



Nurse Manager Scope and Span of Control: An Objective Business and Measurement Model

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Objectives

- Describe the importance of measuring scope and span of control for nurse managers success in their role.
- Discuss the components of a method used to successfully measure nurse manager scope and span of control



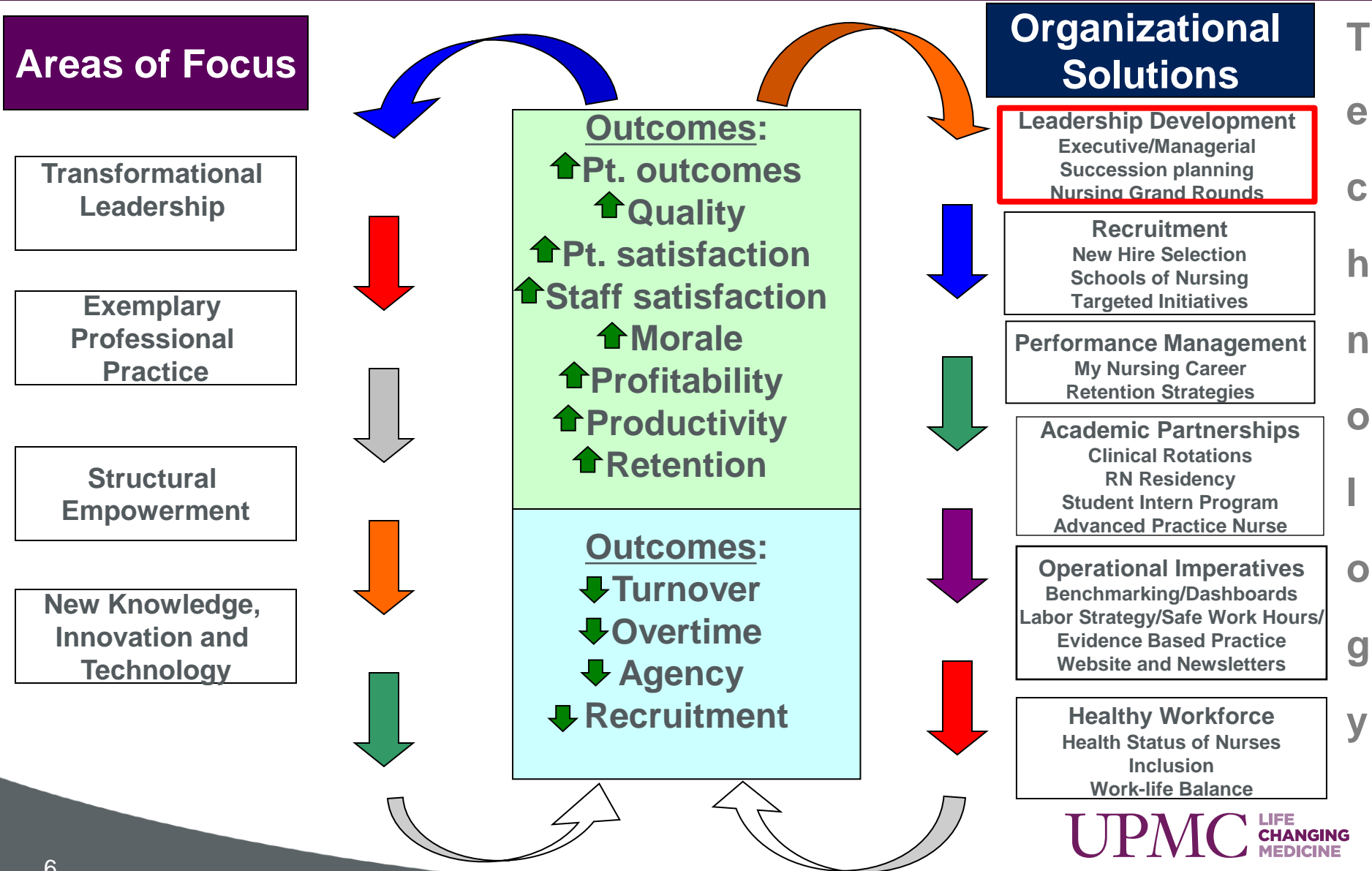
- Global health enterprise headquartered in Pittsburgh, Pennsylvania
- Operates more than 20 academic, community, and specialty hospitals and 400 outpatient sites, offers an array of rehabilitation, retirement, and long-term care facilities
- Pennsylvania's largest employer, with more than 55,000 employees
- Over 12,000 nurses

UPMC Nursing Vision

“Create the best patient experience, nationally and internationally, through the selection, development, retention and reward of the highest performing nurses while creating systems and programs that creates consistency and excellence in patient care.”



UPMC Nursing Strategic Solutions

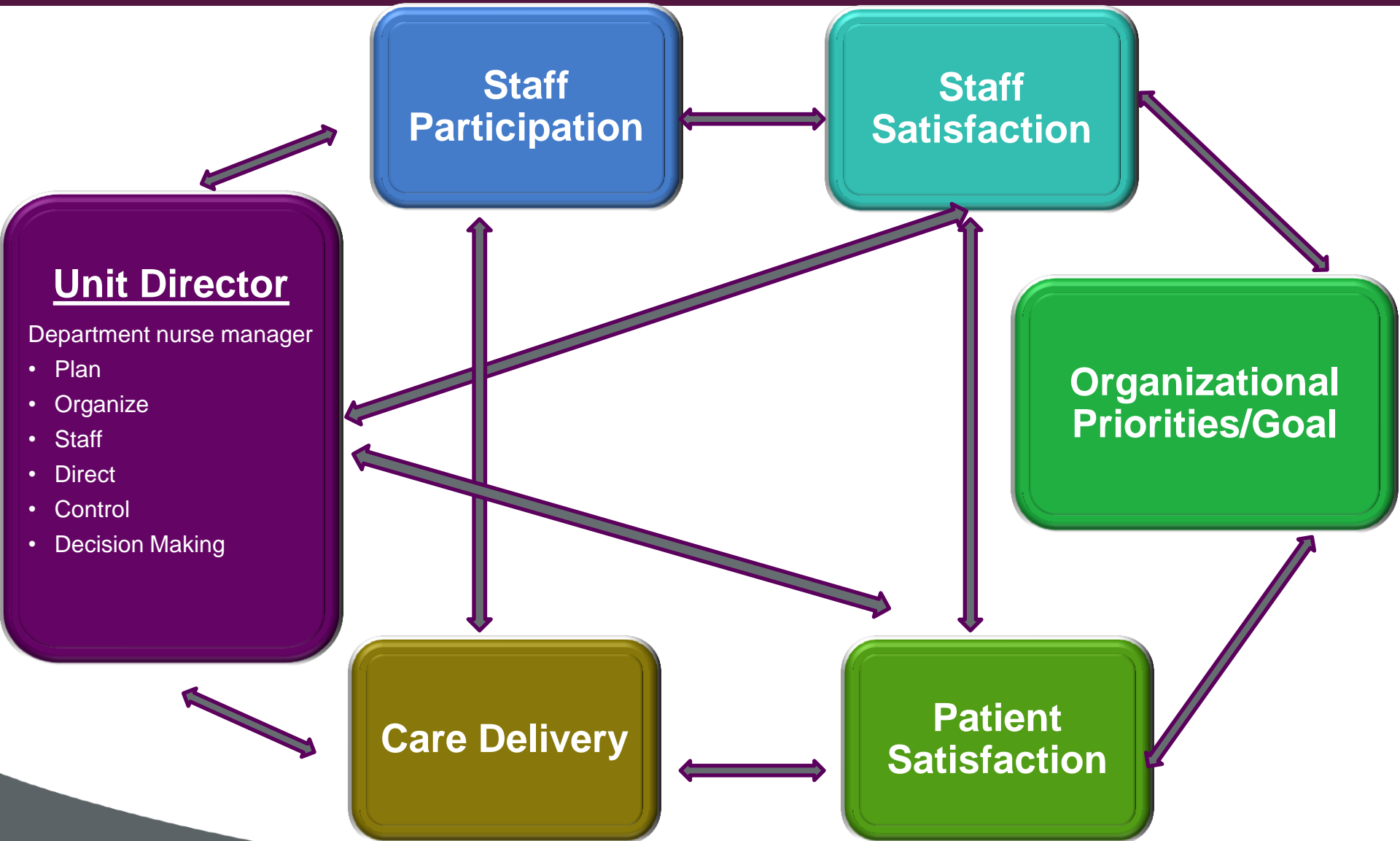


Key to Achieving Outcomes

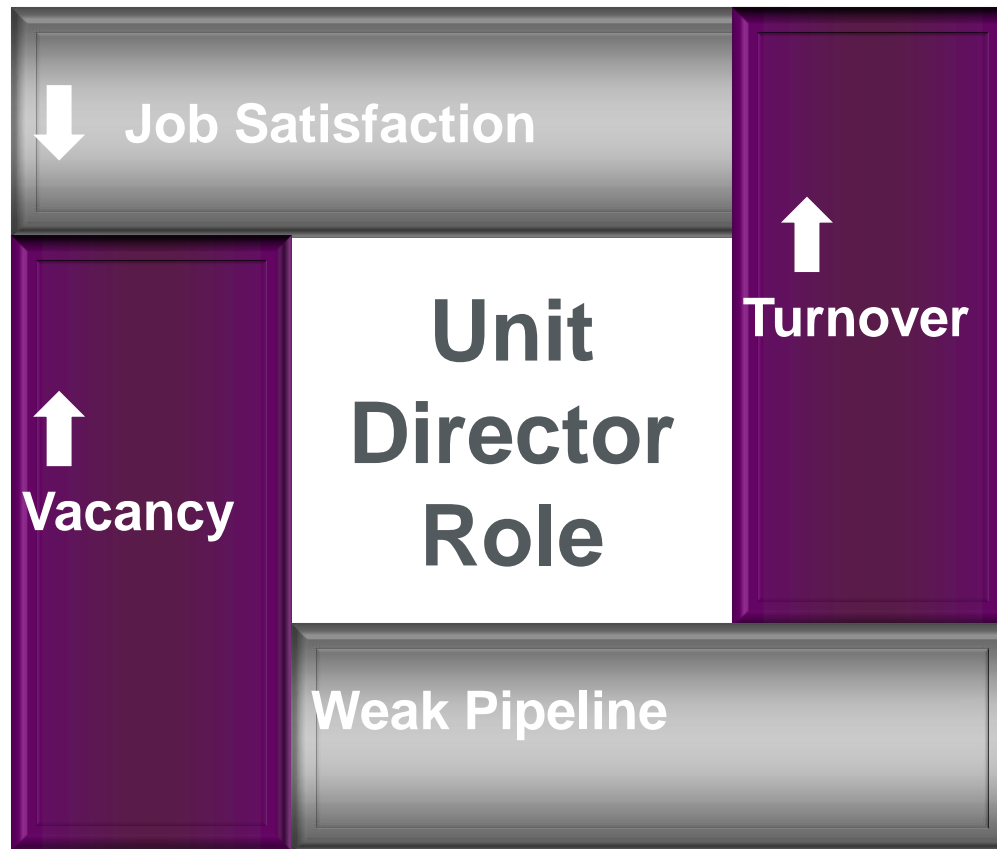
- Unit Directors (Nurse Manager)
 - Operational accountability
 - Manage the daily priorities
 - Employee relations
 - Drive department's care delivery
 - Fiscal accountability



Unit Director's Influences to Reach Priorities/Goals



Overlapping Challenges



UPMC's Response

Unit Director Task Force:

- Chief Nursing Officers
- Nursing leaders and managers
- Compensation
- Human Resources
- Finance and productivity

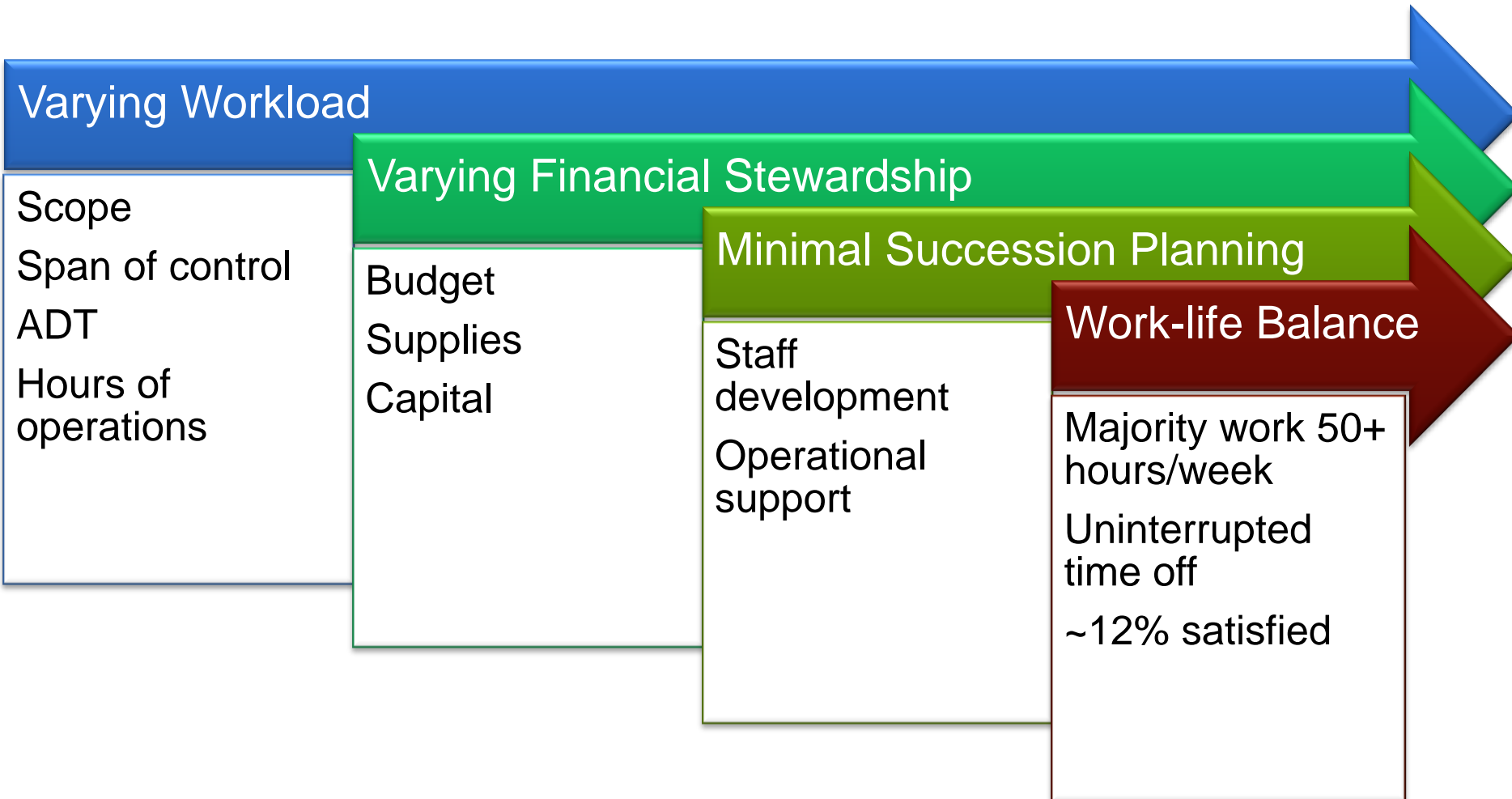
Problem statement: In what ways can nursing leadership improve unit director (nurse manager) turnover and vacancy rates across UPMC?

Assessment

- Surveyed nurse managers
- Focus groups with shared governance councils
- Surveyed to CNOs
- Literature review



Assessment Findings



The Evidence Supports

- Successful Unit Directors/Nurse Manager
 - Transformational leaders
 - Strong communication regarding organization goals, values and vision
 - Positive personality traits, extroverted, openness, optimism
 - Tenured within organization
 - Embraces autonomy, shared governance, empowerment of staff
 - Advanced nursing degree
 - Attitude of “I own it”- accountable
 - Self awareness and confidence
 - Self management: transparency and adaptability, initiative, empathetic
 - Social awareness

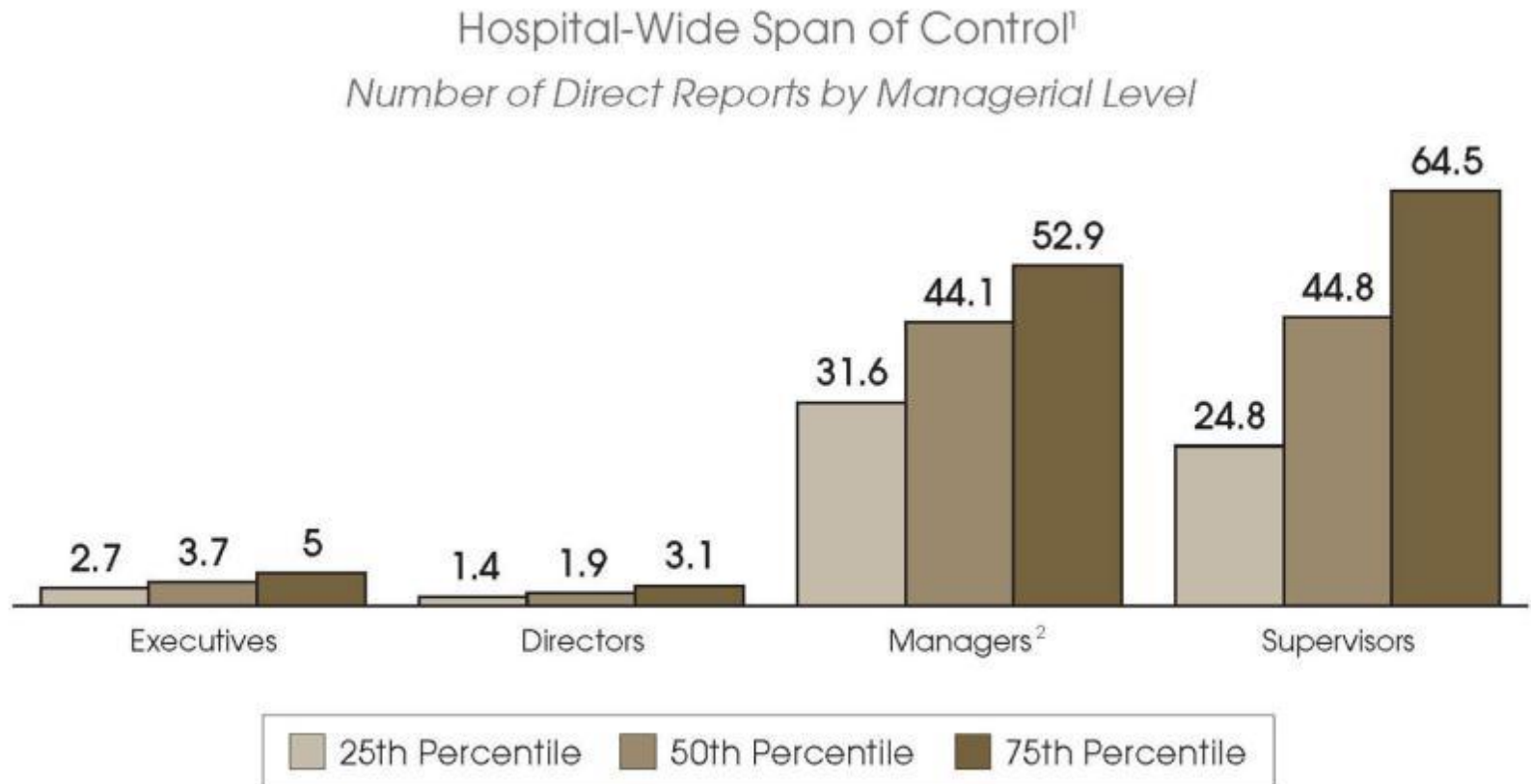
Force, M. (2005) The Relationship Between Effective Nurse Managers and Nursing Retention, JONA, 35(7/8).
Goleman, D., Boyatzis, R., and McKee, A. (2002). Primal Leadership.

Definitions

- Scope - the extent or range of managerial accountabilities
 - Number of departments
 - Workload of the departments
 - Hours/days of accountability
 - Budgetary requirements
- Span of Control
 - The number of employees reporting to a manager
 - Full time equivalents (FTE)
 - Headcount

Span of Control in the literature

- Advisory Board – Hospital-Wide



© The Advisory Board Company

Footnotes: 1 Represents headcount data for 95 hospitals.

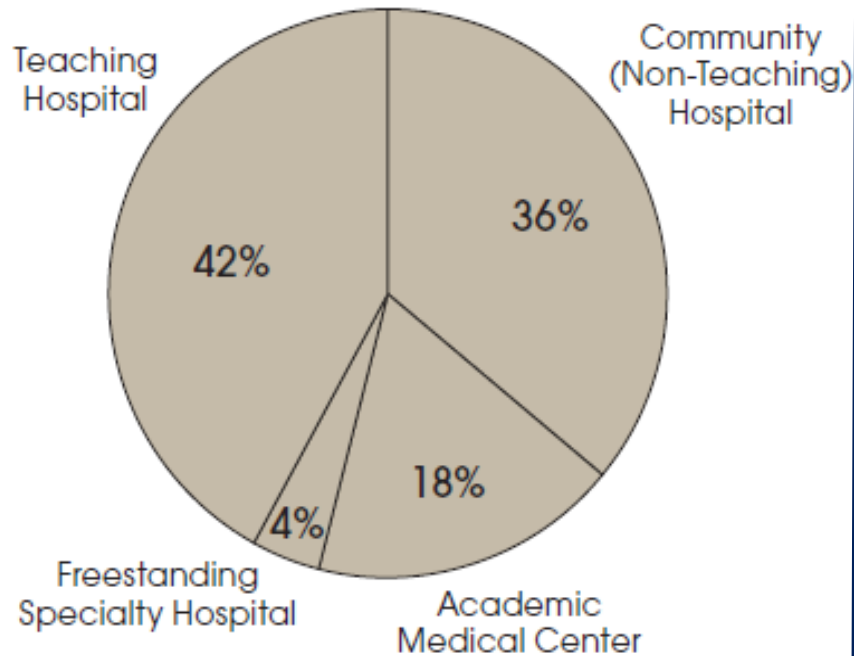
2 Includes supervisors and frontline staff per manager

Comparison of Respondents: Advisory Board / UPMC

Nursing Executive Center Survey on Organizational Design and Performance, 2008;
Nursing Executive Center analysis

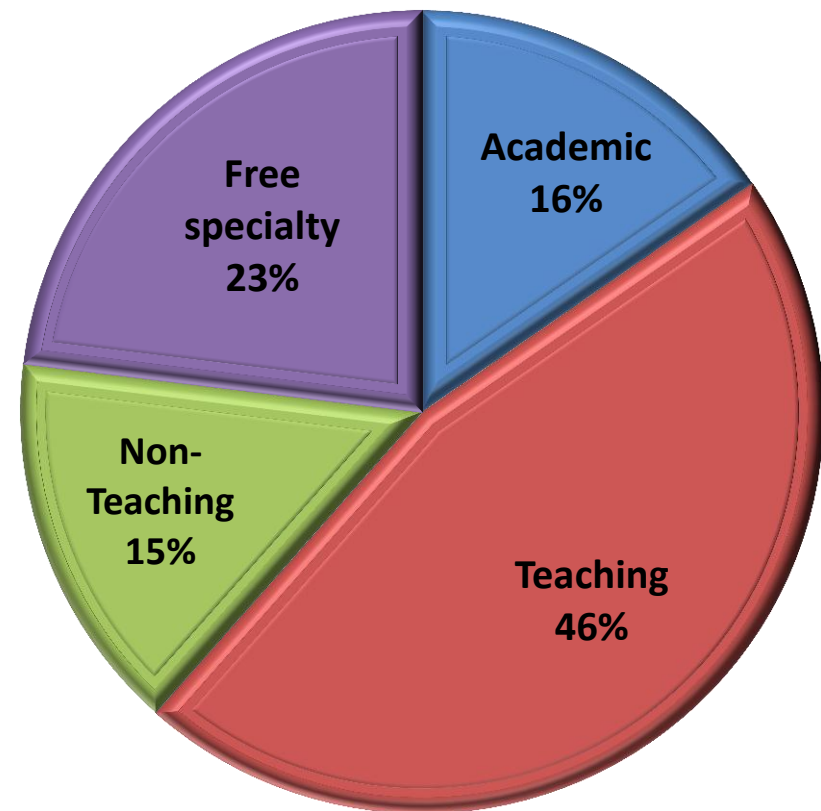
Institution Type

n=2,930



Advisory Board Company, (2008) Benchmarking Nursing Organizational Structure, p 32.

UPMC Hospitals



Based on UPMC's NDNQI reporting

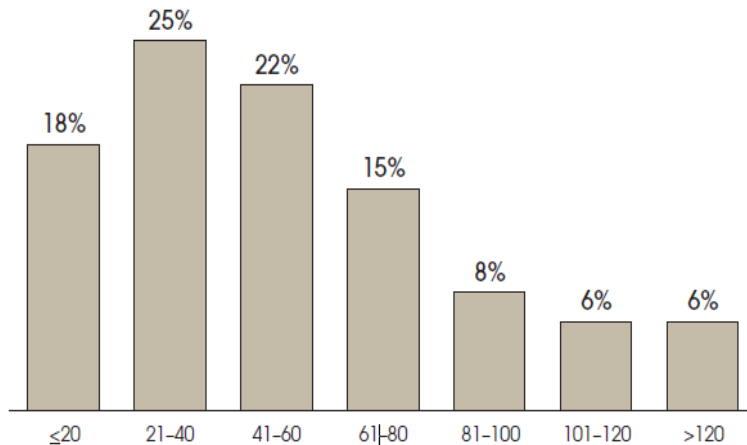
UPMC LIFE
CHANGING
MEDICINE

Headcount comparison – Advisory Board / UPMC

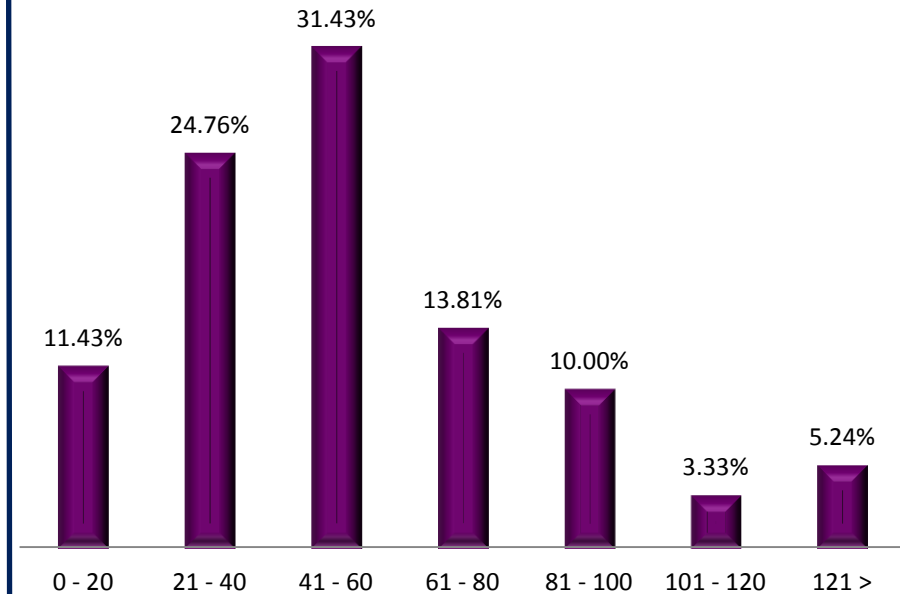
Nurse Manager Span of Control

Breakdown of Respondent Nurse Managers by Number of Employees Overseen¹

n=2,134

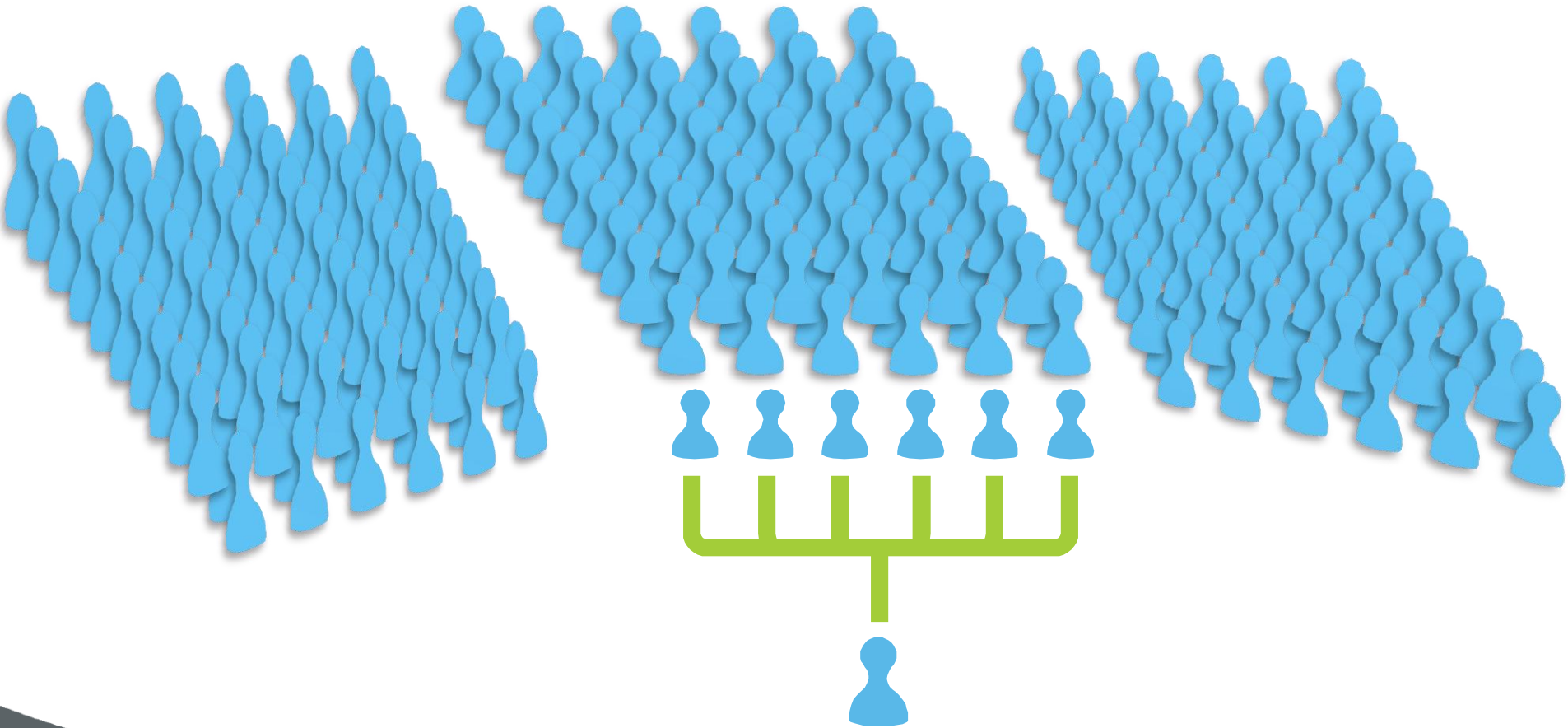


UPMC Nursing



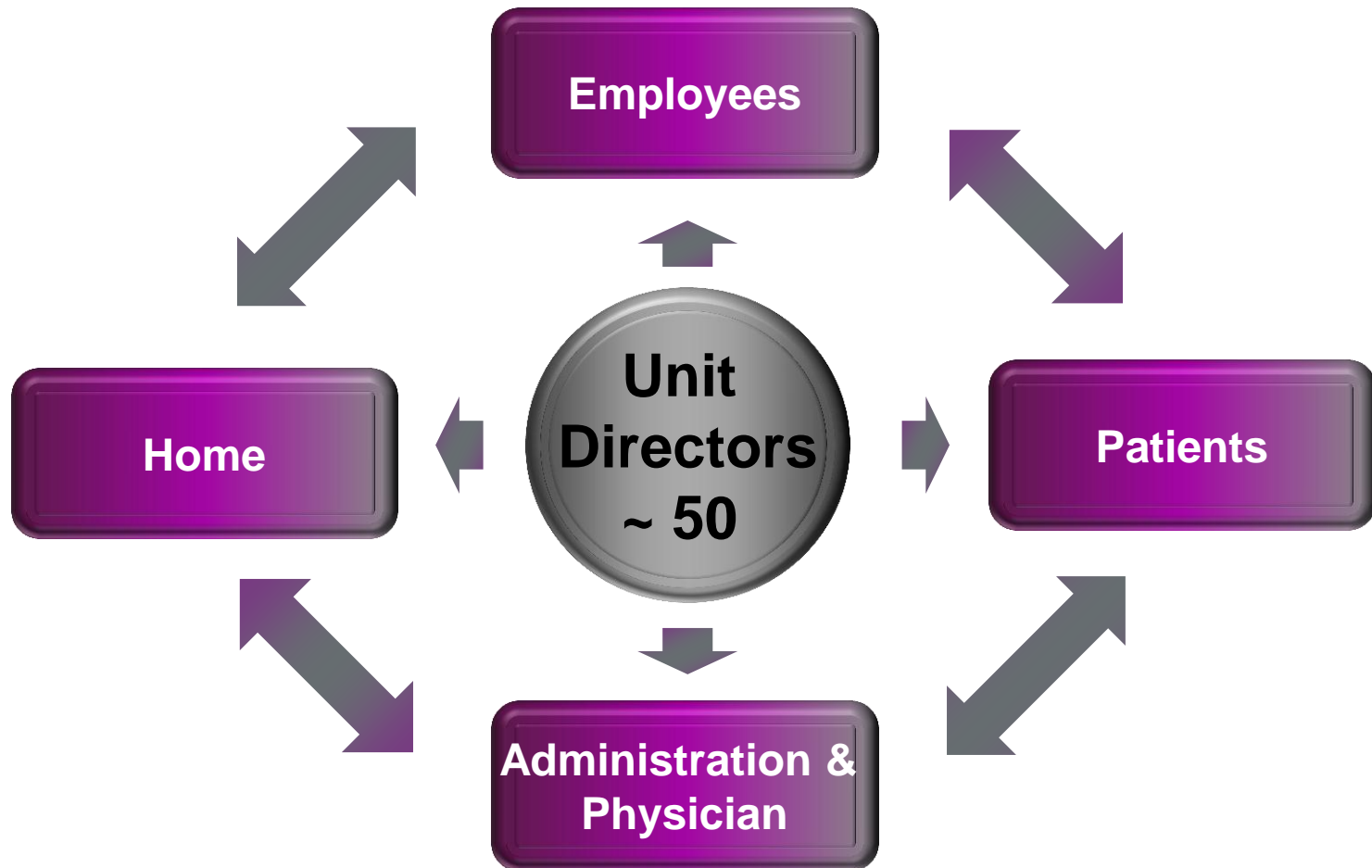
Relationships Increases with Span of Control

1 manager/ 6 director reports = 222 relationships



Hindle, T. (2009), Span of Control, *The Economist*, London: The Economist Newspaper Limited

Various Other Relationships



Advisory Board– Nursing Specific

Support Staff Benchmarks

Mean Number of Positions per Ten Frontline Caregivers

Unit-Based Staff							Non Unit Based Staff			
AA	ANM	CN	CNL	CNS	NP	Sum	Educator	Expert	Researcher	Sum
1.19	0.24	0.82	0.08	0.17	0.19	2.69	0.24	0.15	0.07	0.46

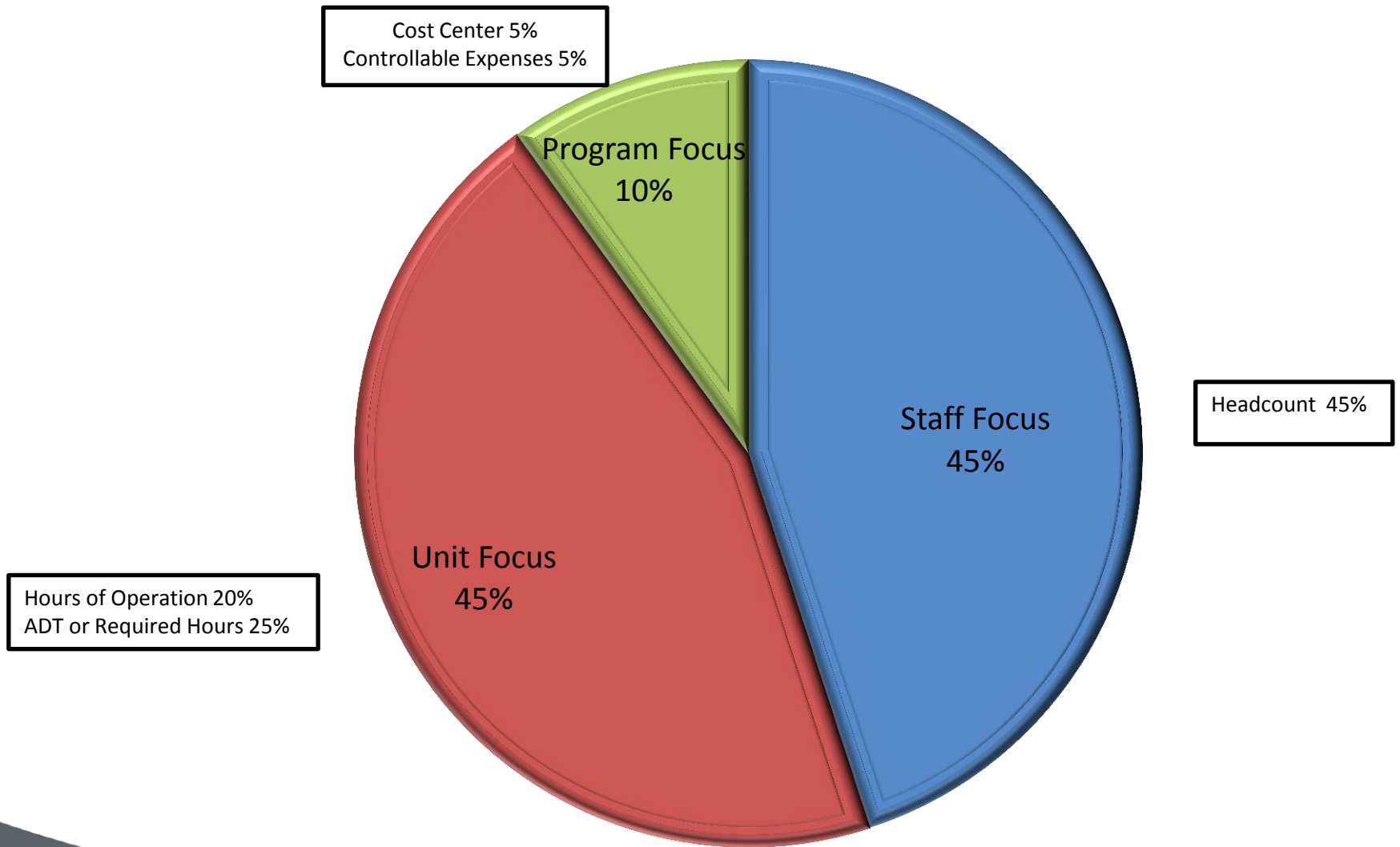
Advisory Board Company, (2008) Benchmarking Nursing Organizational Structure, p45.

Taking Span of Control Further

- *Unit Focus*
 - Complexity of the unit
 - Hours of operation
 - Unpredictability of the department
 - Turnover of patients –admissions, discharges and transfers (ADT)
 - Key Volume Indicator (KVI)
- *Staff Focus*
 - Volumes of staff directly reporting to the manager
 - Skill level of the staff and their stability
- *Program Focus*
 - Number of responsible departments
 - Total size of the budget minus salaries

Morash, Brintnell & Lemire (2005) A Span of Control Tool for Clinical Managers, *Nursing Leadership*, (18) 3 p. 83- 93.

UPMC's Distribution of Measurements



5 Overall Categories Weighted Using a Point System:

Headcount

• 45% or 45 Points

ADT or Direct
Required Hours

• 25% or 25 Points

Hours of
Operation

• 20% or 20 Points

Cost Centers

• 5% or 5 Points

Controllable
Expenses

• 5% or 5 Points

Measuring Span of Control

Headcount – total of 45 possible points

- Simple count of people based on “home” departments
 - Provided by HR
- Aggregated all departments to respective Unit Directors
 - Minimum of 0 people
 - Maximum of 183 people
- Outliers were identified and *temporarily* excluded
- Remaining Unit Directors were awarded points
 - Based on percentile (e.g. a UD in the 70th percentile received 70% of the 45 total possible points)
 - All outliers were high and received all 45 possible points

Measuring Scope and Span of Control

ADT or Direct Required Hours – total of 25 possible points

- Clinical nursing units or Non-nursing departments
 - Clinical nursing units evaluated using ADT
$$\text{ADT} = \frac{\text{Admission} + \text{Discharge} + \text{Observation} + \text{Transfers in} + \text{Transfers Out}}{\text{Contact Census (start census} + \text{Admissions} + \text{Transfers in})}$$
 - Non-nursing units evaluated using budgeted direct required hours
 - Amount of actual patient related time each department should be staffing
- Each department awarded points using the same method as “headcount”
 - Identify outliers, rank in percentiles, award points
- Aggregated departments under respective Unit Directors
 - Averaged points to compensate for multiple departments

Measuring Scope and Span of Control

Hours of Operation – total of 20 possible points

- Actual charged hours to departments during 6 months
- Hours divided into 4 categories
 - **Daylight:** All departments received 2 points
 - **Weekend:** 6 points
 - Approximately 28% (2/7) of the week is weekend
 - Threshold lowered to 20% for staffing fluctuations
 - **Off-Shift:** 6 points
 - Approximately 36% (1/2 of each of 5 weekdays)
 - Minimum threshold lowered to 27%
 - **Holiday:** 6 points
 - 2 holidays during the 184 day period – or 1%
 - Minimum threshold lowered to 0.5%
- Department points averaged when aggregated



Measuring Scope and Span of Control

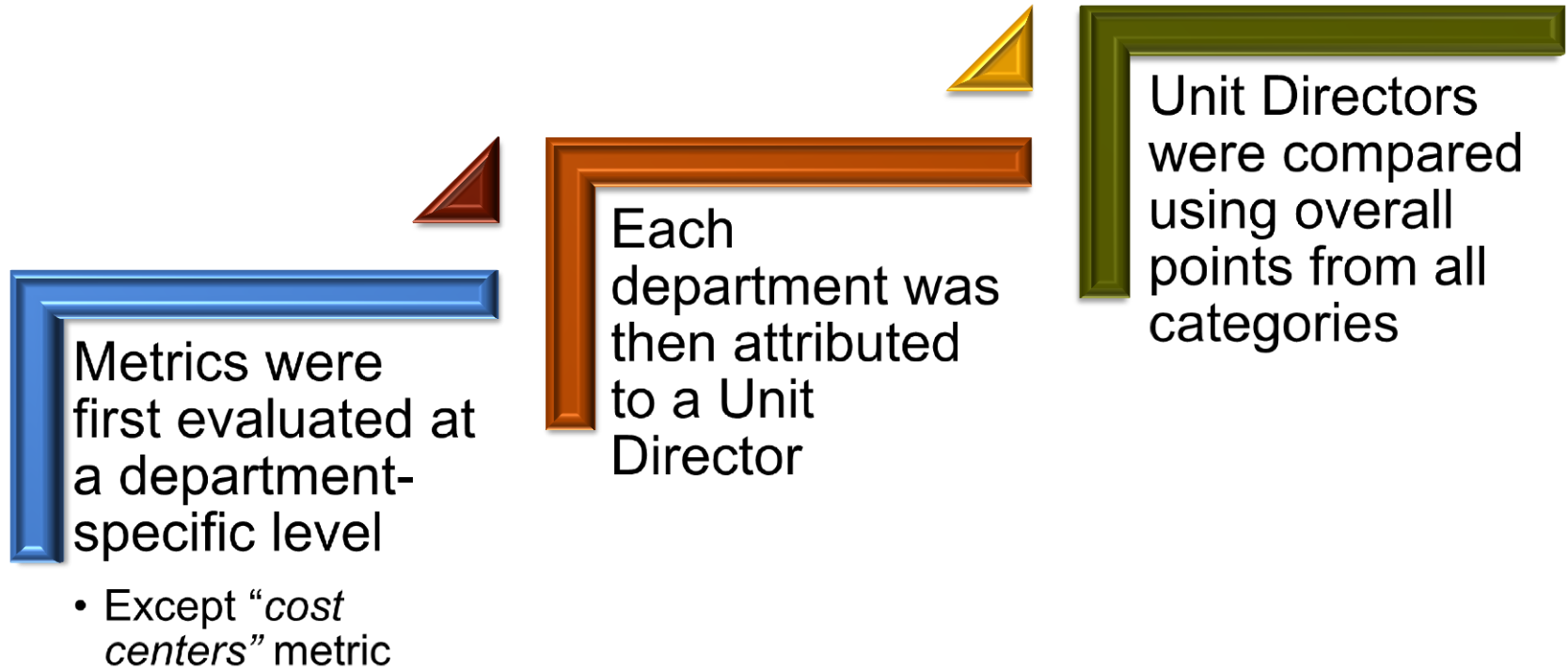
Cost Centers – total of 5 possible points

- Number of responsible departments
 - Minimum of 1
 - Maximum of 4
- Each Unit Director received 1.25 points per department

Controllable Expenses

- Full year budgeted controllable expenses **except** salaries
 - Supplies, purchased services, drugs, etc.
- Evaluated in same fashion as “headcount”
 - Aggregate, identify outliers, rank, award points

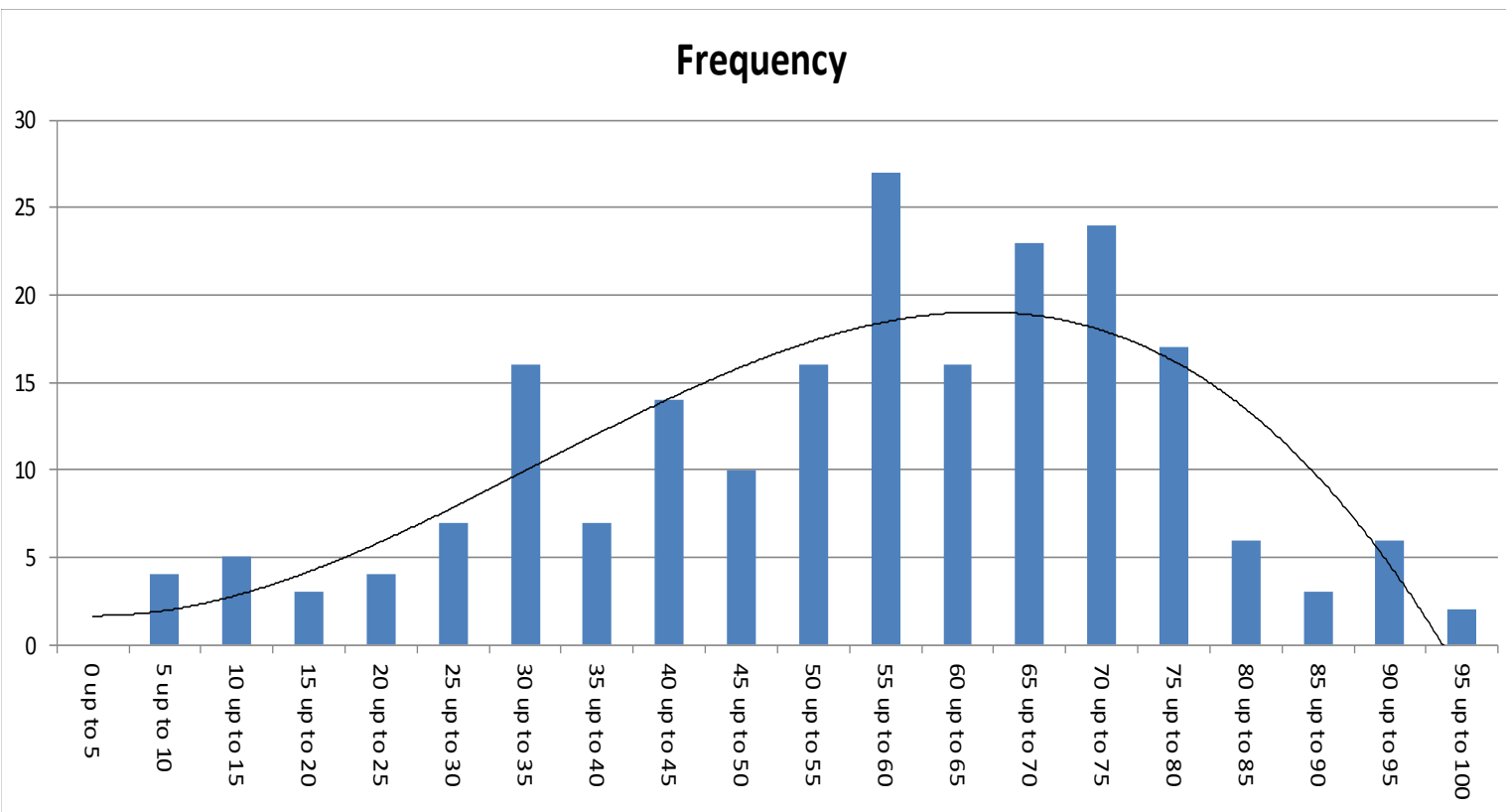
Steps in Creating Ranking



Measuring Span of Control – Evaluating Unit Directors

Hospital	Director	Headcount	Hours of Operation	ADT or Required Hours	Controllable Expenses	Cost Centers	Total Points	Rank
MAG	Unit Director A	45.00	20.00	25.00	5.00	1.25	96.25	1
CHP	Unit Director B	44.55	20.00	25.00	5.00	1.25	95.80	2
PUH	Unit Director C	42.98	20.00	25.00	5.00	1.25	94.23	3
MER	Unit Director D	42.98	20.00	25.00	5.00	1.25	94.23	3
SHY	Unit Director E	42.75	20.00	25.00	4.83	1.25	93.83	5
MAG	Unit Director F	44.33	20.00	22.50	4.77	1.25	92.85	6
SHY	Unit Director G	43.65	20.00	20.83	4.18	2.50	91.15	7
SMH	Unit Director H	40.55	20.00	24.48	4.55	1.25	90.82	8
PAS	Unit Director I	39.20	20.00	23.98	4.52	1.25	88.94	9
PAS	Unit Director J	40.55	20.00	20.16	3.75	2.50	86.96	10
PAS	Unit Director K	41.22	20.00	18.85	4.20	2.50	86.77	11
CHP	Unit Director L	45.00	20.00	13.58	5.00	1.25	84.83	12
CHP	Unit Director M	45.00	20.00	13.45	4.86	1.25	84.56	13
PUH	Unit Director N	45.00	8.00	25.00	5.00	1.25	84.25	14
SHY	Unit Director O	35.24	20.00	22.65	4.32	1.25	83.45	15
PUH	Unit Director P	41.67	11.00	21.84	5.00	2.50	82.01	16
HRZ	Unit Director Q	33.66	20.00	22.80	2.30	1.25	80.01	17
MER	Unit Director R	45.00	20.00	5.36	4.46	5.00	79.82	18
MER	Unit Director S	35.24	20.00	19.28	4.06	1.25	79.82	19
MER	Unit Director T	41.67	20.00	11.98	4.74	1.25	79.64	20

Measuring Span of Control – Distribution of Results



Interval	Frequency
0 up to 5	0
5 up to 10	4
10 up to 15	5
15 up to 20	3
20 up to 25	4
25 up to 30	7
30 up to 35	16
35 up to 40	7
40 up to 45	14
45 up to 50	10
50 up to 55	16
55 up to 60	27
60 up to 65	16
65 up to 70	23
70 up to 75	24
75 up to 80	17
80 up to 85	6
85 up to 90	3
90 up to 95	6
95 up to 100	2

Summary of Total Points	
Min	5.94
Max	96.25
Mean	56.09
Median	58.39
Std. Dev.	20.31

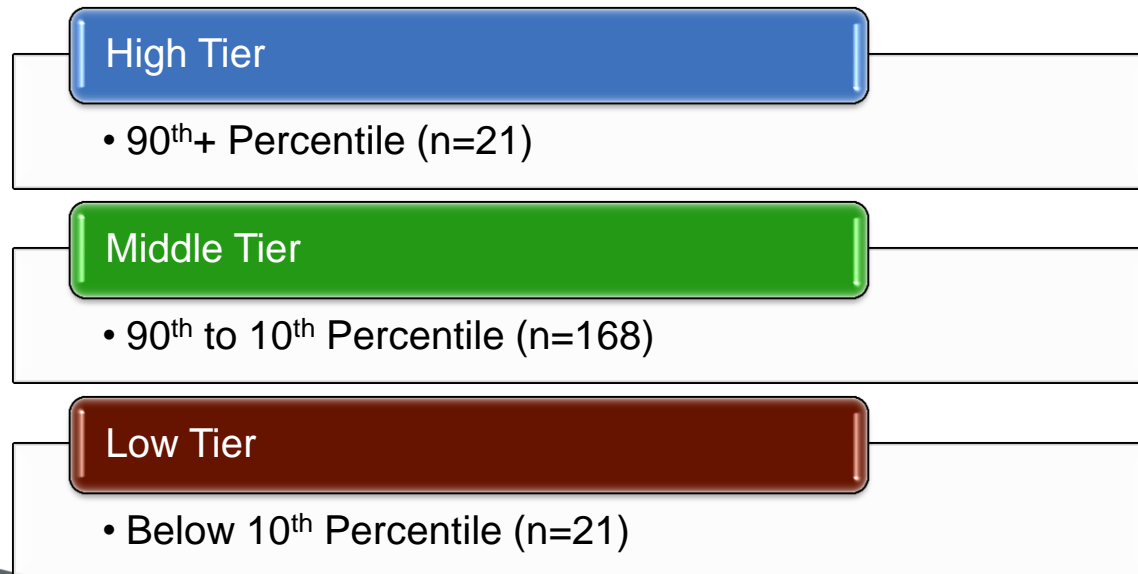
Measuring Scope and Span of Control

Interpreting Results

- Span of Control Tool evaluated by University of Pittsburgh statistician
 - Main purpose was to establish tiers for allocating administrative support and to determine the validity of the tool

Defining Tiers

- Statistician recommended the 10th and 90th percentiles
- Statistician found significant difference between groups
 - Results indicate need to different support



Unit Director Support

Operational Support:

- Clinician or other type of nurse in the department
 - Assists with the day to day operations (schedules, staffing, audits, RCA, patient rounds)
 - Assists with performance management
- Support level is determined by the headcount
 - Recommendation is in hours of indirect time per week, pay period, and year
 - Guide for budgeting – this could be accomplished by redirecting hours from direct to indirect or from other indirect activity

**Formula: Headcount X 0.12 hours (Advisory Board)
per 10 Staff**

Unit Director Support

Administrative Support

- Unit operation support for items such as meeting agendas and minutes, ordering, tracking and audits, etc.
 - May be provided by an administrative assistant, business assistant, or higher level HUC
 - According to Labor Management Institute, 2007 Nurse Manager Span of Control Report, approximately 50% of nurse managers have either full or part time administrative assistant support
 - Advisory Board does not separate unit clerk and administrative assistant

Unit Director Support

Administrative Support

- Recommendation:
 - Middle tier: 0.125 FTE
 - High tier: greater than 0.125 FTE
 - Low tier: less than 0.125 FTE

High Tier

- Greater than 10 hours per pay period

Middle Tier

- 10 hours per pay period

Low Tier

- Less than 10 hours per pay period

Business Unit Example

- 36 bed Medicine Unit (Middle Tier)

Formula: $\frac{63 \text{ Headcount} \times .12 \text{ hours (Advisory Board)}}{\text{per 10 staff}} = .75 \text{ operational support}$

Indirect Operational Support

Clinician = .2

Clinician = .2

Clinician = .2

**1 Life Stages RN = .1 (8hours/pay)
.7 FTE**

Administrative Support

10 hours per week of a shared Administrative Assistant

Business Unit Example

- 74 bed NICU (High Tier)
- Formula: $\frac{183 \text{ Headcount} \times .12 \text{ hours (Advisory Board)}}{\text{per 10 staff}} = 2.2 \text{ support}$

Indirect Operational Support

Unit Director = 1.0

Clinician = .2

Clinician = .2

Clinician = .2

6 Life Stages RN = .6 (8hours/pay)

2.2 FTE

Administrative Support

10 - 20 hours per week of a shared Administrative Assistant

System wide Roll Out

- Mapped each UD to a tier
- Shared the concepts with all system CNO's
- UD's Job Grade was adjusted to the Director Level similar to all other ancillary department heads.
- Modeled the concepts to meet each specific hospital's needs and resources.
- Adjusted the budget to incorporate the indirect time while remaining budget neutral

Note: This was not an exactly identical model for each unit or hospital. Goal was to provide the support needed.

Outcomes



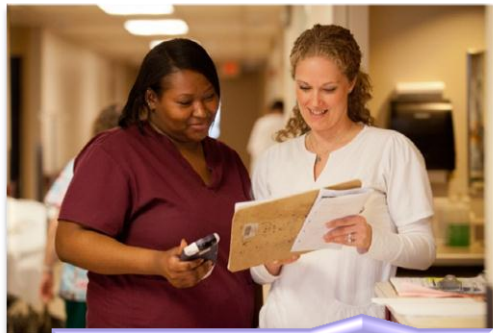
Vacancies



Turnover



Hires



Education



Operational Support
Performance

First...a quick Unit Director Overview (does not include WPIC)

201 UD's throughout
UPMC

Manage Across 15 BU's

UPMC
UD Snapshot

Average Age is 48.5

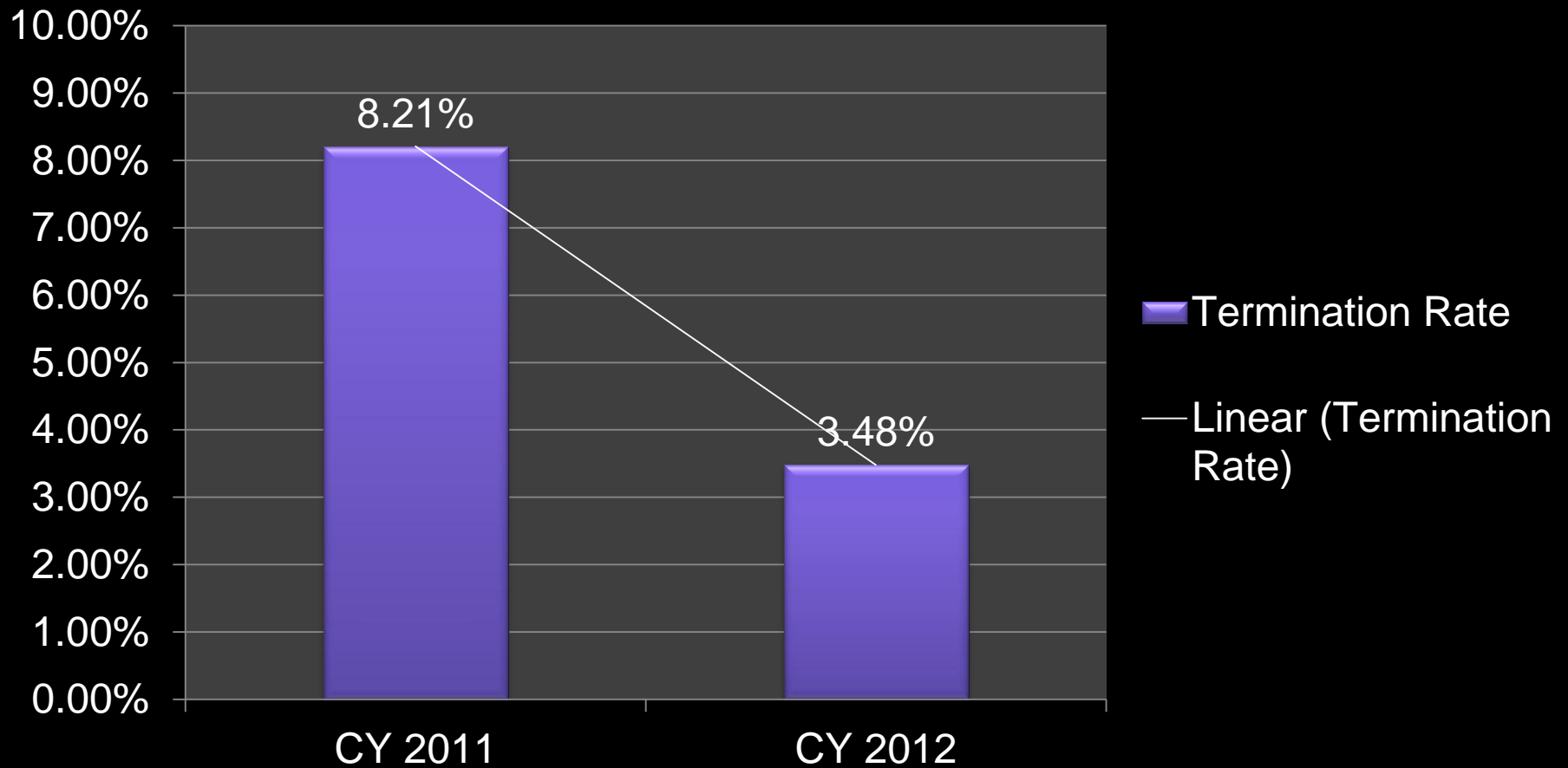
- Oldest BU Avg = 53.12
- Youngest BU Avg = 42.56

Demographics

- 90% Female/10% Male

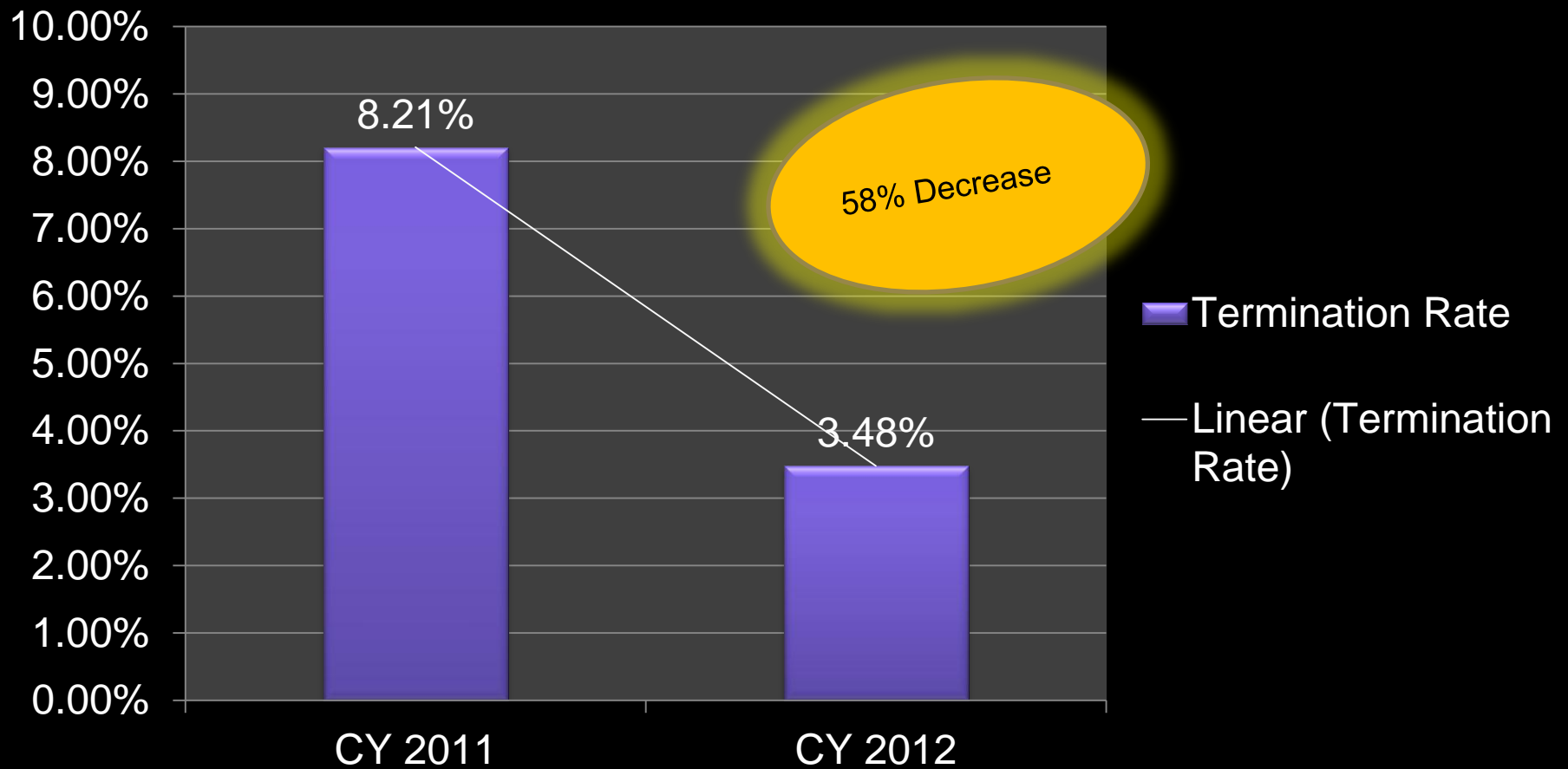
Termination/Turnover (left UPMC) – as of 11/2012

Unit Director: Termination Rate

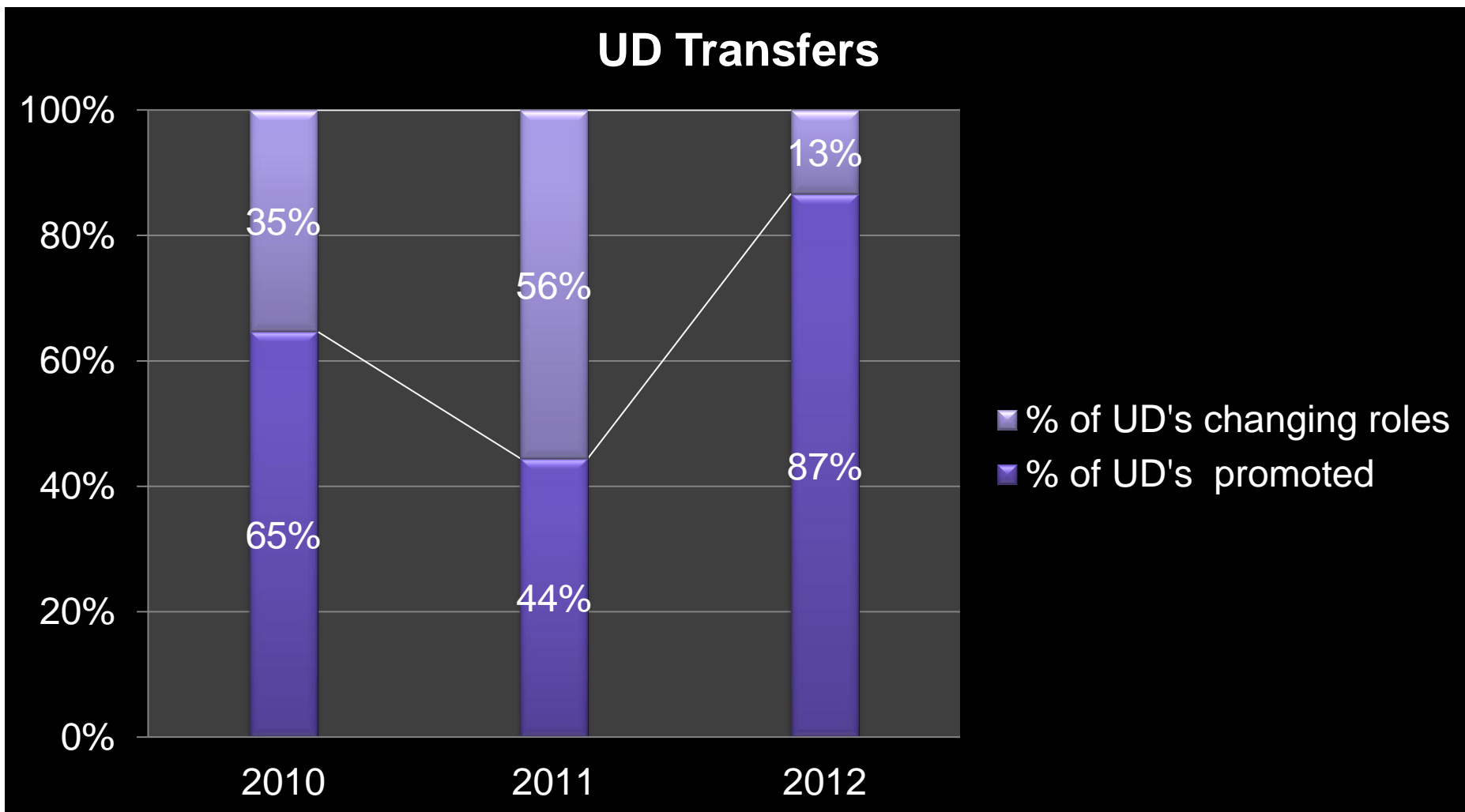


Termination/Turnover (left UPMC) – as of 11/2012

Unit Director: Termination Rate

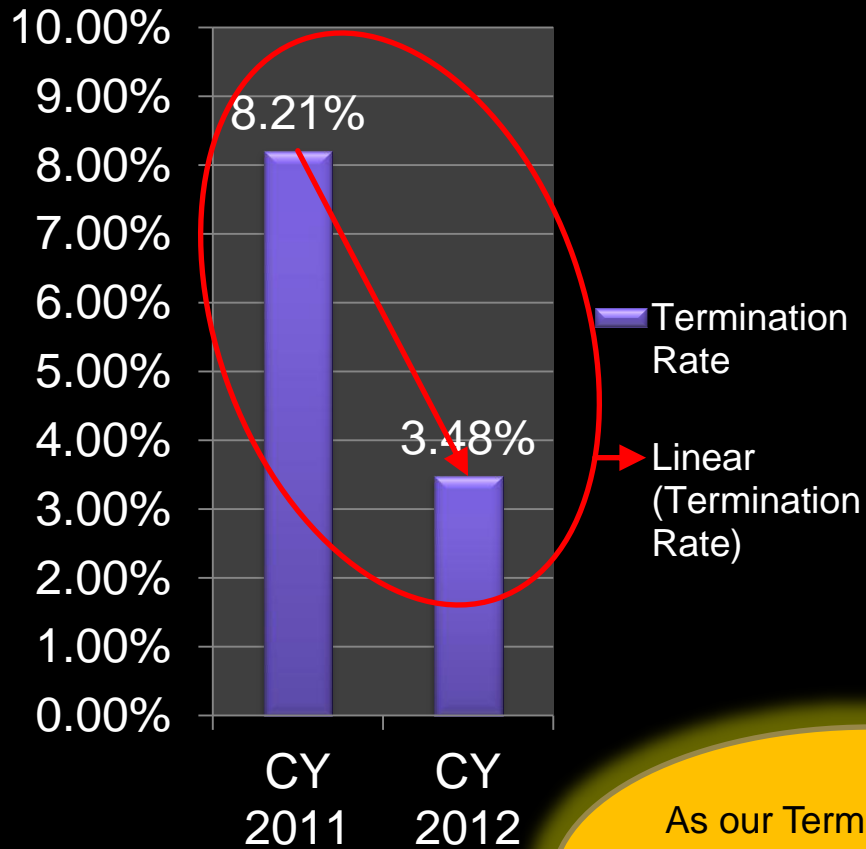


Unit Director – Internal Transfers out of Role

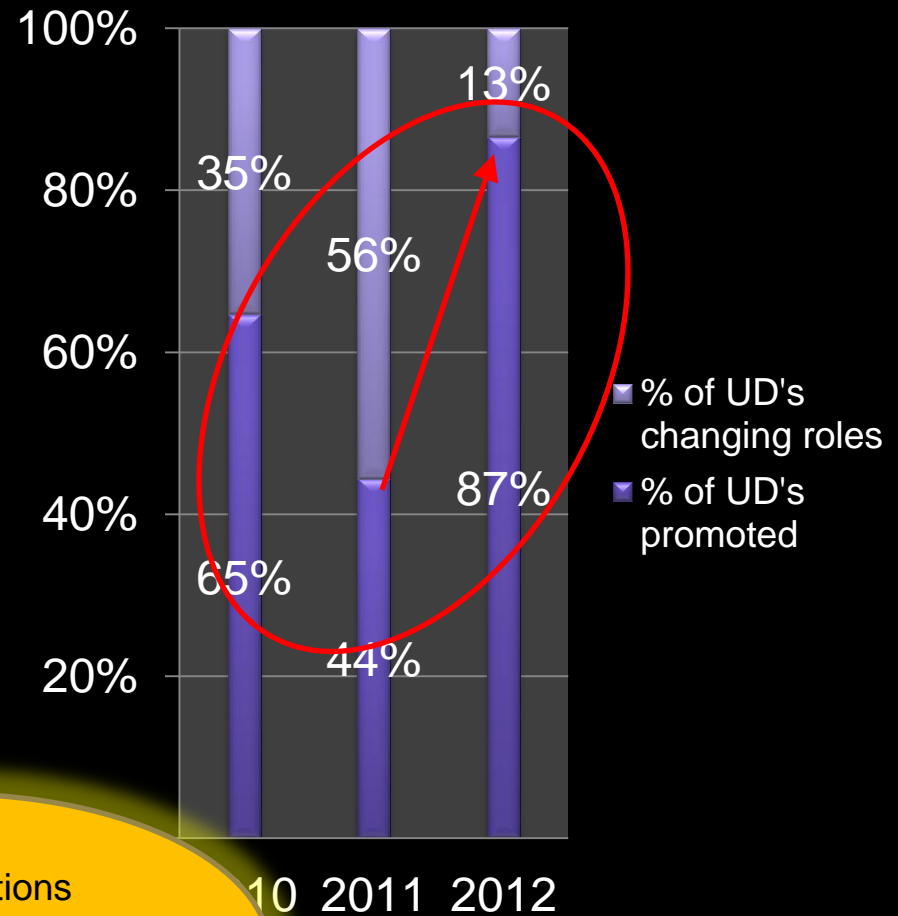


Unit Director – Internal Transfers out of Role

Unit Director: Termination Rate



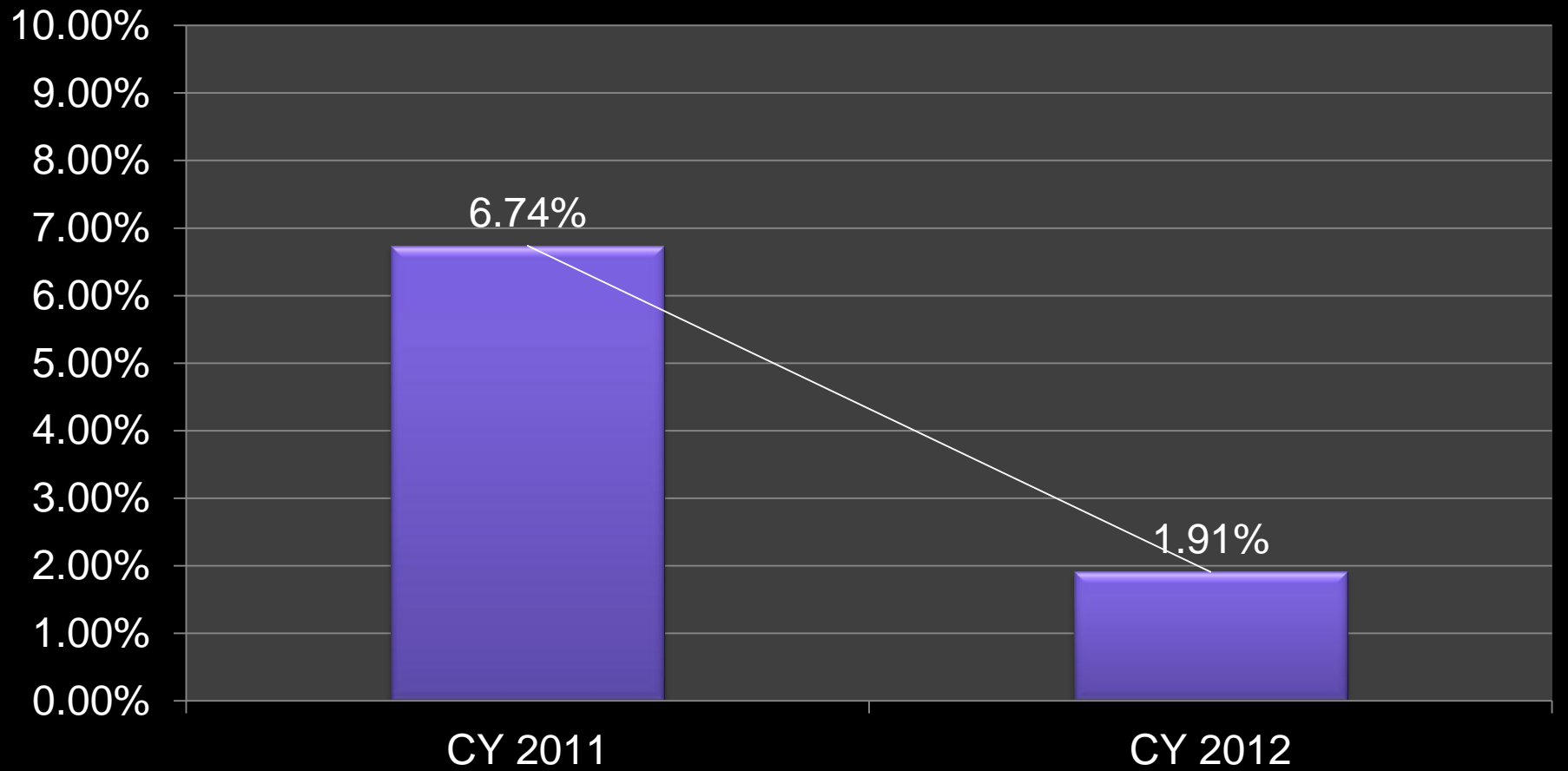
UD Transfers



As our Terminations across the system decrease, the internal promotions increase....

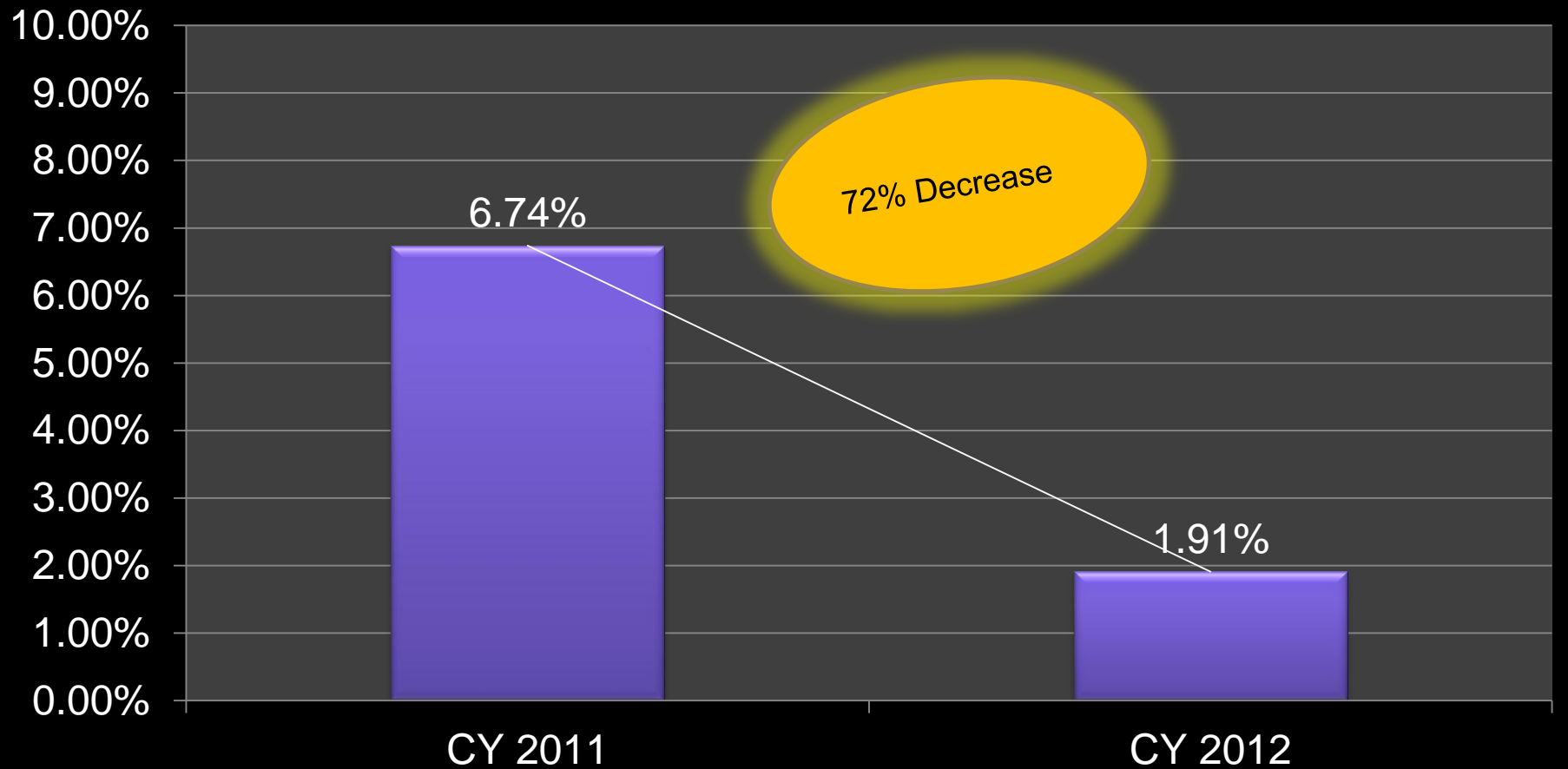
Vacancy Rate – as of 11/2012

Unit Director: Vacancy Rate



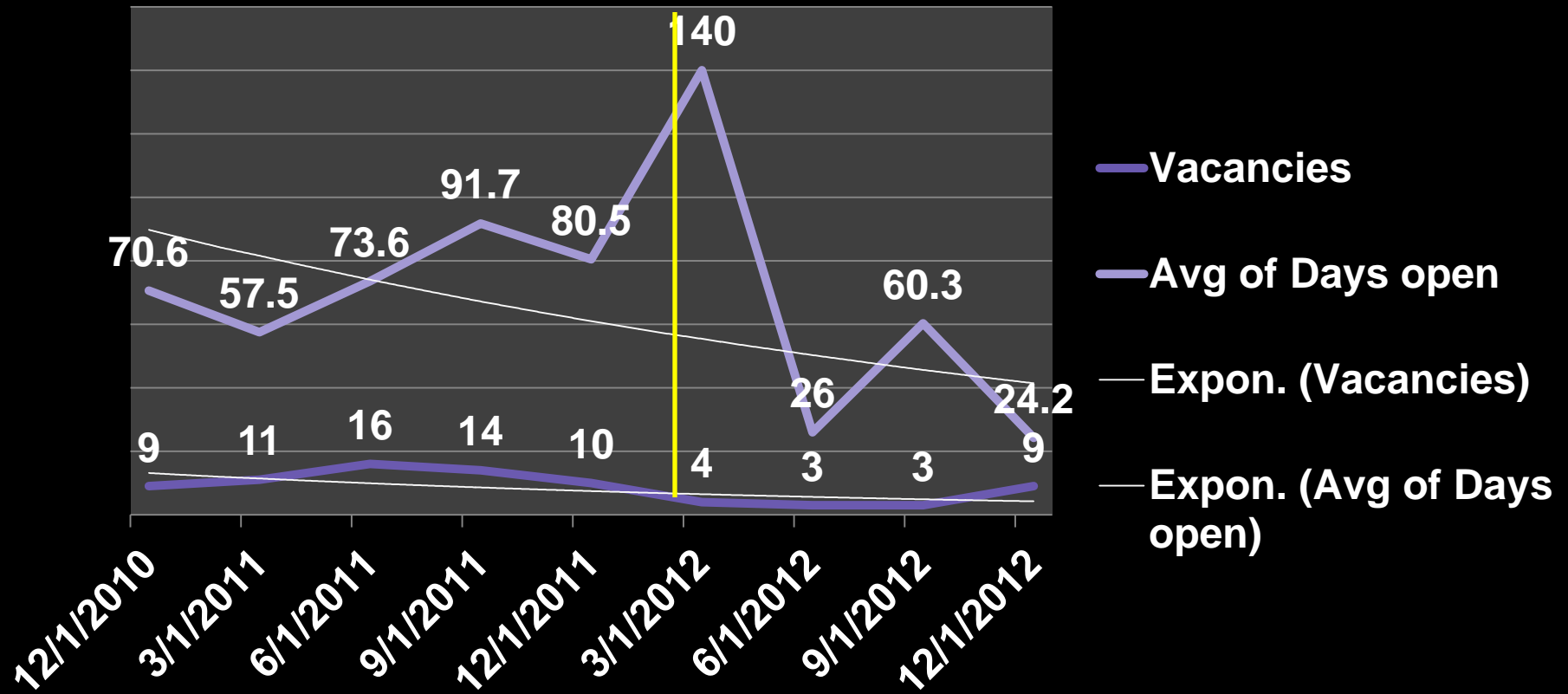
Vacancy Rate – as of 11/2012

Unit Director: Vacancy Rate



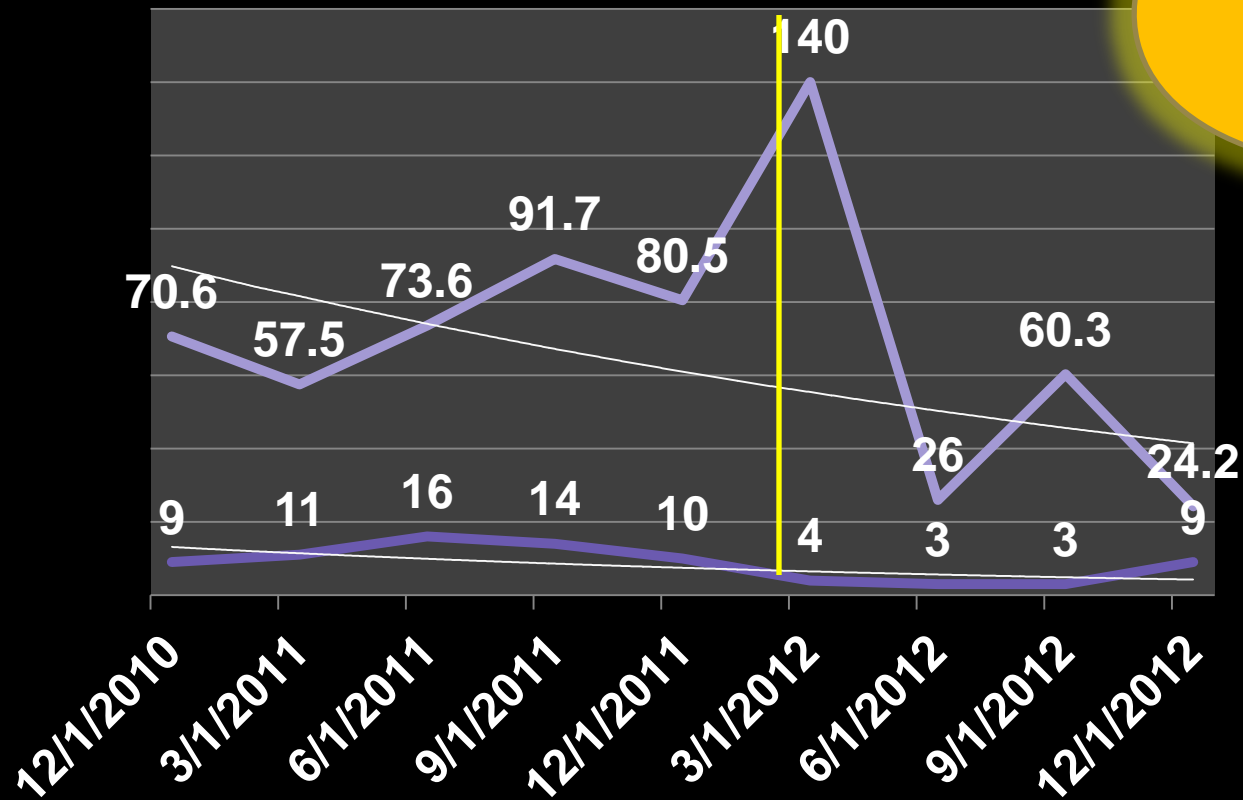
Vacancy Snapshot

Unit Director Quarterly Snapshot: Vacancies and Days Open



Vacancy Snapshot

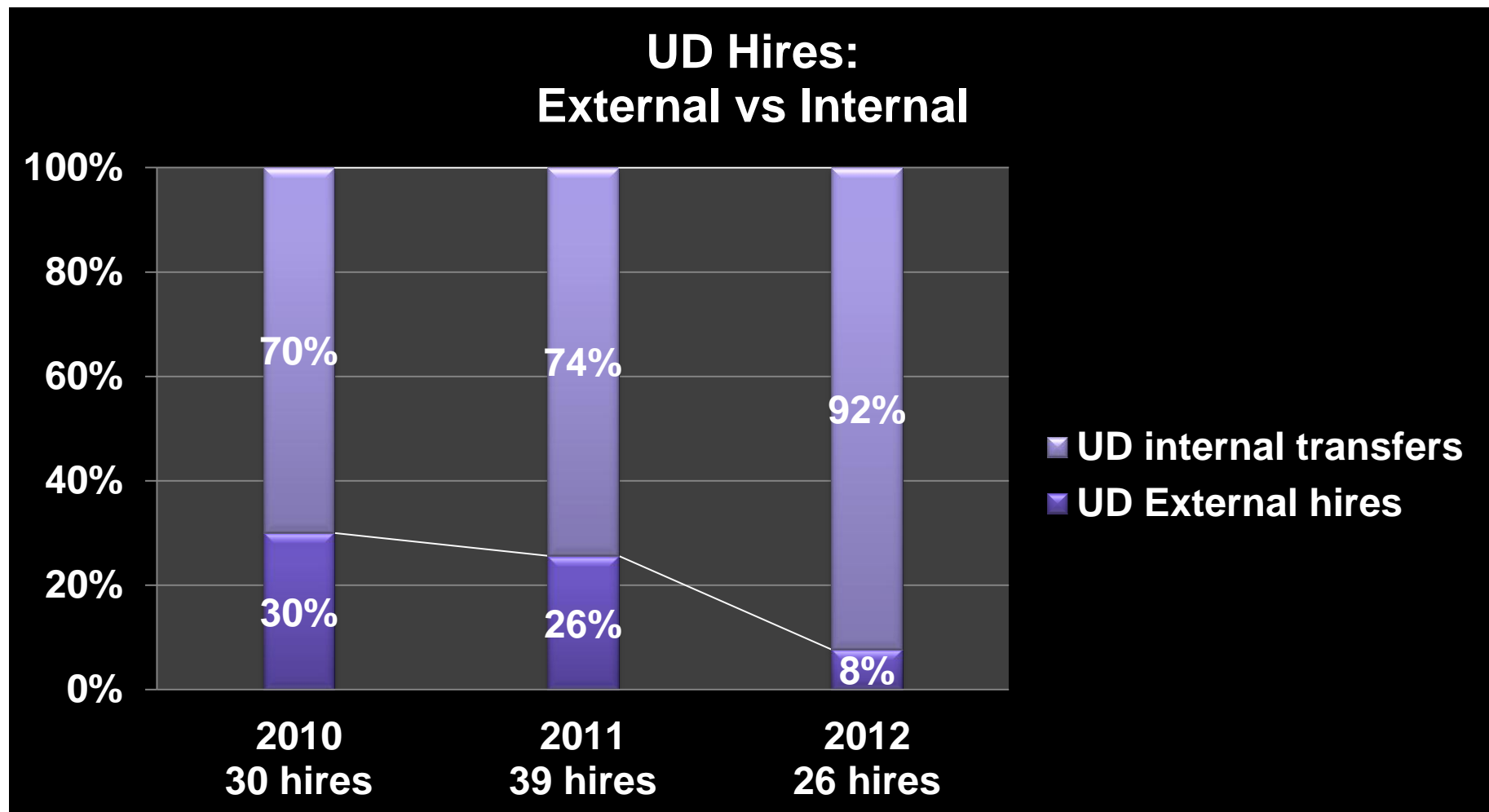
Unit Director Quarterly Snapshot: Vacancies and Days Open



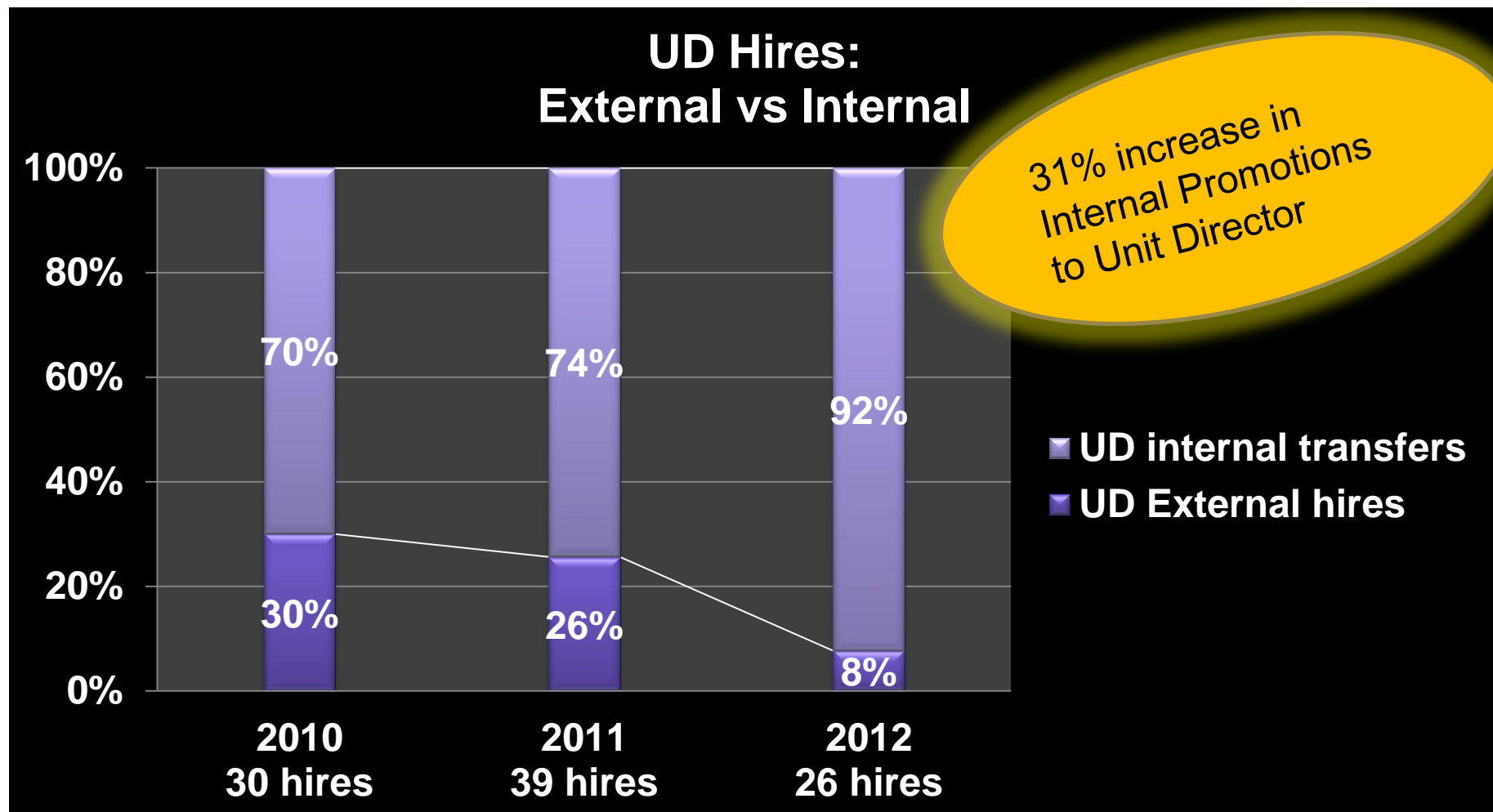
Significant Decrease
in Prevalence of
vacancies and Days
Open

- Vacancies
- Avg of Days open
- Expon. (Vacancies)
- Expon. (Avg of Days open)

Unit Director: Hires/Promotions

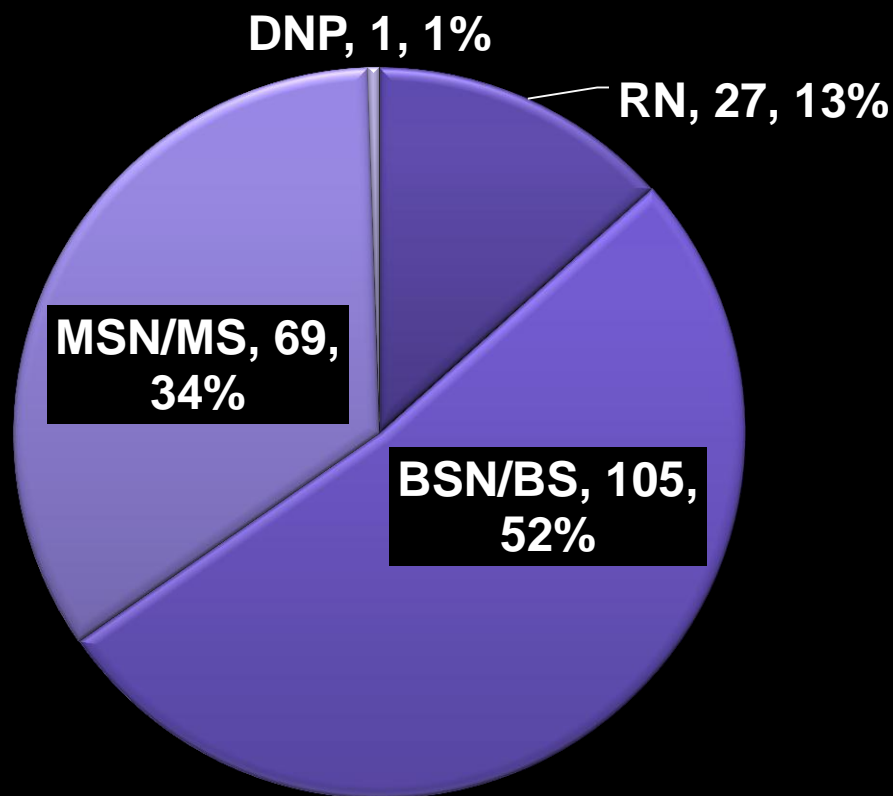


Unit Director: Hires/Promotions



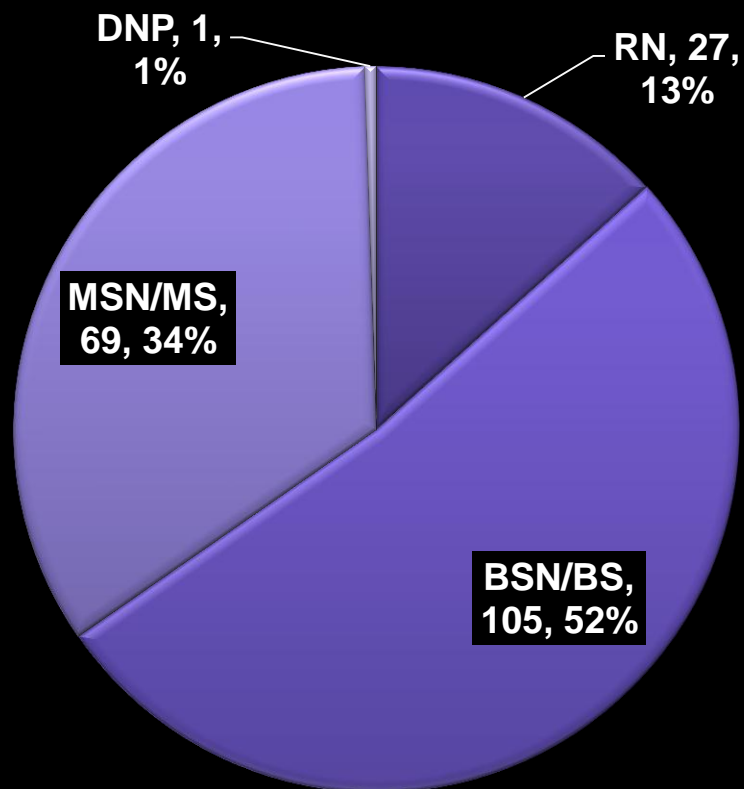
Unit Director: Educational Preparation

2008 - Unit Director Education

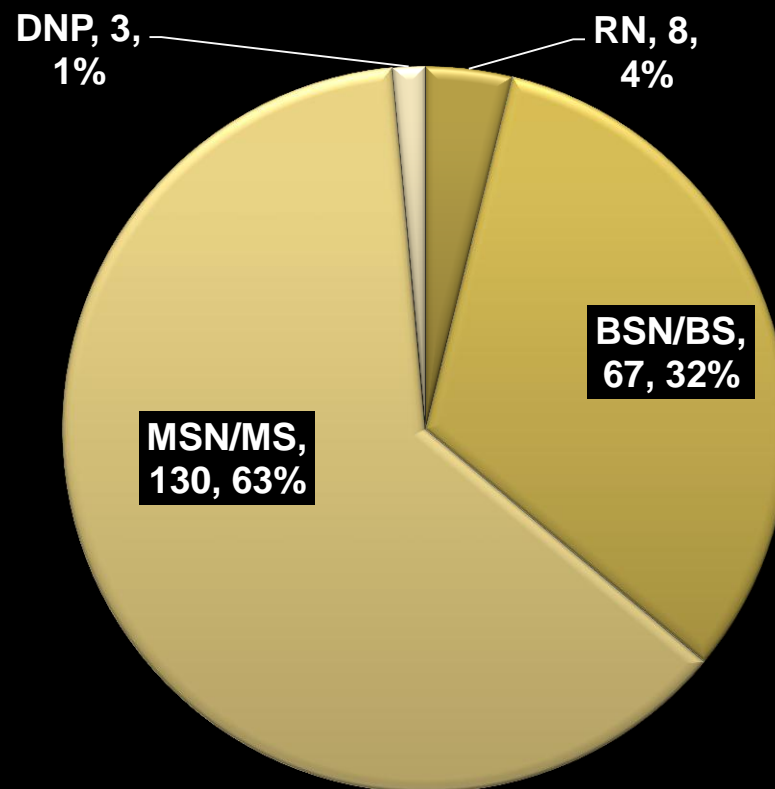


Unit Director: Educational Preparation

2008 - Unit Director Education

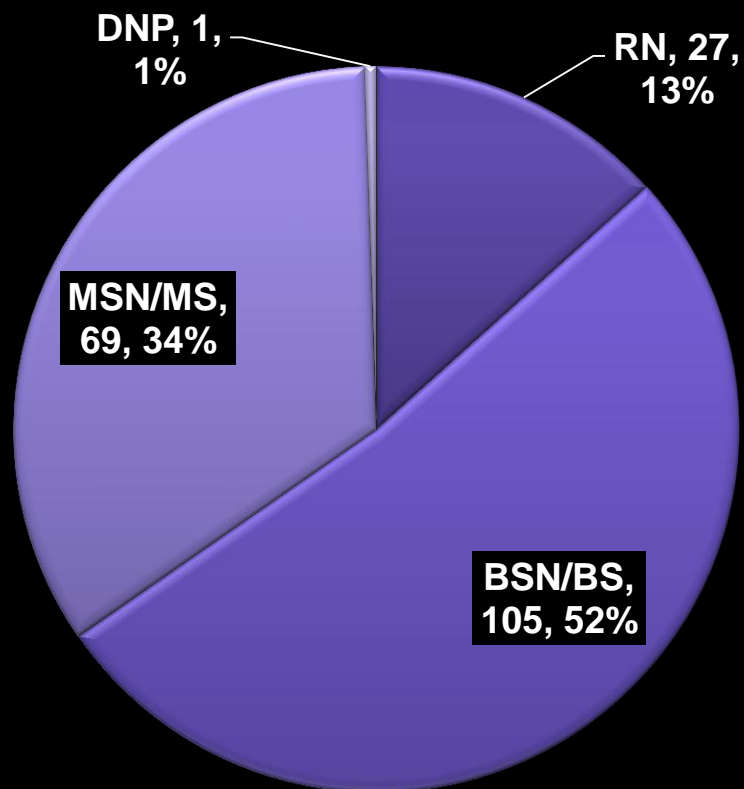


2012 - Unit Director Education

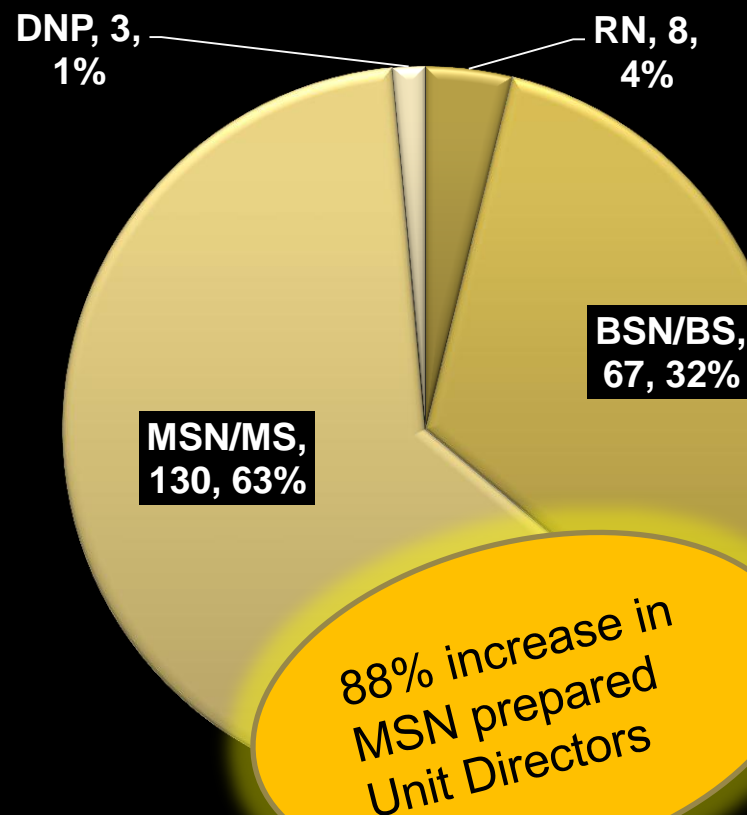


Unit Director: Educational Preparation

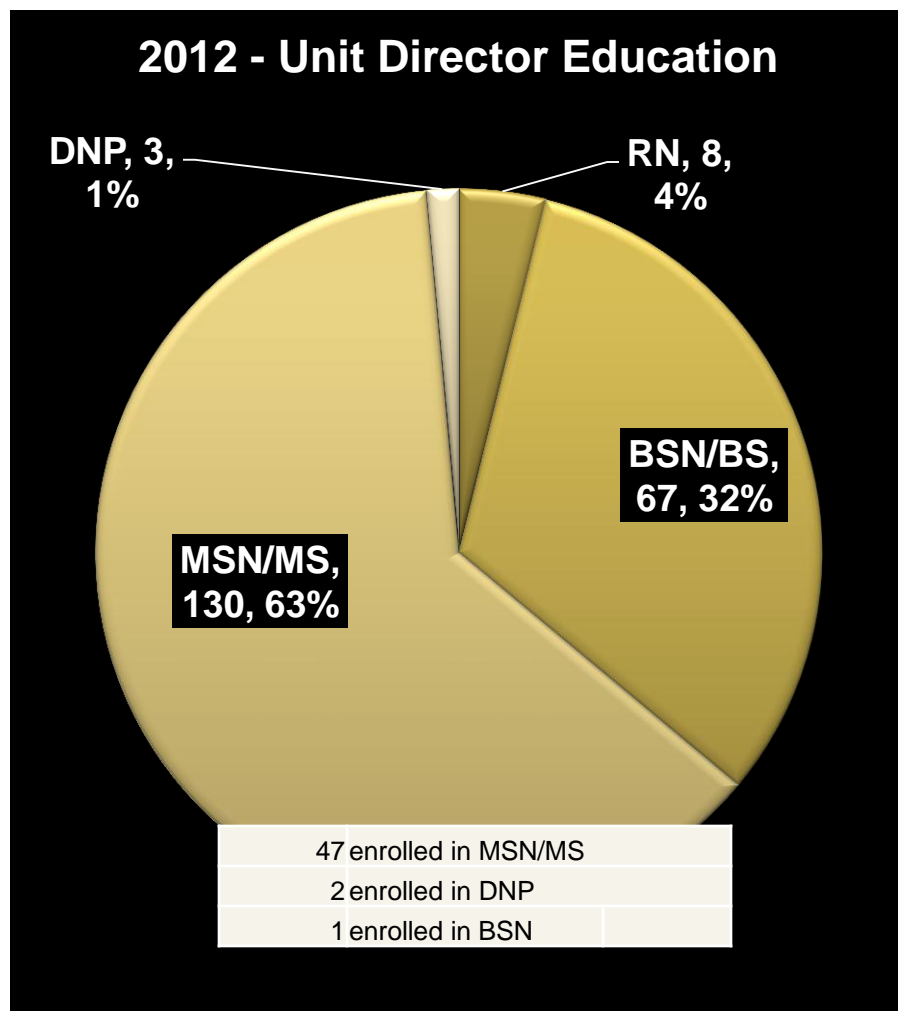
2008 - Unit Director Education



2012 - Unit Director Education



Changes to UD Educational Preparation

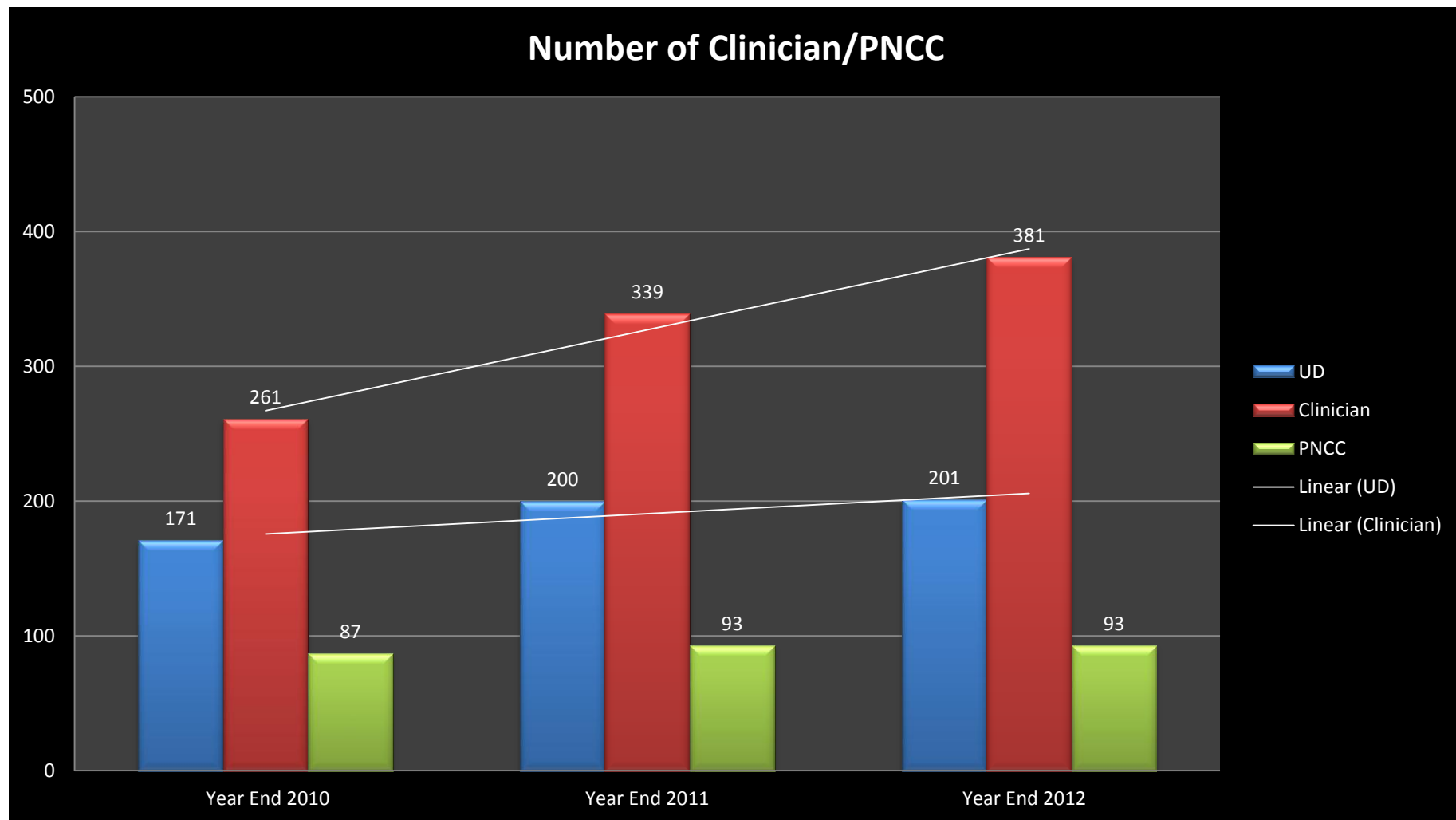


- 70% decrease in non-degree
- 36% decrease in BSN only
- 88% increase in MSN/MS
- 200% increase in DNP

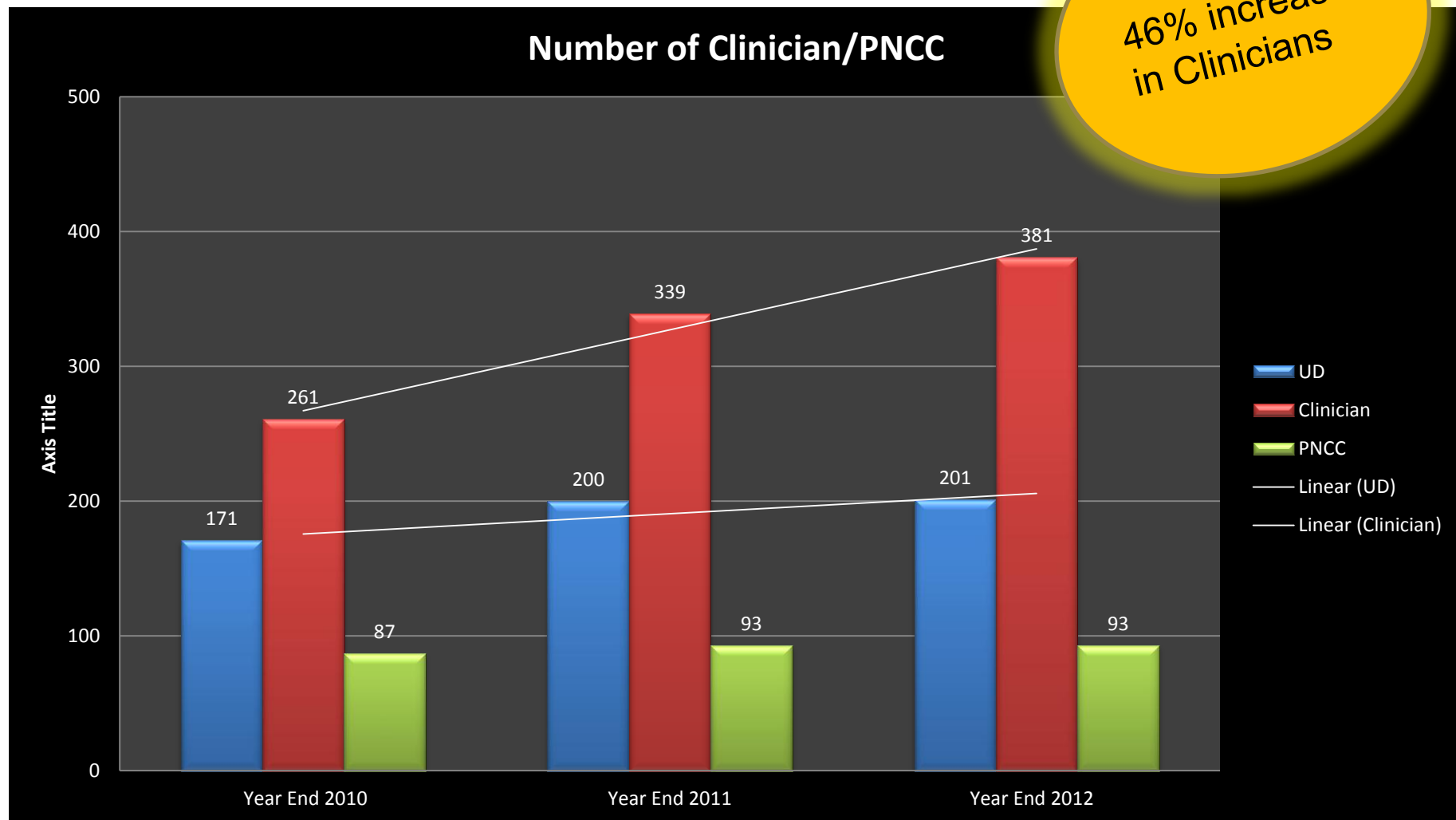
2012, Enrolled in programs:

- 1 in a BSN Program
- 47 in a MSN/MS Program
- 2 in a DNP Program

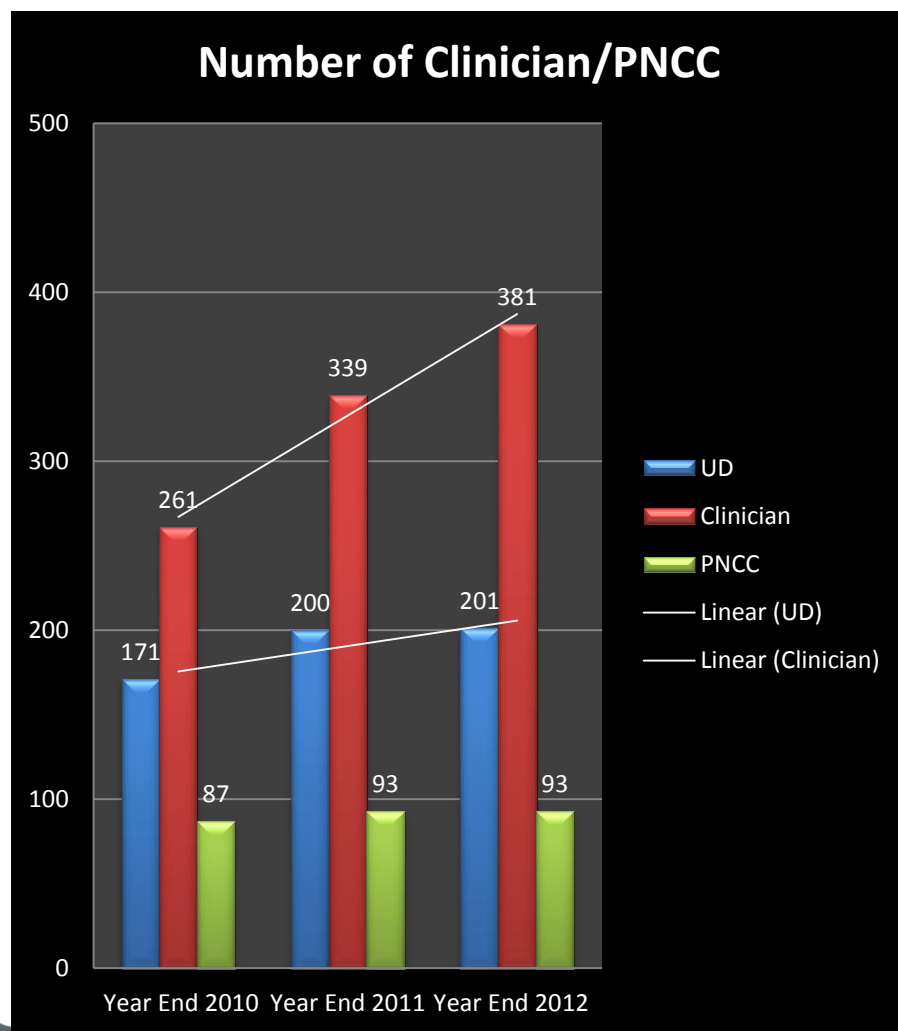
Clinician and PNCC Support



Clinician and PNCC Support



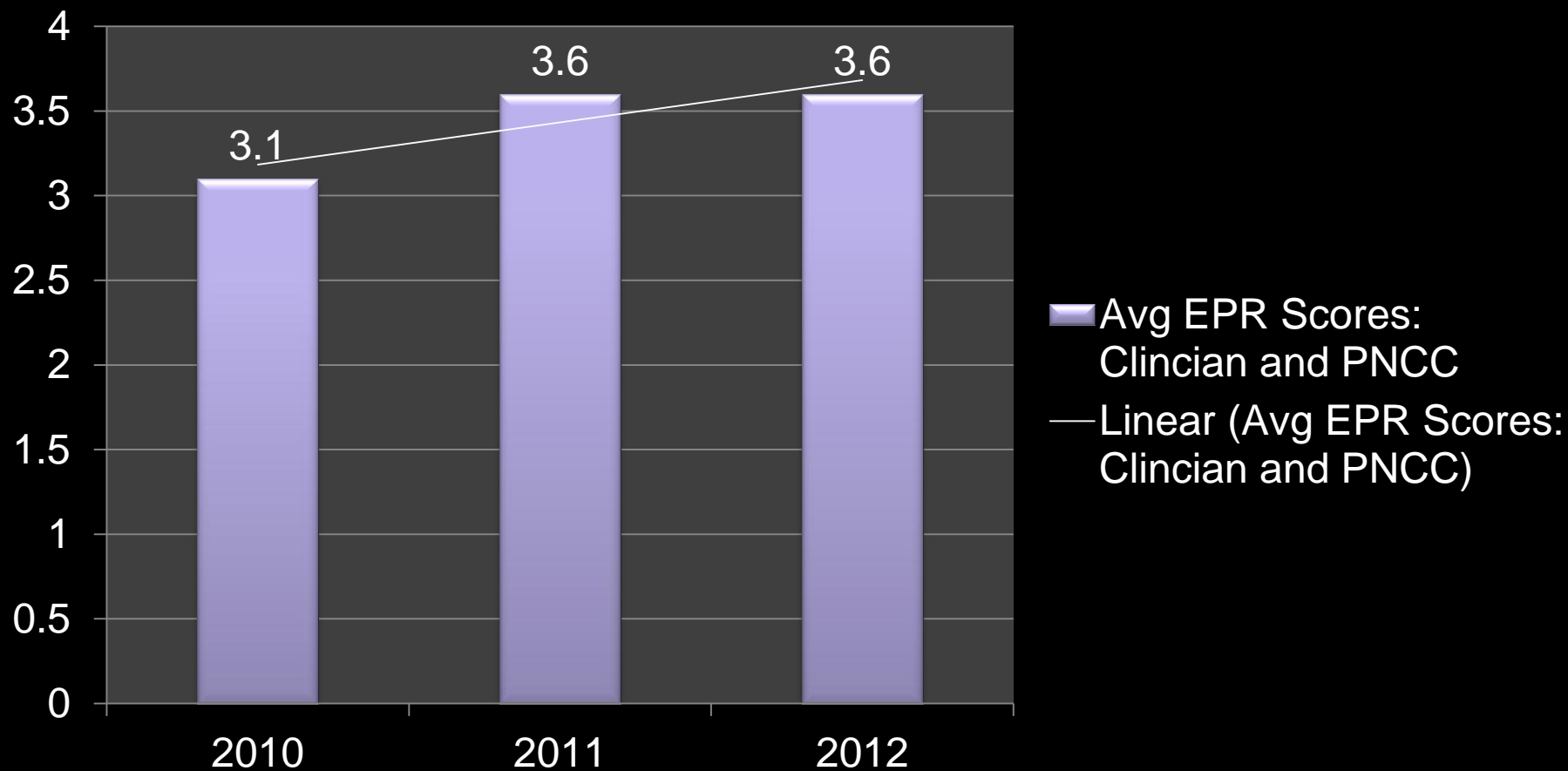
Clinician and PNCC Support



- UD's – flat
- PNCC – flat
- Number of Clinicians increased:
 - 2010 to 2011 – 30%
 - 2011 to 2012 – 12%
 - **2010 to 2012 – 46%**
- **Total UPMC Employees**
 - **2010 to 2012 – 19%**

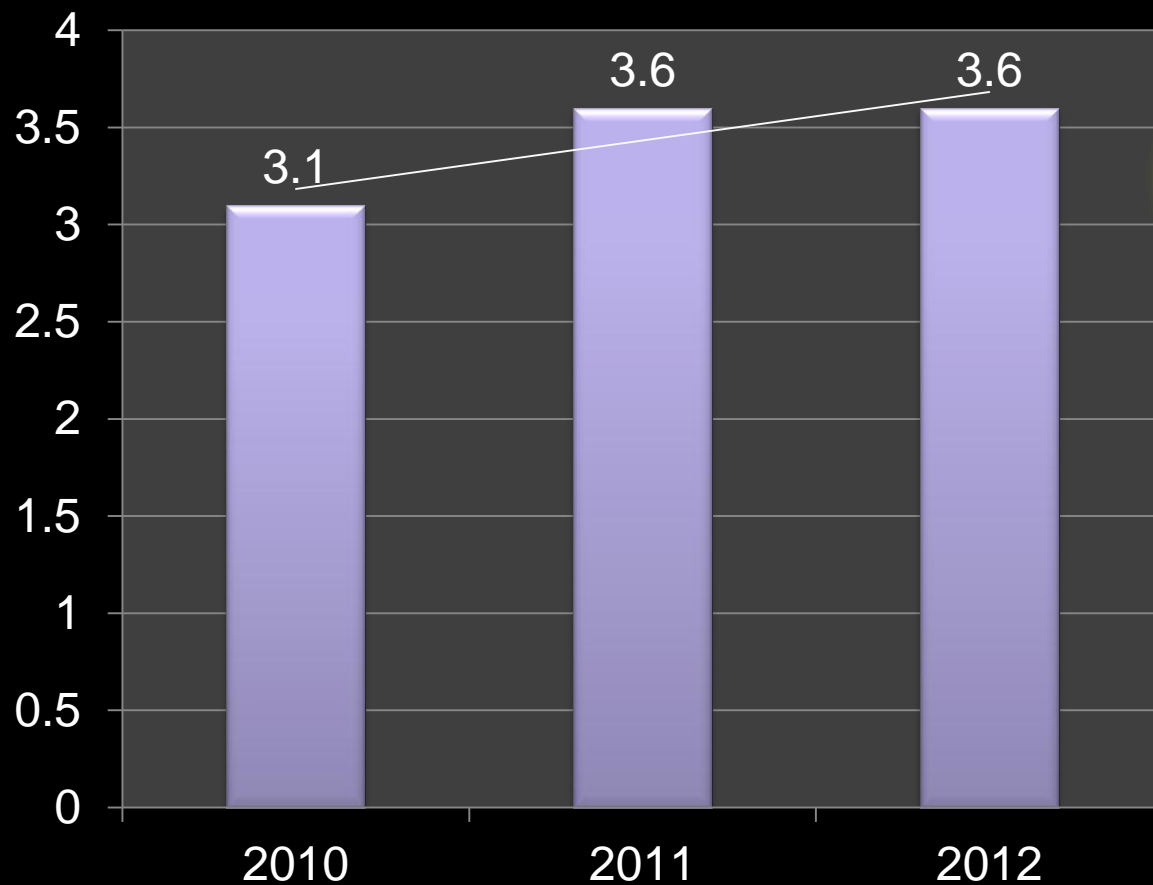
Clinician and PNCC Performance

Average EPR Scores: Clinician and PNCC



Clinician and PNCC Performance

Average EPR Scores: Clinician and PNCC

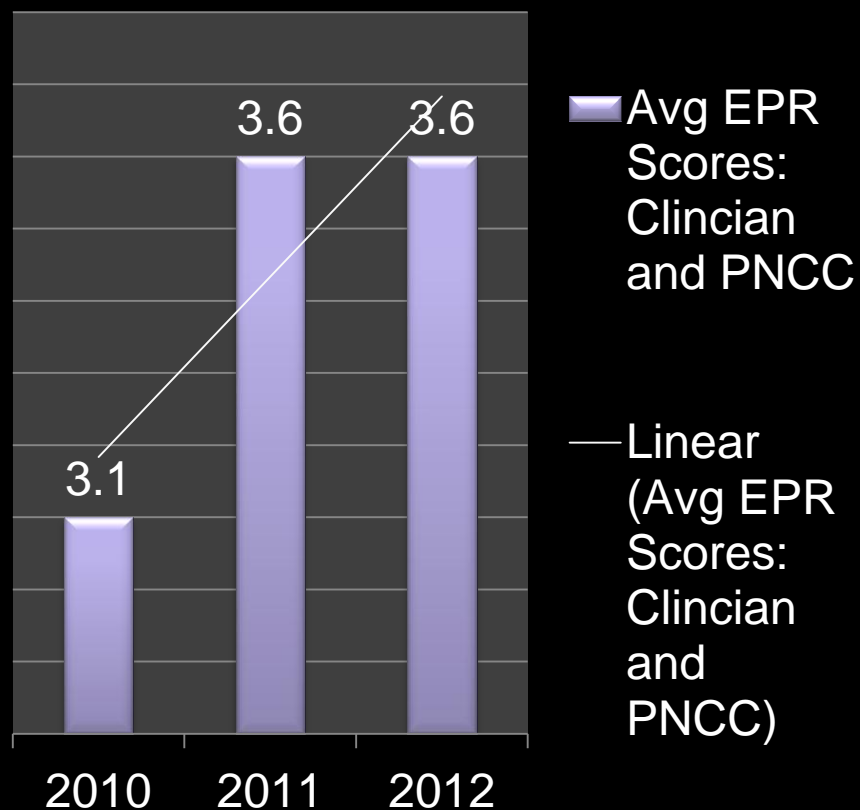


16% improvement
in Average EPR
Score

- Avg EPR Scores: Clinician and PNCC
- Linear (Avg EPR Scores: Clinician and PNCC)

Clinician and PNCC Performance

Average EPR Scores: Clinician and PNCC



Identified Roles as critical to Unit Director Success

- Refocused Role Purpose
- Unit Director Course
- Talent Management Review (TMR)
- 16% increase in performance translates to better support for the Unit Director

Questions



References

- Burke, R & Friedman, L. H, (2011) Essentials of Management and Leadership in Public Health, Sudbury, MO: Jones & Bartlett Publishers
- Hindle,T. (2009), Span of Control, *The Economist*, London: The Economist Newspaper Limited
- Morash, Brintnell & Lemire (2005) A Span of Control Tool for Clinical Managers, *Nursing Leadership*, (18) 3 p. 83- 93.
- Advisory Board Company, (2008) Benchmarking Nursing Organizational Structure.