

Nursing Safety Minutes

Incompetence

Your Worst Performers (Bottom 10%) Think They are Very Good (Top 40%)

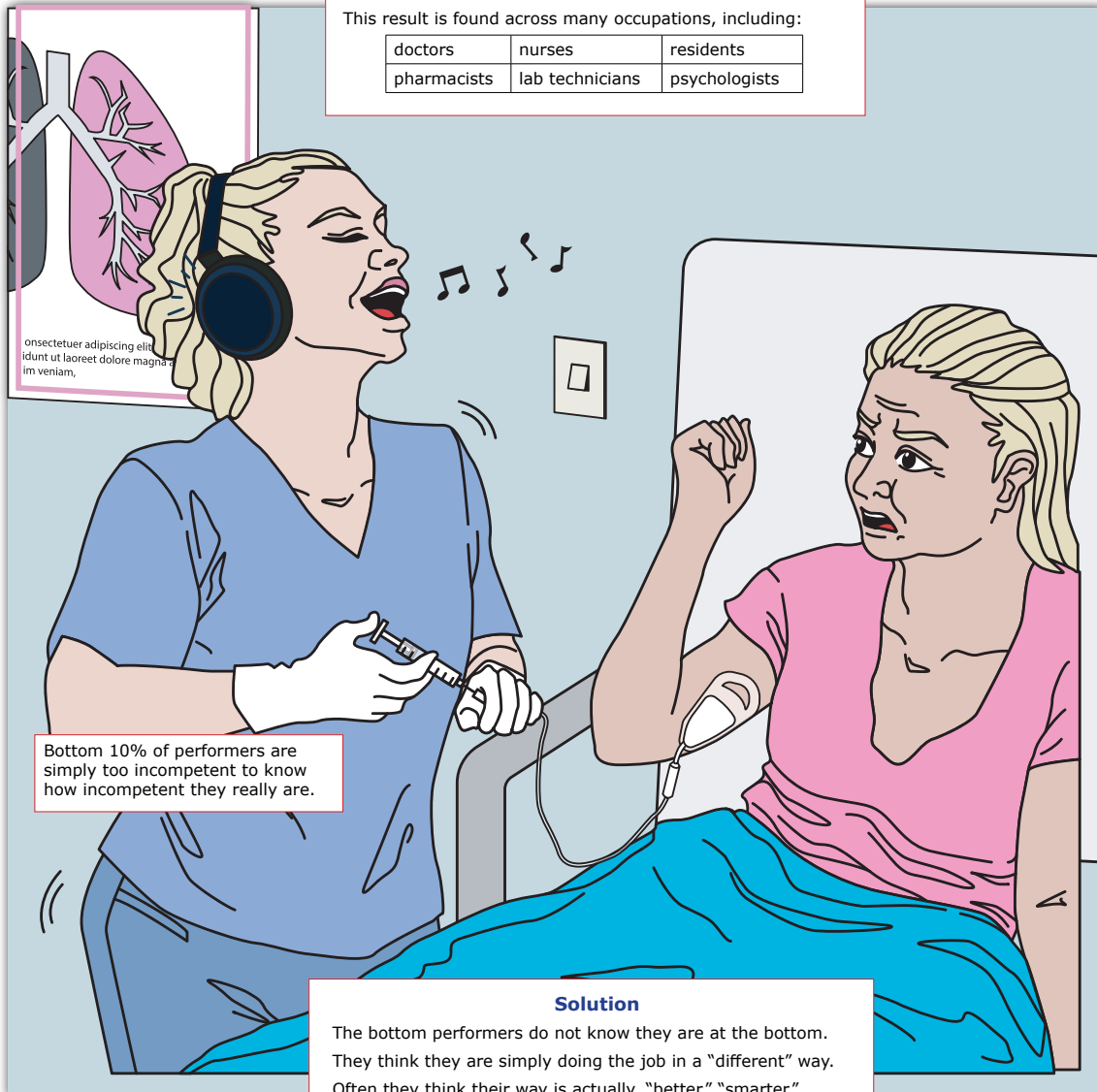
The Problem

More than 20 years of research into incompetence shows:

- Bottom 10% of performers think they are in the top 40%.
- This is called the "Dunning-Kruger Effect"

This result is found across many occupations, including:

doctors	nurses	residents
pharmacists	lab technicians	psychologists



Bottom 10% of performers are simply too incompetent to know how incompetent they really are.

Solution

The bottom performers do not know they are at the bottom. They think they are simply doing the job in a "different" way. Often they think their way is actually, "better," "smarter," "faster," "easier."

The only solution is confronting them with facts. Showing them they are not "different;" they are "incompetent."

Weekly Safety Minute So Your Nurses Can Do Better Safety Meetings

Nursing Safety Minutes

Giving Nurses What They Need
To Do Good Safety Talks

Sample

Shift Handover

Outgoing Nurses Hold the Power to Improve

Shift Handover

Outgoing Nurses Hold the Power to Improve

Transferring Information

Best Handovers Have Two Parts¹

Transferring:

1. Patient's medical information
2. Responsibility for patient's welfare

Equally Important to Patient Safety²

Transferring "responsibility" has an equal effect on patient safety as transferring "medical information."

Transferring "Responsibility" Means³:

- telling reasons for decisions
- warnings about problems
- giving advice
- creating a "shared mental model" of the patient
 - encouraging incoming nurse to "see" the patient the same way as outgoing nurse



Outgoing Nurse Sets Tone⁴

When outgoing nurses communicate only medical information, incoming nurses show "indifference" and "non-attentiveness" during the handover.

Bad Handovers Cause⁵:

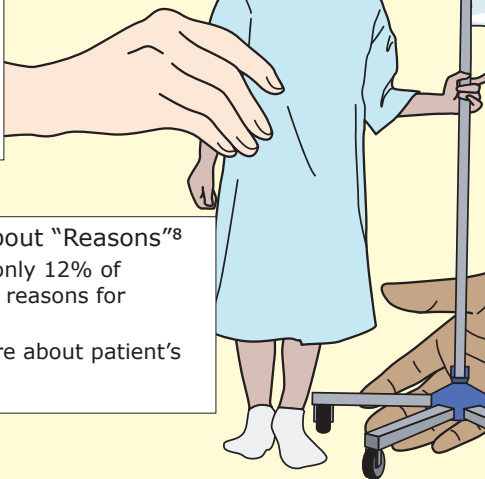
- 35% of sentinel events
- 28% of surgical errors
- 24% of malpractice claims

Transferring Responsibility

Power of Personality⁶

During handover, some outgoing nurses know how to make incoming nurses "feel" responsible for the patient.

Some outgoing nurses succeed in transferring "concern" regardless of the particular incoming nurse.



Huge Imbalance in Questions⁷

Incoming nurses ask 10 times more questions than outgoing nurses. Should be closer to 50/50.

Too Little Talking About "Reasons"⁸

During handovers, only 12% of questions are about reasons for treatments.

47% of questions are about patient's current condition.

Standardized Handover Programs Have Mixed Results⁹

Roughly half these programs lead to better handovers.

Standardized handover programs seem to neither help or hurt the transfer of "responsibility."

Programs include: SBAR, SHARE, PSYCH

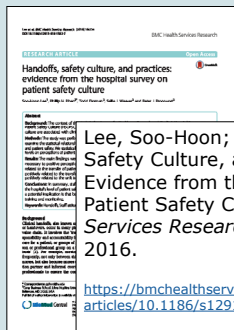
Air Traffic Controllers¹⁰

50% of serious errors happen in the first 30 minutes after a handover between controllers.

Why? Researchers found outgoing controllers did not adequately communicate their worries and concerns to incoming controllers.

References

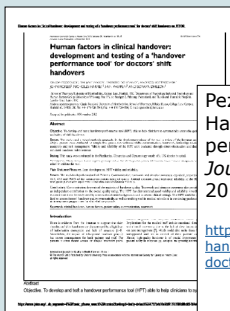
Shift Handover: Outgoing Nurses Hold the Power to Improve



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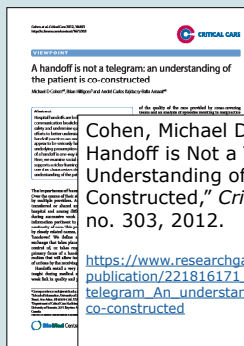
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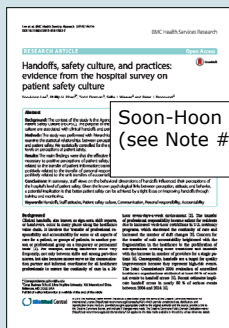
https://www.researchgate.net/publication/233878897_Human_factors_in_clinical_handover_Development_and_testing_of_a_'handover_performance_tool'_for_doctors'_shift_handovers



3

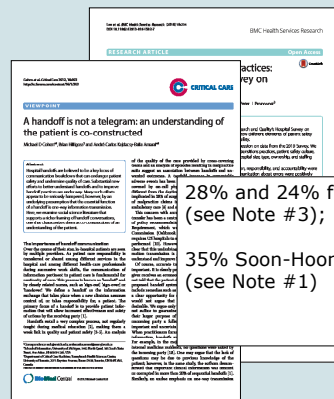
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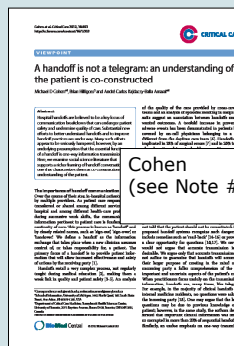
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Soon-Hoon (see Note #1)



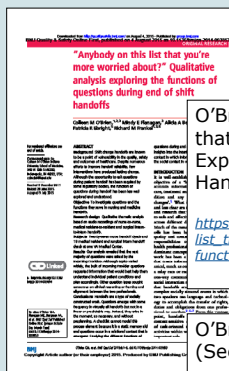
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28% and 24% from Cohen (see Note #3);
35% Soon-Hoon (see Note #1)



6

Cohen (see Note #3)



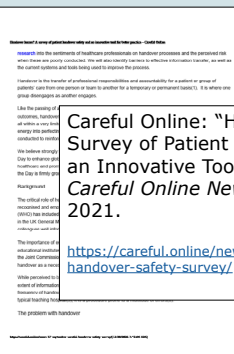
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O'Brien, Colleen M.; et. al.: "Anybody on This List that You're More Worried About? Qualitative Analysis Exploring the Functions of Questions During End of Shift Handoffs," *BMJ Quality & Safety*, 2015, p. 1-8.

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O'Brien (See Note 7)

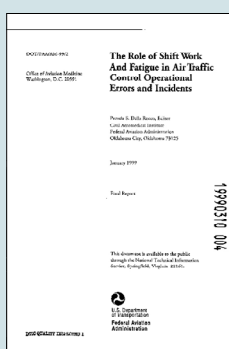
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9

Careful Online: "Handover Harms? A Survey of Patient Handover Safety and an Innovative Tool for Better Practice," *Careful Online News*, November 28, 2021.

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Nursing Safety Minutes

Giving Nurses What They Need
To Do Good Safety Talks

Sample **Handwashing: The Dark Side**

Handwashing: The Dark Side

1

Doctors Worse Than Nurses

Nurses more likely to wash hands than physicians.

WHO study found nurse compliance at 55% with MD compliance at 44%.

2

Biggest Motivator for Handwashing is Personal Protection—Not Patient Safety

Nurses more likely to wash hands after treating a patient than before.

Most frequently used hand sanitizers are near exit doors.

Handwashing does not increase as the number of patients in a unit increases.



3

Handwashing Campaigns Lack Long-Term Effects

Most campaigns show immediate improvements (raising compliance to over 60%) but, after the campaign, compliance returns to a baseline level of 40%.

4

Non-Washers are Mostly the Same People

Failing to wash hands is not spread evenly across the workforce.

Some healthcare workers almost always wash their hands.

Some healthcare workers consistently do not.

For both groups the behavior is consistent over time.

What Works?

Highest rates of handwashing compliance are found among healthcare workers who:

- Report to a person consistently washing hands themselves
- Report to a person requiring handwashing from everyone on his or her team
- Feel "peer pressure" to wash hands

"Role modeling" and "peer pressure" influence handwashing more than patient safety.

References

Handwashing: The Dark Side

1 Doctors Worse Than Nurses

Research details:

- Researchers studied WHO intervention program for improved hand hygiene in five countries: Costa Rica, Italy, Mali, Pakistan, Saudi Arabia
- Trained observers watched healthcare workers for numerous 20-minute observation periods
- Total 21,884 hand-hygiene opportunities observed
- Before the WHO campaign, nurses were complying 55% of the time, doctors 44% of the time;
- After the WHO campaign, nurses were complying 72% of the time, doctors 60%

Allegranzi, Benedetta, et. al.: "Global Implementation of WHO's Multimodal Strategy for Improvement of Hand Hygiene: a Quasi-experimental Study," *Lancet Infectious Diseases*, vol. 13, 2013, p. 843-851

[http://dx.doi.org/10.1016/S1473-3099\(13\)70163-4](http://dx.doi.org/10.1016/S1473-3099(13)70163-4)



2 Biggest Motivator for Handwashing is Personal Protection—Not Patient Safety

Research details:

- Researchers studied why healthcare workers do and do not wash hands
- interviews: 65 nurses, attending physicians, medical residents, and medical students
- 5 hospitals (intensive care units and surgical departments) in The Netherlands



Interviews showed personal protection was a larger motivator than patient safety.

Erasmus, V., et. al.: "A Qualitative Exploration of Reasons for Poor Hand Hygiene Among Hospital Workers Lack of Positive Role Models and of Convincing Evidence That Hand Hygiene Prevents Cross-Infection," *Infection Control & Hospital Epidemiology*, vol. 30, no. 5, May 2009, p. 415-419.

<https://doi.org/10.1086/596773>

3 Handwashing Campaigns Lack Long-Term Effects

Research details

Researchers studied handwashing behavior in an unnamed surgical department

- Long study: January 2019 to December 2020
- Participants: 19 doctors; 53 nurses
- Electronic sensors were placed on doctors/nurses existing name tags
- sensors placed on handwashing stations
- sensors placed on patients' beds
- sensors detected handwashing opportunities and actual handwashing events
- During the intervention handwashing data was discussed in biweekly staff meetings; results also posted on bulletin boards

Results:

- during the intervention handwashing compliance (wearing monitors and biweekly meetings discussing results) was 58%
- after the intervention (wearing monitors but no biweekly meetings) compliance fell to 46%

Researchers returned to measure compliance during COVID-19 pandemic (wearing monitors during COVID, but no biweekly meetings) compliance fell to 34%.

Stangerup, Marie; et. al.: "Hand Hygiene Compliance of Healthcare Workers Before and During the COVID-19 Pandemic: A Long-term Follow-up Study," *American Journal of Infection Control*, vol. 49, no. 9, Sept 2021, p. 1118-1122.

<https://pubmed.ncbi.nlm.nih.gov/34182068>



4 Non-Washers are Mostly the Same People

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- sensors detected handwashing opportunities and actual handwashing events



Results:

Healthcare workers demonstrate consistent handwashing behavior over time.

Failing to wash hands is NOT spread evenly across workers.

Some workers consistently wash their hands, some consistently do not.

Iversen, Anne-Mette; et.al.: "Clinical Experiences with a New System for Automated Hand Hygiene Monitoring: A prospective Observational Study," *American Journal of Infection Control*, vol. 48, no. 5, May 2020, p. 527-533.

What Works?

Research details:

- Subjects were two critical care fellows and four nurse orientees
- Pediatric and cardiac intensive care units
- fellows and orientees were directly observed and handwashing was recorded

Results:

- baseline compliance with handwashing requirements was 22% (out of 200 handwashing opportunities)
- when fellow and orientees were assigned to attending physicians or nurse preceptors with strong requirements for handwashing, compliance went from 22% (baseline) to 56% of available opportunities.

Schneider, James; et.al.: "Hand Hygiene Adherence is Influenced by the Behavior of Role Models," *Pediatric Critical Care Medicine*, vol. 10, no. 3, May 2009, p. 360-363.

https://journals.lww.com/pccmjournal/Abstract/2009/05000/Hand_hygiene_adherence_is_influenced_by_the.14.aspx



Nursing Safety Minutes

Giving Nurses What They Need
To Do Good Safety Talks

Sample

They Have No Idea What You Are Saying

They Have No Idea What You are Saying

80% of What You Tell Patients is Forgotten Immediately or Remembered Incorrectly



60% of what health care providers tell patients is forgotten immediately. As if it was never said at all.¹

Studying the 40% of information that is remembered, half is remembered incorrectly. Patients get the details wrong.

Roughly 20% of what health care providers tell patients is remembered correctly.

Pictures Increase Understanding Up To 600%

Huge increase in understanding when you add pictures to your words.²

Sample Picture Page

Use a picture page when describing complicated topics to patients.

For example, when explaining "diabetes" use a picture page similar to this one.

Notice: this is not a standalone document. It is not meant to be "read."

Instead, the picture page guides a conversation between health care provider and patient.

DIABETES

Write all over this page while talking.

Get the patient to write on it.

Use it to answer questions.

Make it the foundation for your conversation.

Stomach

Pancreas

Pancreas

Insulin

Insulin opening cell door so food energy can enter.

Adding pictures to talking increases understanding 100% (simple topics); 600% (complex topics).³

It's the *combination* of talking and picture that maximizes understanding.⁴

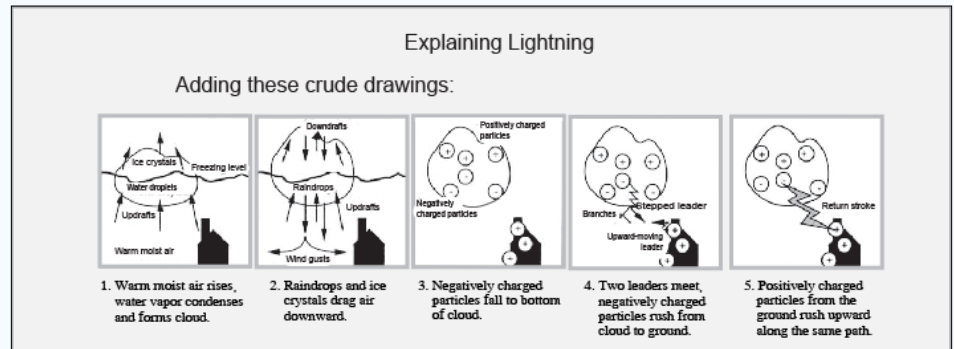
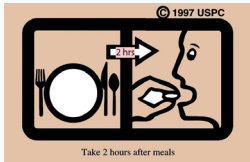
When talking is over, this picture page should be all marked up with your markings and your patient's markings.

Why?
Because this technique increases patients' *understanding* by hundreds of percent.

And, later on, when at home, the patient looks at the marked-up page, it will increase recall by hundreds of percent.

References & Additional Information: They Have No Idea What You are Saying

Adding this picture to the text instruction: "Take this medication two hours after eating" increased understanding 230%.⁵



Adding this simple drawing to a textbook explanation of "lightning" increased students' test scores by 113%.⁶

Most Adults Cannot Understand Our Health Brochures - Collected from Hospitals and Doctors' Offices⁷

Brochure Topic	# of Brochures Tested	Average Readability Grade Level	% of USA Adults Who CANNOT Read at that Level
Cancer	30	9.8 th Grade	65% can't understand
Asthma	7	8.1 th Grade	55% can't understand
HIV-	136	11.2 th Grade	75% can't understand
Arthritis	15	11 th Grade	75% can't understand

Average U.S. adult reads at the 7th or 8th grade level.



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6. Mayer, Richard E., William Bove, Alexandra Bryman, Rebecca Mars, and Lene Tapangco: "When Less is More: Meaningful Learning From Visual and Verbal Summaries of Science Textbook Lessons," *Journal of Educational Psychology*, vol. 88, no. 1, 1996, p. 64-73. https://www.researchgate.net/publication/232425359_When_Less_is_More_Meaningful_Learning_from_Visual_and_Verbal_Summaries_of_Science_Textbook_Lessons
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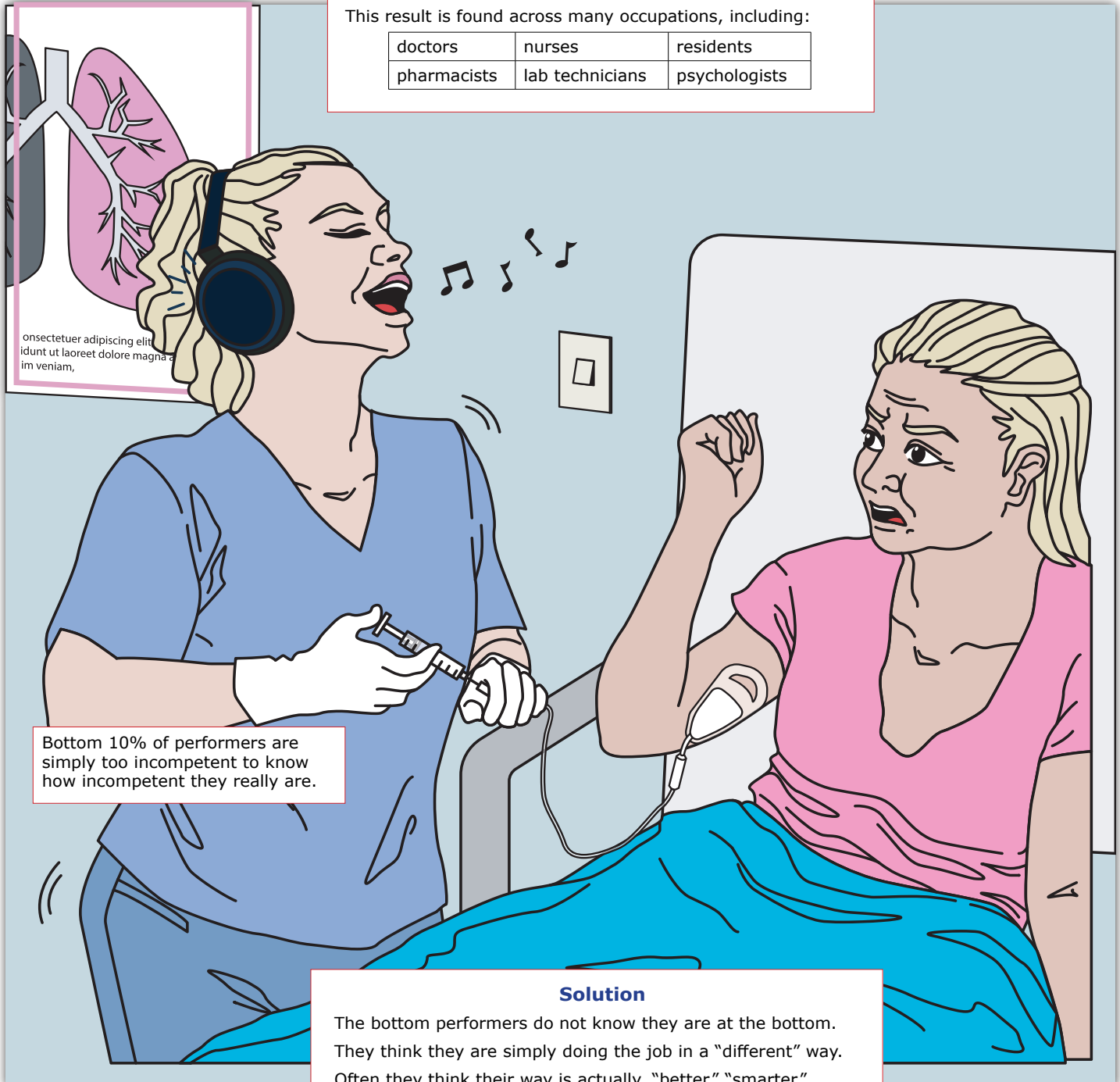
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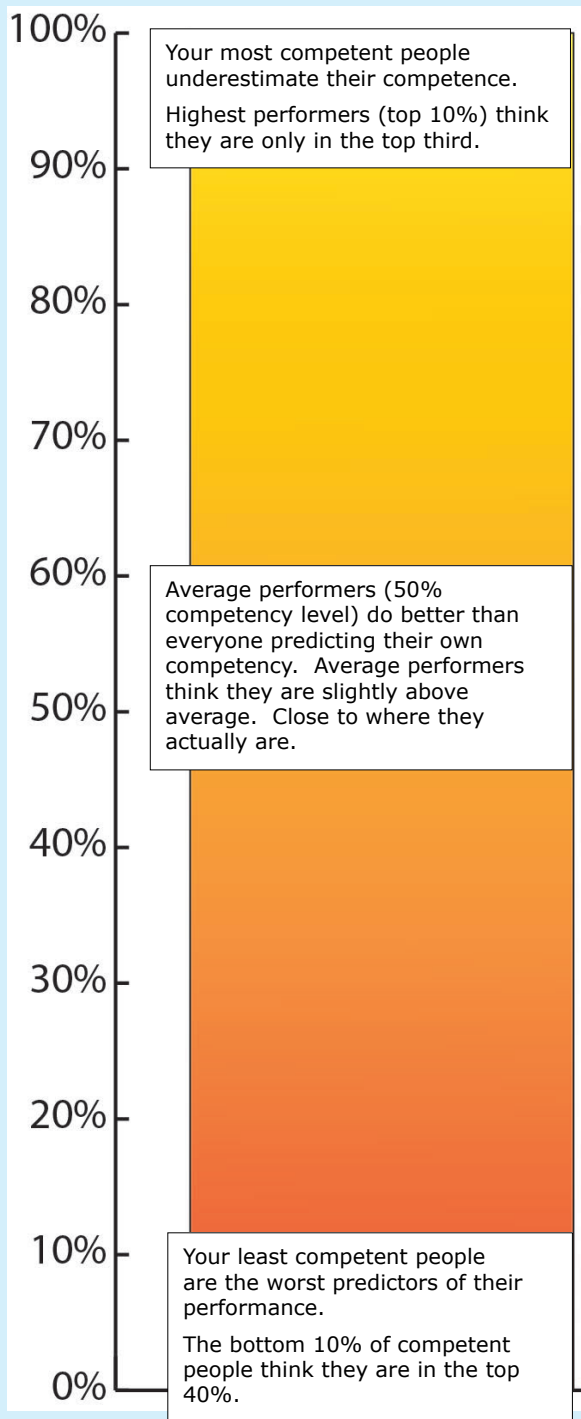
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The only solution is confronting them with facts. Showing them they are not "different;" they are "incompetent."

Additional Information: Incompetence

Competency

100% = Highest Competency



Implications

When evaluating most people, you can be tactful, supportive, and understanding.

However, this gentle approach does not work with your most incompetent people.

Why?

The bottom 10% of performers do not think they are incompetent. They believe they are in the top 40% of performers.

Begin by showing them, with objective data, they are the worst performers. Only then can you begin showing them how to improve.

COVID-19

Study, including healthcare professionals, looked at actual and perceived knowledge of COVID-19.

The worst performing professionals (bottom 10%) estimated their competency as being in the top 30%.

Claessens, Arthur et. al.: "Self-Illusion and Medical Expertise in the Era of COVID-19," *Open Forum Infectious Diseases*, 2021, p. 1-4.
<https://academic.oup.com/ofid/article/8/4/ofab058/6224992>

Autism

Survey of 1,310 USA adults.

30% thought they knew more about the causes of autism than doctors and scientists.

The lower their actual knowledge about autism the higher their confidence they were right.

Vandergriendt, Carly: "The Dunning-Kruger Effect Explained: What It Is - And Why It Matters," *HealthLine.com*, March 11, 2022.
<https://www.healthline.com/health/dunning-kruger-effect#impact>

Residents

Resident physicians scoring in the bottom 25% of competency thought they were in the top 40%.

The lower their score the less likely they were to accept feedback on ways to improve.

The top scoring resident physicians underestimated their competency.

In fact, the most competent physicians estimated their performance at the same level as the worst physicians estimated their performance (both estimated they were in the top 40%).

Vandergriendt, Carly: "The Dunning-Kruger Effect Explained: What It Is - And Why It Matters," *HealthLine.com*, March 11, 2022.
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Communication Best Practices Applied to Nursing Research

Illustration & Title: Same Meaning
Illustration is not decoration.
Illustration is a visual rendering of the written title. (Clark & Paivio)

Illustration Benefits
Illustrations can dramatically increase comprehension (600%) and recall (800%). (Cheng; Paivio)

Entertaining
Documents that don't get talked about at the front line don't change behavior. (Larkin)

Font
Verdana is among best fonts for online reading. (Hojjati & Muniandy)

Color
Increases comprehension by helping readers with part/whole distinctions. (Pinna & Deiana)

Text Boxes
Discrete text boxes use distance and borders to separate topics from one another. (Williams)

Dot Points
20% will read a solid-text paragraph (over 7 lines); increases to 50% if broken out into dot points. (Desaulniers)

Line Length
3.5 inches is preferred length for comfortable reading. (Nanavati & Bias)

Solution
Providing a solution increases self-efficacy and consequently behavior change. (Witte)

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Cheng PCH. Why diagrams are (sometimes) six times easier than words: benefits beyond locational indexing. *Proceedings of Diagrams*. 2004; p. 242-260.

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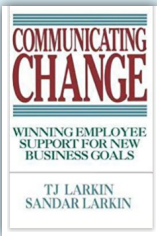
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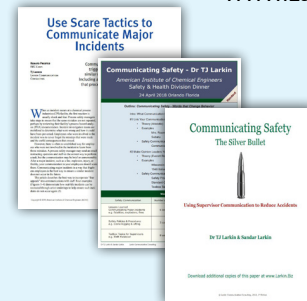
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