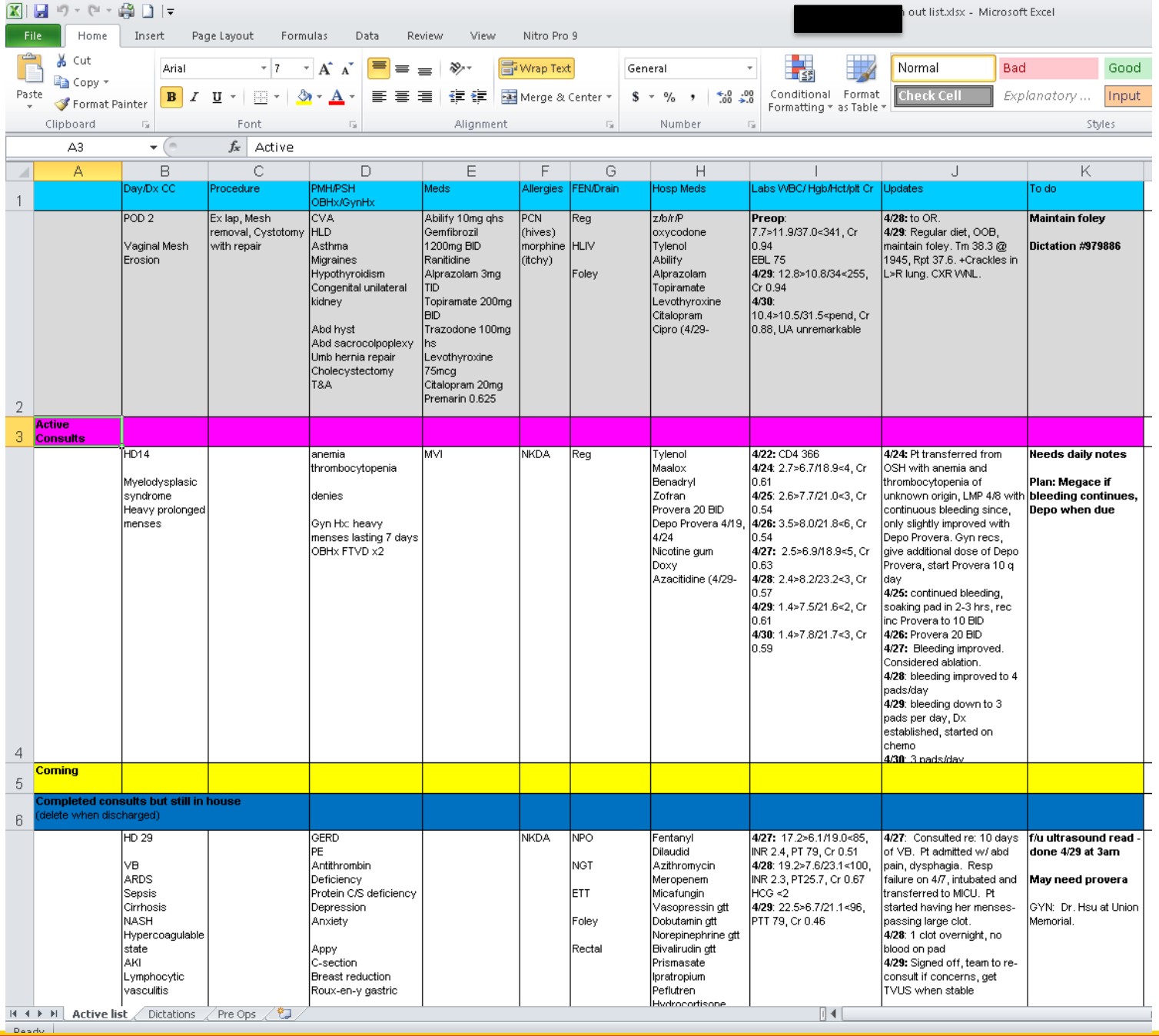
[redacted] Team: 1 Attending: Dr. Someone C: 555-666-5678

04/25/14. Resident: Stevie Steve Pager 33377 C: 555-666-1234

Intern A: Joe Smith Pager 11155 C: 555-555-1234

Intern B: John Jones Pager 22266 C: 555-555-5678

Patient Information	Hospital course	Overnight
Name [redacted] MRN [redacted] Room:11E 23 Allergies:PCN Full Code Contact: [redacted]	52y old CM with mental retatrdation 2/2 childhood menigitis, NPH s/p VP shunt. Awaiting placement. **Active issues**: **#AMS**: Baseline. Intermittently agitated, screams and cries. Also very somnolent, borderline cataplexy at times, sacral decub ulcers stage II. Seen by Psych – regimen of Seroquel changed (4/3/14) Now on Seroquel 100mg qam, 150mg qpm- pt seems improved. **Today's events**: NTD **Abx/pain**: Tylenol 650mg q6h prn.	**To do** - NTD **FYI:** If agitated, can try 0.5 mg Haldol (oral solution through PEG). Not Standing *DO NOT CALL CODE BLUE FOR ALTERED MENTAL STATUS UNLESS OBJECTIVE INDICATORS DICTATE THIS* **If/Then:** -If agitated can 0.5 mg Haldol through PEG if it lasts for a long time. Latest Qtc:-420s -NO BENZOS. -If febrile, CXR, UA/UCx, BCx. Also keep in mind that he has VP shunt. If EMERGENTLY needs CSF drainag or CSF studies call NSGY. Empiric abx: Vanc/Cef/Zosyn/Acyclovir **Team:** For Placement.
Name [redacted] MRN [redacted] Room: T4H-4 rm 6 Allergies: Full Code	52F PMH DM2, morbid obesity who presents to ED from nursing home with LGIB (Hgb 10), AMS, AKI, elevated lactate, and new onset Afib, now with newly-dx'd cirrhosis (likely NASH), mod aortic stenosis, and recovering renal function, awaiting placement **Active issues**: **#Chest pressure/SOB**: resolved, pt comfortable on room air, SaO2 95-97% **#Volume overload**: total body volume overloaded but intravascularly normal, renal function improving (Cr 1.5 yesterday), would avoid IV diuresis as pt is auto-diuresing; do not think this is related to aortic stenosis **#AKI**: as above, Cr 1.5 and improving, avoid IV diuresis, followed by Nephrology, has not received any IV fluids this week **#Cirrhosis, AMS**: at baseline 2-3 mths ago, treating as possible hepatic encephalopathy given new diagnosis of cirrhosis (likely NASH), continue lactulose, rifaximin **#New onset Afib with RVR**: initially in setting of volume overload/sepsis, now resolved, in NSR or normal sinus tachycardia **#Resp**: on room air, DuoNebs q4h standing, encourage incentive spiro, pt immobile, obese, and third spacing excess volume **#Hypercalcemia**: stable, likely related to immobility, possibly hyperparathyroidism, Endo following **#Thrombocytopenia**: stable, poss 2/2 cirrhosis **Pertinent Exam:** Morbidly obese, AAOx2-3, anasarcic with 2-3+ dependent pitting edema; wounds on inner thighs **Today's events**: Refusing labs today, will try to convince pt to allow blood draw and wound examination; wound culture shows Candida albicans, treating with Greer's Goo	**To do** - NTD If/then: If back in Afib with RVR Get ekg, load with digoxin, obtain vitals. (Previously did not tolerate metoprolol with significant bump in Cr) If c/o chest pain- get ekg, act accordingly. Team: -F/u labs [ ]Space nebs as indicated.



[redacted] out list.xlsx - Microsoft Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View | Nitro Pro 9

Cut | Copy | Format Painter | Paste | Clipboard

Arial | 7 | Font

Wrap Text | Merge & Center | Alignment

General | Number

Conditional Formatting | Format as Table

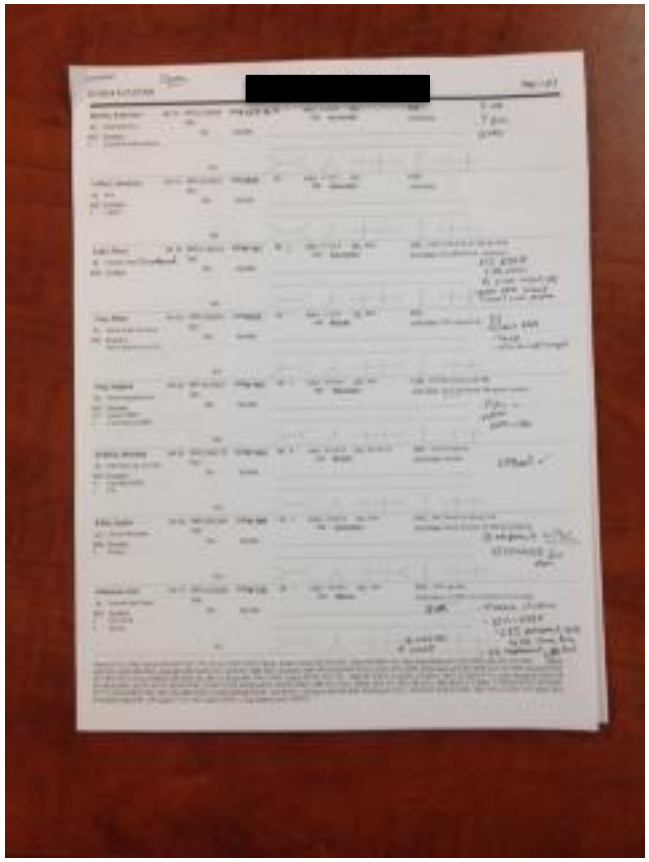
Normal | Bad | Good | Check Cell | Explanatory ... | Input | Styles

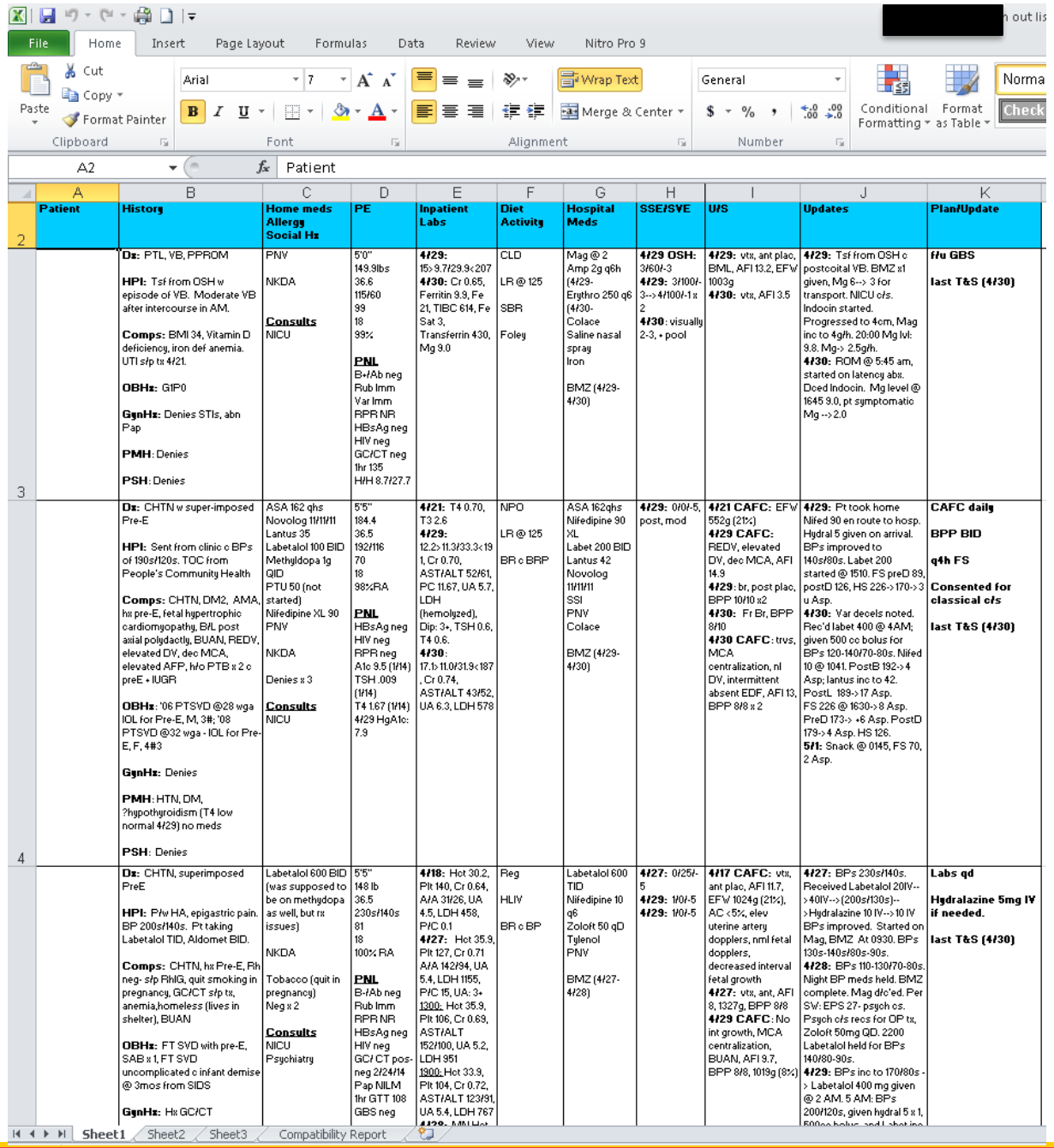
A3 | Active

	A	B	C	D	E	F	G	H	I	J	K
1		Day/Dx CC	Procedure	PMH/PSH OBHx/GynHx	Meds	Allergies	FEN/Drain	Hosp Meds	Labs WBC/ Hgb/Hct/plt Cr	Updates	To do
2		POD 2 Vaginal Mesh Erosion	Ex lap, Mesh removal, Cystotomy with repair	CVA HLD Asthma Migraines Hypothyroidism Congenital unilateral kidney Abd hyst Abd sacrocolpoplexy Umb hernia repair Cholecystectomy T&A	Abilify 10mg qhs Gemfibrozil 1200mg BID Ranitidine Alprazolam 3mg TID Topiramate 200mg BID Trazodone 100mg hs Levothyroxine 75mcg Citalopram 20mg Premarin 0.625	PCN (hives) morphine (itchy)	Reg HLIV Foley	z/o/r/P oxycodone Tylenol Abilify Alprazolam Topiramate Levothyroxine Citalopram Cipro (4/29-	**Preop**: 7.7>11.9/37.0<341, Cr 0.94 EBL 75 **4/29**: 12.8>10.8/34<255, Cr 0.94 **4/30**: 10.4>10.5/31.5<pend, Cr 0.88, UA unremarkable	**4/28:** to OR. **4/29**: Regular diet, OOB, maintain foley. Tm 38.3 @ 1945, Rpt 37.6. +Crackles in L>R lung. CXR WNL.	**Maintain foley** **Dictation #979886**
3	**Active Consults**										
4		HD14 Myelodysplasic syndrome Heavy prolonged menses		anemia thrombocytopenia denies Gyn Hx: heavy menses lasting 7 days OBHx FTVD x2	MVI	NKDA	Reg	Tylenol Maalox Benadryl Zofran Provera 20 BID Depo Provera 4/19, 4/24 Nicotine gum Doxy Azacitidine (4/29-	**4/22:** CD4 366 **4/24**: 2.7>6.7/18.9<4, Cr 0.61 **4/25**: 2.6>7.7/21.0<3, Cr 0.54 **4/26:** 3.5>8.0/21.8<6, Cr 0.54 **4/27:** 2.5>6.9/18.9<5, Cr 0.63 **4/28**: 2.4>8.2/23.2<3, Cr 0.57 **4/29**: 1.4>7.5/21.6<2, Cr 0.61 **4/30**: 1.4>7.8/21.7<3, Cr 0.59	**4/24:** Pt transferred from OSH with anemia and thrombocytopenia of unknown origin, LMP 4/8 with continuous bleeding since, only slightly improved with Depo Provera. Gyn recs, give additional dose of Depo Provera, start Provera 10 q day **4/25:** continued bleeding, soaking pad in 2-3 hrs, rec inc Provera to 10 BID **4/26:** Provera 20 BID **4/27:** Bleeding improved. Considered ablation. **4/28**: bleeding improved to 4 pads/day **4/29**: bleeding down to 3 pads per day, Dx established, started on chemo **4/30**: 3 pads/day	**Needs daily notes** **Plan: Megace if bleeding continues, Depo when due**
5	**Coming**										
6	**Completed consults but still in house** (delete when discharged)										
		HD 29 VB ARDS Sepsis Cirrhosis NASH Hypercoagulable state AKI Lymphocytic vasculitis		GERD PE Antithrombin Deficiency Protein C/S deficiency Depression Anxiety Appy C-section Breast reduction Roux-en-y gastric		NKDA	NPO NGT ETT Foley Rectal	Fentanyl Dilaudid Azithromycin Meropenem Micafungin Vasopressin gtt Dobutamin gtt Norepinephrine gtt Bivalirudin gtt Prismasate Ipratropium Pefflutren Hydrocortisone	**4/27:** 17.2>6.1/19.0<85, INR 2.4, PT 79, Cr 0.51 **4/28**: 19.2>7.6/23.1<100, INR 2.3, PT25.7, Cr 0.67 HCG <2 **4/29**: 22.5>6.7/21.1<96, PTT 79, Cr 0.46	**4/27**: Consulted re: 10 days of VB. Pt admitted w/ abd pain, dysphagia. Resp failure on 4/7, intubated and transferred to MICU. Pt started having her menses- passing large clot. **4/28**: 1 clot overnight, no blood on pad **4/29:** Signed off, team to re-consult if concerns, get TVUS when stable	**f/u ultrasound read - done 4/29 at 3am** **May need provera** GYN: Dr. Hsu at Union Memorial.

Active list | Dictations | Pre Ops

Ready





	A	B	C	D	E	F	G	H	I	J	K
2	**Patient**	**History**	**Home meds Allergy Social Hx**	**PE**	**Inpatient Labs**	**Diet Activity**	**Hospital Meds**	**SSE/SVE**	**U/S**	**Updates**	**Plan/Update**
3		**Dx:** PTL, VB, PPROM **HPI:** Tsf from OSH w episode of VB. Moderate VB after intercourse in AM. **Comps:** BMI 34, Vitamin D deficiency, iron def anemia. UTI s/p tx 4/21. **OBHx:** G1P0 **GynHx:** Denies STIs, abn Pap **PMH**: Denies **PSH**: Denies	PNV NKDA **Consults** NICU	5'0" 149.9lbs 36.6 115/60 99 18 99% **PNL** B+/Ab neg Rub Imm Var Imm RPR NR HBsAg neg HIV neg GC/CT neg 1hr 135 H/H 8.7/27.7	**4/29:** 15>9.7/29.9<207 **4/30:** Cr 0.65, Ferritin 9.9, Fe 21, TIBC 614, Fe Sat 3, Transferrin 430, Mg 9.0	CLD LR @ 125 SBR Foley	Mag @ 2 Amp 2g q6h (4/29-Erythro 250 q6 (4/30-Colace Saline nasal spray Iron BMZ (4/29-4/30)	**4/29 OSH:** 3/60/-3 **4/29:** 3/100/-3-->4/100/-1 x 2 **4/30:** visually 2-3, + pool	**4/29:** vtx, ant plac, BML, AFI 13.2, EFW 1003g **4/30:** vtx, AFI 3.5	**4/29:** Tsf from OSH c postcoital VB. BMZ x1 given, Mg 8--> 3 for transport. NICU c/s. Indocin started. Progressed to 4cm, Mag inc to 4g/h. 20:00 Mg lvl: 9.8. Mg-> 2.5g/h. **4/30:** ROM @ 5:45 am, started on latency abx. Doed Indocin. Mg level @ 1645 9.0, pt symptomatic Mg --> 2.0	**f/u GBS** **last T&S (4/30)**
4		**Dx:** CHTN w super-imposed Pre-E **HPI:** Sent from clinic c BPs of 190s/120s. TOC from People's Community Health **Comps:** CHTN, DM2, AMA, hx pre-E, fetal hypertrophic cardiomyopathy, B/L post axial polydactly, BUAN, REDV, elevated DV, dec MCA, elevated AFP, h/o PTB x 2 c preE + IUGR **OBHx:** '06 PTSVD @28 wga IOL for Pre-E, M, 3#; '08 PTSVD @32 wga - IOL for Pre-E, F, 4#3 **GynHx:** Denies **PMH**: HTN, DM, ?hypothyroidism (T4 low normal 4/29) no meds **PSH**: Denies	ASA 162 qhs Novolog 11/11/11 Lantus 35 Labetalol 100 BID Methyldopa 1g QID PTU 50 (not started) Nifedipine XL 90 PNV NKDA Denies x 3 **Consults** NICU	5'5" 184.4 36.5 192/116 70 18 98%RA **PNL** HBsAg neg HIV neg RPR neg A1c 9.5 (1/14) TSH .009 (1/14) T4 1.67 (1/14) 4/29 HgA1c: 7.9	**4/21:** T4 0.70, T3 2.6 **4/29:** 12.2>11.3/33.3<19 1, Cr 0.70, AST/ALT 52/61, PC 11.67, UA 5.7, LDH (hemolyzed), Dip: 3+, TSH 0.6, T4 0.6. **4/30:** 17.1>11.0/31.9<187, Cr 0.74, AST/ALT 43/52, UA 6.3, LDH 578	NPO LR @ 125 BR c BRP	ASA 162qhs Nifedipine 90 XL Labet 200 BID Lantus 42 Novolog 11/11/11 SSI PNV Colace BMZ (4/29-4/30)	**4/29:** 0/0/-5, post, mod	**4/21 CAFC:** EFW 552g (21%) **4/29 CAFC:** REDV, elevated DV, dec MCA, AFI 14.9 **4/29:** br, post plac, BPP 10/10 x2 **4/30:** Fr Br, BPP 8/10 **4/30 CAFC:** trvs, MCA centralization, nl DV, intermittent absent EDF, AFI 13, BPP 8/8 x 2	**4/29:** Pt took home Nifed 90 en route to hosp. Hydral 5 given on arrival. BPs improved to 140s/80s. Labet 200 started @ 1510. FS preD 89, postD 126, HS 226-> 170-> 3 u Asp. **4/30:** Var decels noted. Rec'd labet 400 @ 4AM; given 500 cc bolus for BPs 120-140/70-80s. Nifed 10 @ 1041. PostB 192-> 4 Asp; lantus inc to 42. PostL 189-> 17 Asp. FS 226 @ 1630-> 8 Asp. PreD 173-> +6 Asp. PostD 179-> 4 Asp. HS 126. **5/1:** Snack @ 0145, FS 70, 2 Asp.	**CAFC daily** **BPP BID** **q4h FS** **Consented for classical c/s** **last T&S (4/30)**
		Dx: CHTN, superimposed PreE **HPI:** P/w HA, epigastric pain. BP 200s/140s. Pt taking Labetalol TID, Aldomet BID. **Comps:** CHTN, hx Pre-E, Rh neg- s/p RhIG, quit smoking in pregnancy, GC/CT s/p tx, anemia,homeless (lives in shelter), BUAN **OBHx:** FT SVD with pre-E, SAB x 1, FT SVD uncomplicated c infant demise @ 3mos from SIDS **GynHx:** Hx GC/CT	Labetalol 600 BID (was supposed to be on methydopa as well, but rx issues) NKDA Tobacco (quit in pregnancy) Neg x 2 **Consults** NICU Psychiatry	5'5" 148 lb 36.5 230s/140s 81 18 100% RA **PNL** B-/Ab neg Rub Imm RPR NR HBsAg neg HIV neg GC/ CT pos-neg 2/24/14 Pap NILM 1hr GTT 108 GBS neg	**4/18:** Hct 30.2, Plt 140, Cr 0.64, A/A 31/26, UA 4.5, LDH 458, P/C 0.1 **4/27:** Hct 35.9, Plt 127, Cr 0.71 A/A 142/94, UA 5.4, LDH 1155, P/C 15, UA: 3+ 1300: Hct 35.9, Plt 106, Cr 0.69, AST/ALT 152/100, UA 5.2, LDH 951 1900: Hct 33.9, Plt 104, Cr 0.72, AST/ALT 123/91, UA 5.4, LDH 767 **4/28:** AM Hct	Reg HLIV BR c BP	Labetalol 600 TID Nifedipine 10 q6 Zoloft 50 qD Tylenol PNV BMZ (4/27-4/28)	**4/27:** 0/25/-5 **4/29:** 1/0/-5 **4/29:** 1/0/-5	**4/17 CAFC:** vtx, ant plac, AFI 11.7, EFW 1024g (21%), AC <5%, elev uterine artery dopplers, nml fetal dopplers, decreased interval fetal growth **4/27:** vtx, ant, AFI 8, 1327g, BPP 8/8 **4/29 CAFC:** No int growth, MCA centralization, BUAN, AFI 9.7, BPP 8/8, 1019g (8%)	**4/27:** BPs 230s/140s. Received Labetalol 20IV--> 40IV--> (200s/130s)--> Hydralazine 10 IV--> 10 IV BPs improved. Started on Mag, BMZ At 0930. BPs 130s-140s/80s-90s. **4/28:** BPs 110-130/70-80s. Night BP meds held. BMZ complete. Mag d/c'ed. Per SW: EPS 27- psych cs. Psych c/s recs for OP tx, Zoloft 50mg QD. 2200 Labetalol held for BPs 140/80-90s. **4/29:** BPs inc to 170/80s --> Labetalol 400 mg given @ 2 AM. 5 AM: BPs 200/120s, given hydral 5 x 1, 500cc bolus, and Labet inc	**Labs qd** **Hydralazine 5mg IV if needed.** **last T&S (4/30)**

Sheet1 Sheet2 Sheet3 Compatibility Report

What does a Good Hand Off look Like?
-Target State

Target State: Standardized Process

Content: template

- MR#
- Name
- Location
- Active meds
- Allergies
- Code status
- Current patient condition
- Active clinical issues
- Anticipated issues and what to do
- To-do List
- To follow-up list
- Attending name & Contact info
- Resident and Team name & Contact info (e.g pager #)
- Family contact info

Target State: Standardized Process

Delivery

- Structured verbal process
- Active issues identified
- Assessment of patient and problems
- Plan of care
- Anticipatory guidance (e.g. If-Then statements)
- Read-back performed
- Opportunity to ask and respond to questions

Target State: Standardized Process

Environmental

- Performed face-to-face
- Non-distracting location
- No interruptions

Metrics: What measurements can we put in place to assess and answer "what does good look like?"

Gap Analysis: What's in the way of the achieving the Target State today?

Asking the Whys…….

The Washington Monument was disintegrating

Why-Use of harsh chemicals

Why- To clean pigeon droppings

Why- so many pigeons- they eat spiders and there are a lot of spiders at monument

Why- so many spiders? They eat gnats and lots of gnats at monument

Why- so many gnats? They are attracted to the light at dusk

Solution approach: What general things can we try to get closer to the Target State?

Tests of Change: (Improve, Act, Experiments)

Just Do Its: What things can we accomplish within the next few days that will address some of the gaps?

Rapid Experiments: What things do we need to dig into a little deeper- over the next month or so- by doing a little more analysis, measurement, multidisciplinary brainstorming and "trystorming?"

Projects: What things do we think will require longer term efforts (next 6 months) to put into place?

Small Group Group Exercise

The Washington Monument was disintegrating

Why-Use of harsh chemicals

Why- To clean pigeon droppings

Why- so many pigeons- they eat spiders and there are a lot of spiders at monument

Why- so many spiders? They eat gnats and lots of gnats at monument

Why- so many gnats? They are attracted to the light at dusk

Solution: Turn on the lights at a later time

Target State: Standardized Process

Content: template

- MR#
- Name
- Location
- Active meds
- Allergies
- Code status
- Current patient condition
- Active clinical issues
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Target State: Standardized Process

Delivery

- Structured verbal process
- Active issues identified
- Assessment of patient and problems
- Plan of care
- Anticipatory guidance (e.g. If-Then statements)
- Read-back performed
- Opportunity to ask and respond to questions

Target State: Standardized Process

Environmental

- Performed face-to-face
- Non-distracting location
- No interruptions

Target State: Standardized Process

Other

Age, Weight, Gender

Recent labs

Procedures done

In-patient vs Out-patient

Pnemonic to characterize illness severity

Special considerations: ex. Religious preference, access

Contact info: chain of command, consult teams

Read back by receiver

Restraints, contact precautions

Gap Analysis

System Output: integration with EMR vs physical document

Education: HIPPA compliance, tools, sharing format, legal

Setting: space, computer access, free of distractions

Time: Auto-population, Link to call schedule

Information Mgt: How much? Deletion of impertinent info

Staffing: lack of…

Centralization: Documentation, Format, Access

Patient/Service Volume

Accountability, Oversight, Supervision, Enforcement

Modify-able Tool

Assess Effectiveness

Gap analysis

Sign out time, Interruptions

If…then…

Sustainability

Education—ex. CRISP, integration of electronic systems that "talk to each other", when? -- during orientation

Elevation of importance – competency, formal training

Site specific challenges

Departmental Buy-In—same tool, collection/collation of specialty specific items

Tablet-based/portable info management

Solution Approach

Contact Each Program: know/share time for sign out, name of contact, sign on door

RN: dynamic call blocking during sign out (**caution**), cohort pages

Define/Establish Location

Designate Team Member to manage calls during sign out

Team Sign Out

Automated Delete on To-Do List—requires updates

Designate Departmental Champion(s) – supervision, enforcement

Involve mid-level providers

Use Technology to modernize process

Solution approach

Use current EMR, adapt to current needs

Manage volume of the service w/o compromising learning experience

Quality Assessment & Improvement, integrated into process

Cultural change—"this is MY patient"

Limit/manage information

Assign name of care team in EMR

Surveys: RN

Education: On-going, conferences, review of documentation

Incentive: build relationships with other team members

Observe: "secret shopper"

Emulate successful teams, Share with HSA

Metrics

Near misses, LOS

Resident “happiness”

RN satisfaction

Observation, Secret Shopper

Time tracking, time study

missing information, frequency, how often do you need to use the chart

Receiver assessment of quality, content

Quantify interruptions,

during “no call time” is there harm, balancing measures

tasks completed or required after sign out

Audit sign out sheets

Milestone – communication

Recommendations & Action Plan

Education: IHI Modules

Patient Safety

Quality Improvement

Transitions of Care/Hand Offs

Report Back

Use A3, become departmental champion

When & What Format

Report to GME, in 1 month