Why It Matters:

The Power of Data Visualization and Storytelling in Health Care

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Associate Chief Nursing Officer

PRESS GANEY

First……

Why Are We Here?

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Our Dilemma and Our Challenge

4

Lost in the Data and Missing the Point…

> 10,000

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What We Don't Want to Do Today

Repeat

Miss the point

Bore

Fail to connect

What We Do Want to Do Today

Educate

Bridge the gap between data and story

Inspire

Take away at least one new actionable idea

Relevance: AACN Masters Essentials

Masters Essential II:: Organizational and Systems Leadership

Master's Essential III: Quality Improvement & Safety

Masters Essentials IV: Translating and Integrating Scholarship into Practice

Next…..

Story Telling

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Let me tell you a story….

"The importance of storytelling as the foundation of human experiences cannot be overestimated. The oral traditions focus upon educating and transmitting knowledge and skills and also evolved into one of the earliest methods of communicating scientific discoveries and developments."
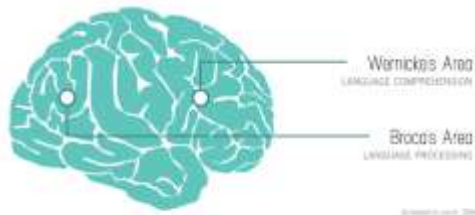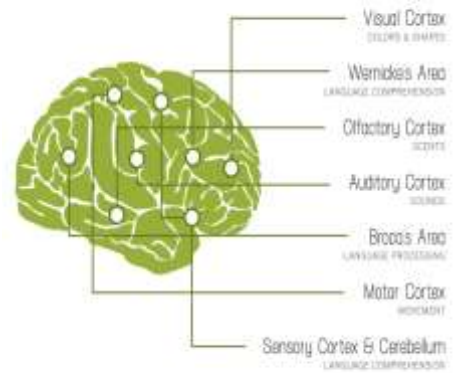
Haigh & Hardy, 2010

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The Science

YOUR BRAIN ON DATA

Wernicke's Area
LANGUAGE COMPREHENSION

Broca's Area
LANGUAGE PROCESSING

YOUR BRAIN ON STORIES

Visual Cortex
COLORS & SHAPES

Wernicke's Area
LANGUAGE COMPREHENSION

Olfactory Cortex
SCENTS

Auditory Cortex
SOUNDS

Broca's Area
LANGUAGE PROCESSING

Motor Cortex
MOVEMENT

Sensory Cortex & Cerebellum
LANGUAGE COMPREHENSION

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People

Retain 10% of what they hear

Retain 20% of what they read

Retain 80% of what they see

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Visual Processing

90% of information transmitted to the brain is visual

40% of people respond better to visuals

50% of your brain is active in visual processing

70% of sensory receptors are in the eyes

Processing of Visual vs. Text Information

60,000 X Faster

Five Elements of a Good Story

- Passion
- Hero
- Antagonist
- Challenge
- Transformation

Truth and Authenticity

Using Stories to Engage People

- Emotion
- Action
- Value
- Memory

Influencing to Achieve Good Things

Storytelling in Education and Healthcare

- Re-engage participants to focus on core skills and attitudes
- Promote a sense of belonging
- Promotes interaction with other health care professionals
- Reduces feelings of isolation
- Promotes empathy and compassion
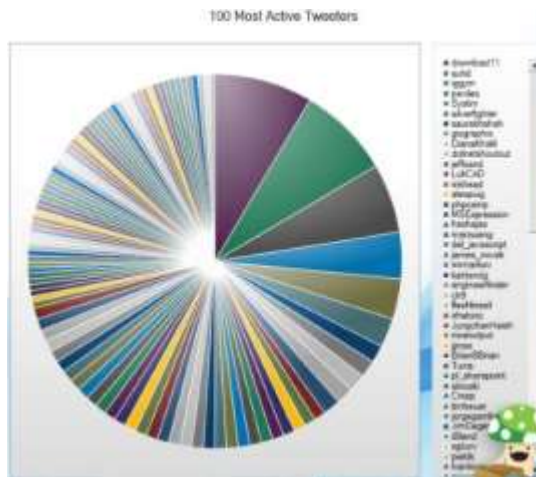

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Now…

Data Visualization:
The Good, the Bad
and the Ugly
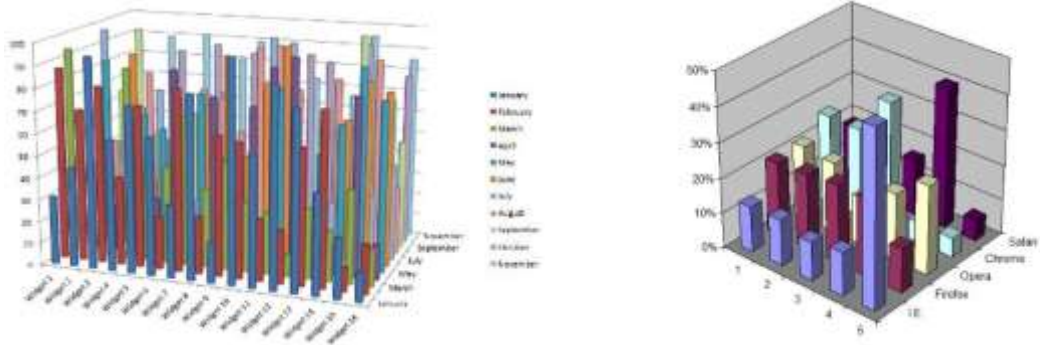
Psychedelic
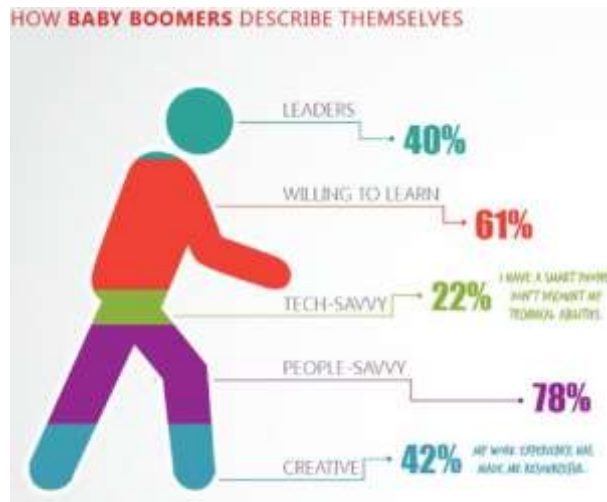
3-D Nightmare

Hot Mess

HOW **BABY BOOMERS** DESCRIBE THEMSELVES

LEADERS → 40%

WILLING TO LEARN → 61%

TECH-SAVVY 22%

PEOPLE-SAVVY → 78%

CREATIVE 42%

The Ubiquitous Pie Chart

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And…

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Provide Meaningful Content

Forest area, 2015
(millions of square kilometers)

Change since 1990
(%)

Russian Federation
Brazil
Canada
United States
China
Congo, Dem. Rep.
Australia
Indonesia
Peru
India
Rest of the world

0   5   10   -25   0   25

Source: Food and Agriculture Organization; World Development Indicators database (AG.LND.FRST.K2).
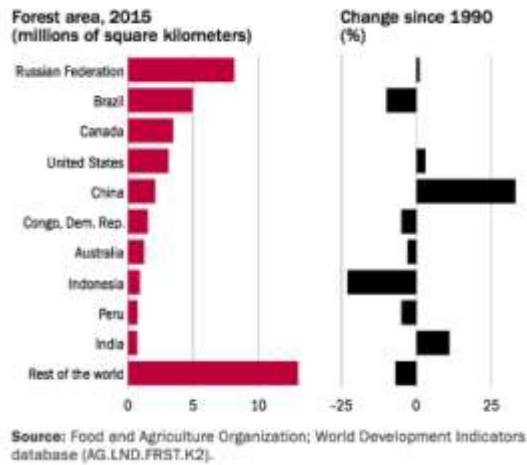
Choose the Right Chart

Visualization Purpose	Description	Recommended Chart Type	
Comparisons	You are trying to compare different values in your data set for e.g. which channel brought you the most traffic?	Bar Chart, Column Chart, Line Chart	
Trends	You are trying to plot the trends in your data set for e.g. has our summer campaign increased sales in the last six months	Line Chart, Column Chart	
Correlations	You are trying to map relationships between variables e.g. Ad spend and number of visits	Scatter Plot	
Part-to-Whole	You need to show the device breakdown of your site visitors. Think Pie Chart	Pie Chart	
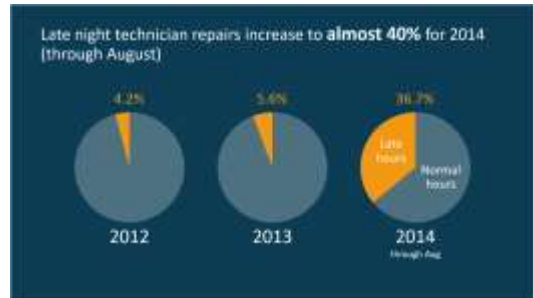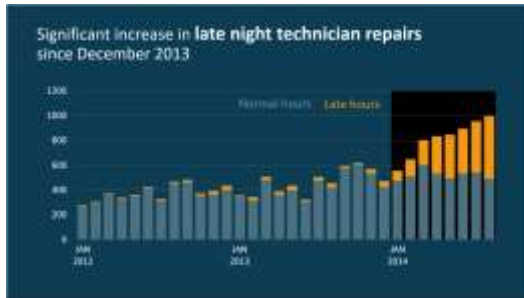
Less is More

Sort Your Data

https://www.e-nor.com/blog/data-visualization/makes-good-visualization

Identify the Relationships

U.S. rural and urban poverty and unemployment rates, 2000-16

Poverty and unemployment rate (percent)

Note: Rural/urban determined by nonmetro/metro status as defined by the Office of Management and Budget. Gray vertical bars indicate recessions.
Source: USDA, Economic Research Service using data from U.S. Census Bureau (poverty) and Bureau of Labor Statistics (employment).
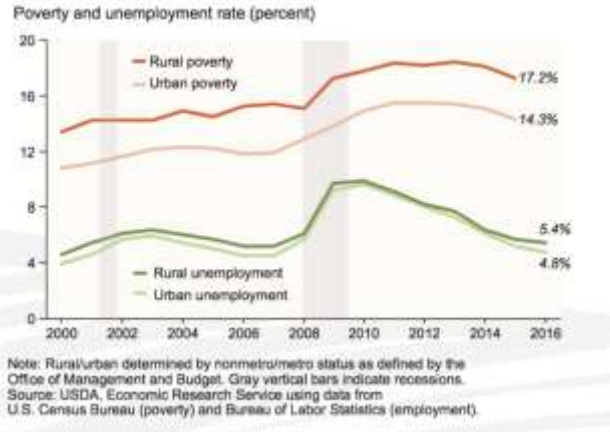
Accurate Scaling
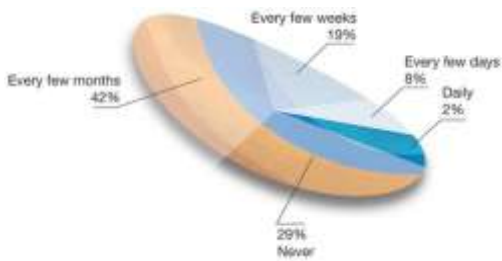
REVENUE VS. RATING
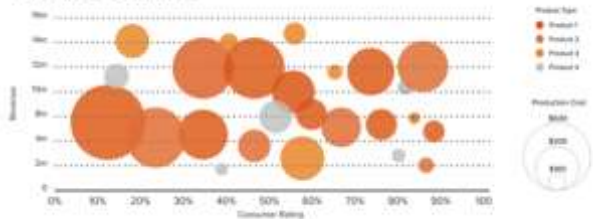
Color

Median usual weekly earnings of women and men who are full-time wage and salary workers, by age, 2014 annual averages

Ensure That All Have Access

8% of men and 0.5% of women are color blind

Difficulty distinguishing red and green

Consider using other colors or labeling to accommodate
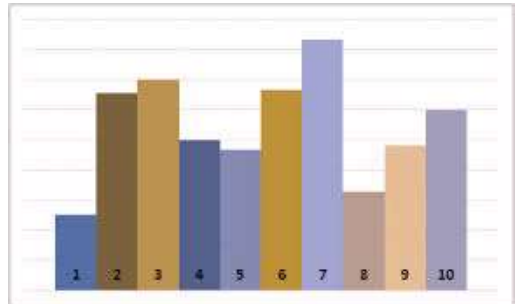
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The Bridge…

Compassionate
Connected
Care

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Measuring What Matters
to Improve the
Patient Experience

What Do Patients Really Value?
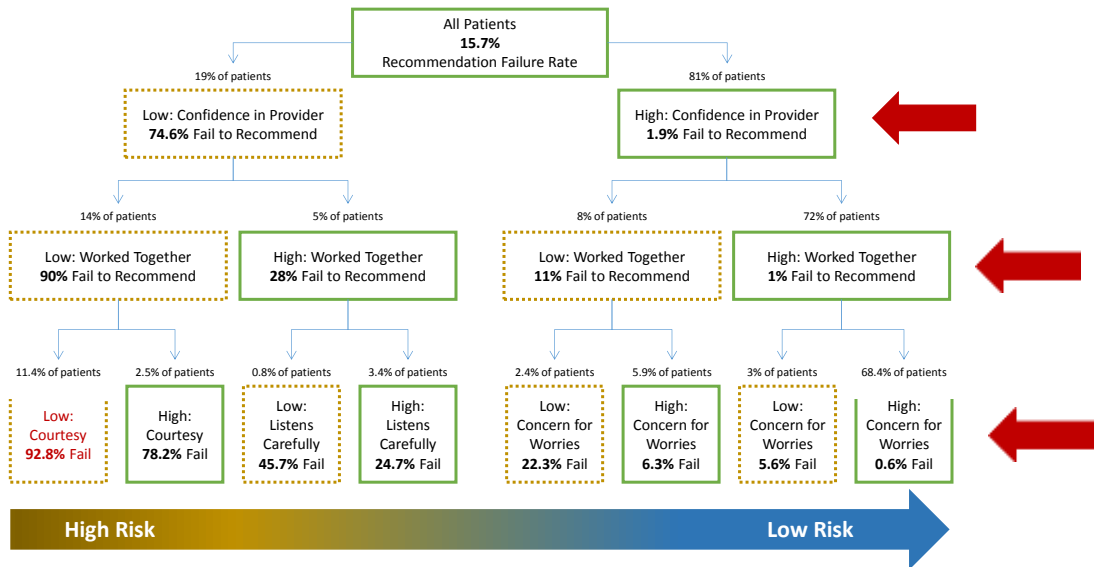
What Do Patients Really Value?

81% are likely to recommend if they have high confidence in the provider

72% are likely to recommend if they believe the team is working well together to provide care

68% are likely to recommend if the provider demonstrates concern for their worries

Drivers of Likelihood to Recommend - Inpatient

Inpatient (HCAHPS) Recommend – LTR Within Service Line
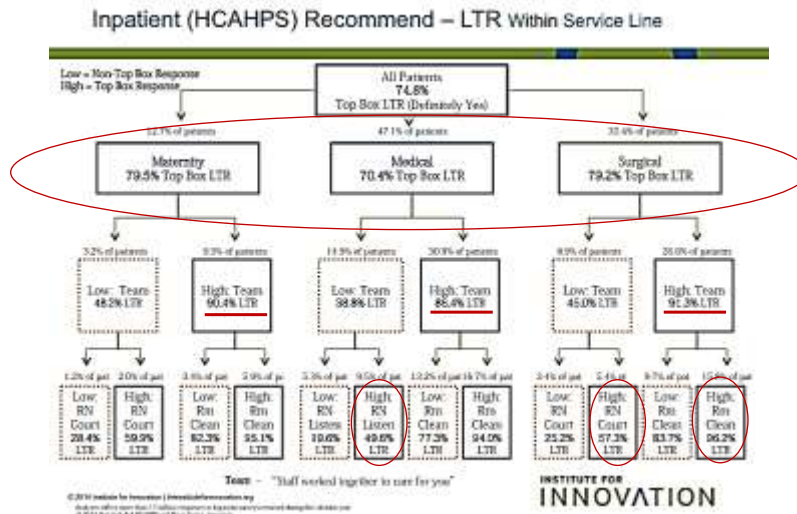
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Drivers of Likelihood to Recommend in the Hospital

1. Teamwork

2. Room Cleanliness

3. Courtesy and respect

4. Listened carefully to you

Bedside Shift Report

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How Patients Experience Care

Caring Behaviors — Empathy, Courtesy, Privacy, Inform, Choice, Personalize, Service Recovery

Clinical Excellence — Discharge Prep, Clinical Skill, Pain Control

Operational Efficiency — Environment, Wait, Amenities

Culture — Teamwork

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Compassionate Connected Care ™ Themes

- Acknowledge Suffering
  We should acknowledge that our patients are suffering, and show them that we understand.
- Body Language Matters
  Non-verbal communication skills are as important as the words we use.
- Anxiety is Suffering
  Anxiety and uncertainty are negative outcomes that must be addressed.
- Coordinate Care
  We should show patients that their care is coordinated and continuous, and that "we" are always there for them.
- Autonomy Reduces Suffering
  Autonomy helps preserve dignity for patients
- Caring Transcends Diagnosis
  Real caring goes beyond delivery of medical interventions to the patient

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56 seconds

The Masters Prepared Nurse

"As a practice discipline, clinical care is the core business of nursing practice whether the graduate is focused on the provision of care to individuals, population-focused care,

administration, informatics, education or health policy. Master's nursing education

prepares graduates to implement safe, quality care in a variety of settings and roles."

"Establish therapeutic relationships to negotiate patient-centered, culturally

appropriate, evidence-based goals and modalities of care."

Higher Patient Experience Reliability Scores Link to Higher Quality
(quintiles of performance)

Readmission Rate by Patient Experience Reliability Score Ranking

Average Length of Stay by Patient Experience Reliability Score Ranking

CLABSI by Patient Experience Reliability Score Ranking

PSI-90 Rate by Patient Experience Reliability Score Ranking

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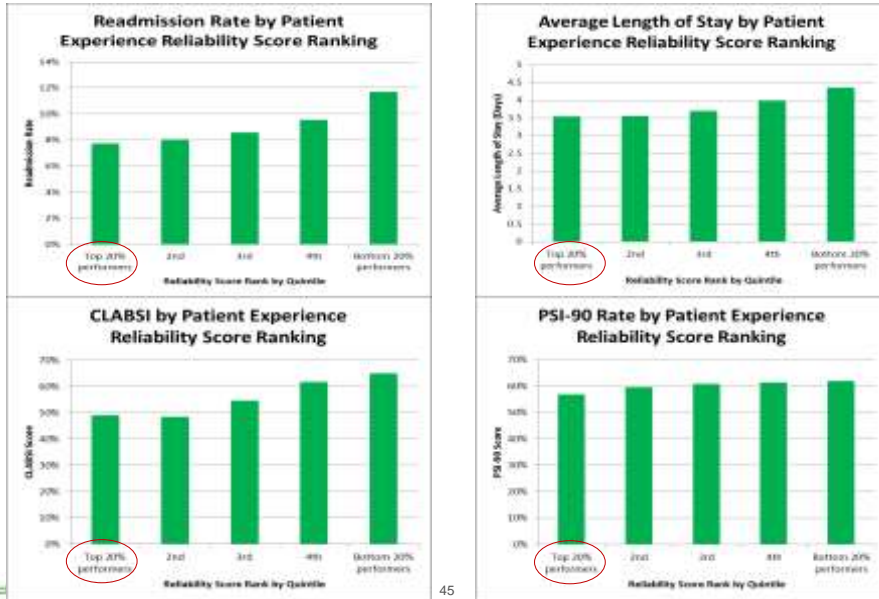
What is Correlated with Likelihood to Recommend?

		Correlation to Likelihood to Recommend
Personalized Care	Staff cared about you as a person	0.79
Information	Kept informed about delays	0.72
Pain Control	Pain controlled	0.72
Empathy	Doctor's concern for your comfort	0.72
	Doctor kept you informed	0.71
	Staff kept family/friends informed	0.71
	Nurses' kept you informed	0.71
	Information re self care at home	0.71
Discharge Prep	Nurses' attention to your needs	0.70
	Doctor listened to you	0.69
	Courtesy toward family or friends	0.69
	Nurses listened to you	0.68
	Courtesy of the doctor	0.68
	Wait in treatment area to see doctor	0.66
	Courtesy of the nurses	0.65
	Nurses' concern for your privacy	0.63
	Allow family/friend to be with you	0.62
	Waiting time pre treatment area	0.58
	Helpfulness person first asked re condition	0.58
	Comfort of the waiting area	0.57
	Concern for comfort blood draw	0.53
	Courtesy person took blood	0.53
	Wait for radiology	0.53
	Privacy re personal/insur info	0.52
	Ease giving personal/insur info	0.52
	Courtesy person re personal/insur info	0.51
	Waiting staff noticed your arrival	0.51
	Concern for comfort during tests	0.50
	Courtesy of radiology staff	0.48

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Top 10 Drivers Correlated with Likelihood to Recommend

Personalized Care and Empathy	Staff cared about you as a person ★ Doctors listened to you Nurses listened to you Nurses attention to your needs Doctor's concern for your comfort
Information	Kept informed about delays Doctor kept you informed Staff kept family and friends informed Nurses kept you informed
Pain Control	Pain control
Discharge Prep	Information re self-care at home

Caregivers

How Caregivers Experience Care

Cared About

Belong **Respect**

Enjoy Work **Trust**

Recognition **Job Security**

Connected

Providing Quality Care

Providing Safe Care

Clinical Excellence

Operational Excellence

Job Fit, Clarity, Pay/Benefits
Work Training, Development
Physical/Staff Resources
Good Management
Input, Feedback, Autonomy
Leadership
Communication

Culture

Mission/Values   Teamwork
Patient-Centeredness   Improvement Focus   Safety as a Priority

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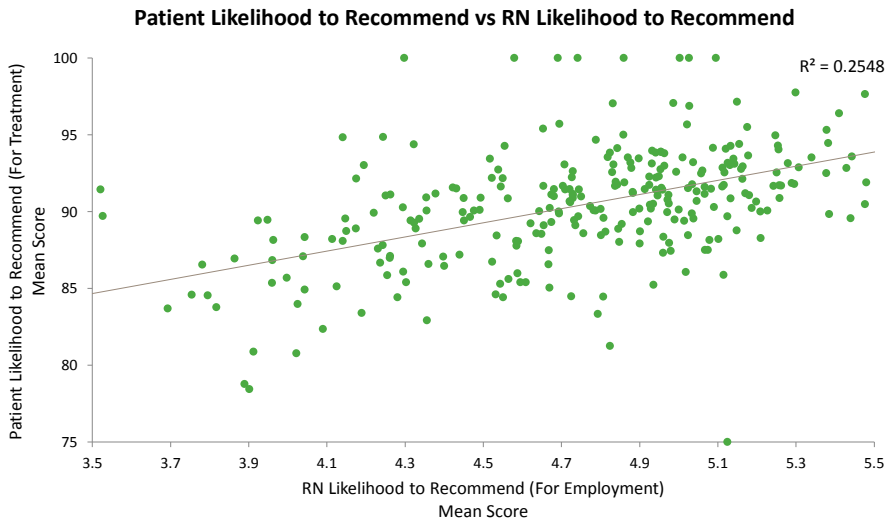

Compassionate Connected Care ™ for the CareGiver

- We should **acknowledge** the complexity and gravity of the work provided by caregivers

- It is the responsibility of management to provide **support** in the form of material, human, and emotional resources

- **Teamwork** is a vital component for success

- **Empathy** and **trust** must be fostered and modeled

- Caregivers' perception of a positive **work/life balance** reduces compassion fatigue

- **Communication** at all levels is foundational

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Patient Loyalty and Nurse Loyalty Are in Sync

Patient Likelihood to Recommend vs RN Likelihood to Recommend

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Nurse Job Enjoyment Is Related to Patient Loyalty
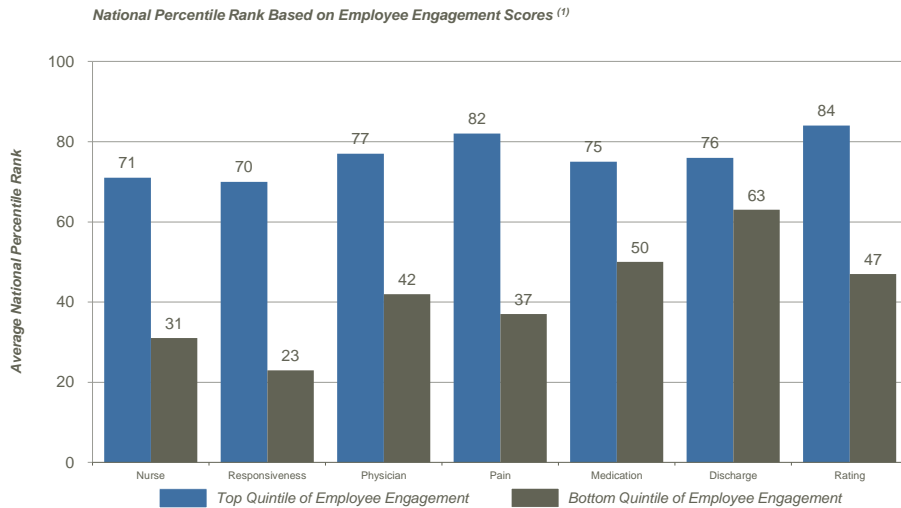

Patient Likelihood to Recommend vs RN Job Enjoyment

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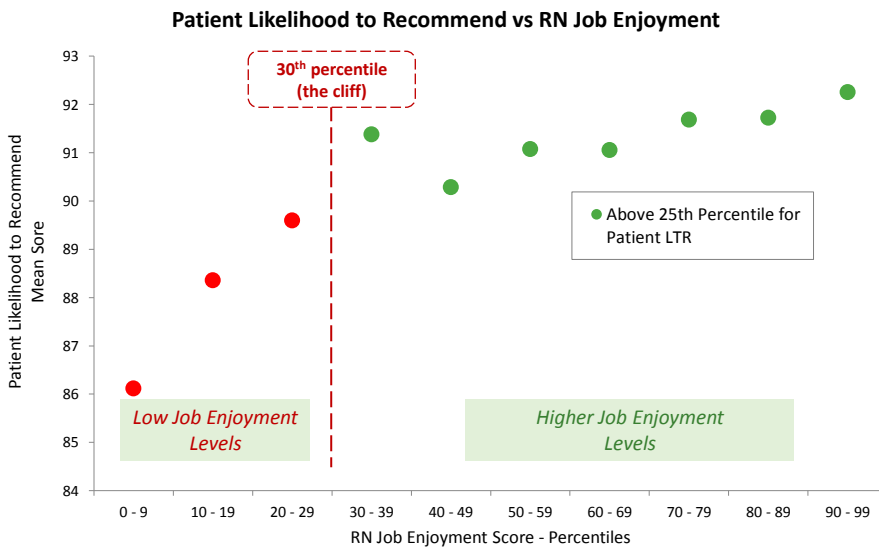
Relationship Between Engagement and Experience

National Percentile Rank Based on Employee Engagement Scores [1]

Chart data — Average National Percentile Rank:

Category	Top Quintile of Employee Engagement	Bottom Quintile of Employee Engagement
Nurse	71	31
Responsiveness	70	23
Physician	77	42
Pain	82	37
Medication	75	50
Discharge	76	63
Rating	84	47

■ Top Quintile of Employee Engagement   ■ Bottom Quintile of Employee Engagement

1. Based on Engagement data from 36 projects, year 2014. HCAHPS data from 2014 PG Database.   *Created by Healthcare Metrics Team.*

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Remember the Patient

- Remember: your patient is **scared**

- Remember: your patient has **lost** almost all control

- Remember: they **hurt** and they are the ONLY judge that matters

- Remember: YOU are likely their only means of **information**

- Remember: they need **compassion**

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…*and* the CareGiver

- Remember: caregivers are **working hard**
- Remember: they are members of a **team**
- Remember: they need **information**
- Remember: they need **resources**
- Remember: they need **compassion**

This is Why it Matters

Thank You!

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