

RESIDENT EXPECTATIONS AND GENERATION Z

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AUPN Webinar Series

July 28, 2023

OU Neurology



RESIDENT EXPECTATIONS & GEN Z

Relevant Disclosure & Resolution

Under Accreditation Council for Continuing Medical Education guidelines disclosure must be made regarding relevant financial relationships with commercial interests within the last 12 months.

David Lee Gordon, M.D.

I have no relevant financial relationships or affiliations with commercial interests to disclose
(except that I am a Baby Boomer)



RESIDENT EXPECTATIONS & GEN Z

Learning Objectives

Upon completion of this session, participants will improve their competence and performance by being able to:

1. Describe how unconscious biases of both medical educators and Gen Z learners affect their relationship
2. Describe the effects of digital social media, more women in the workforce, societal changes, and anxiety intolerance on Gen Z learners
3. List five main expectations of Gen Z residents



UNCONSCIOUS BIAS PRINCIPLES



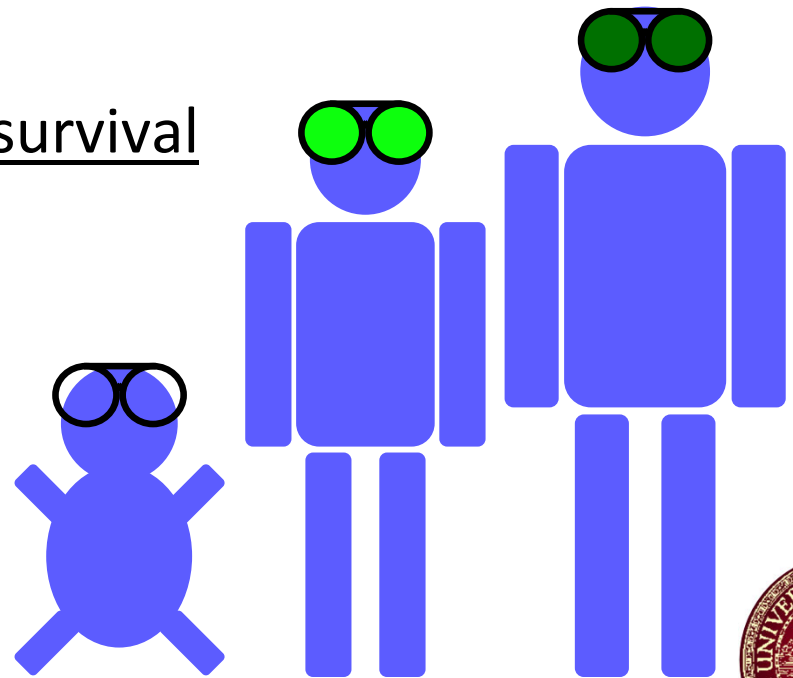
UNCONSCIOUS BIAS

Normal Consequence of Experience

Unconscious bias = attitude or belief without awareness that is determined by previous experience(s)

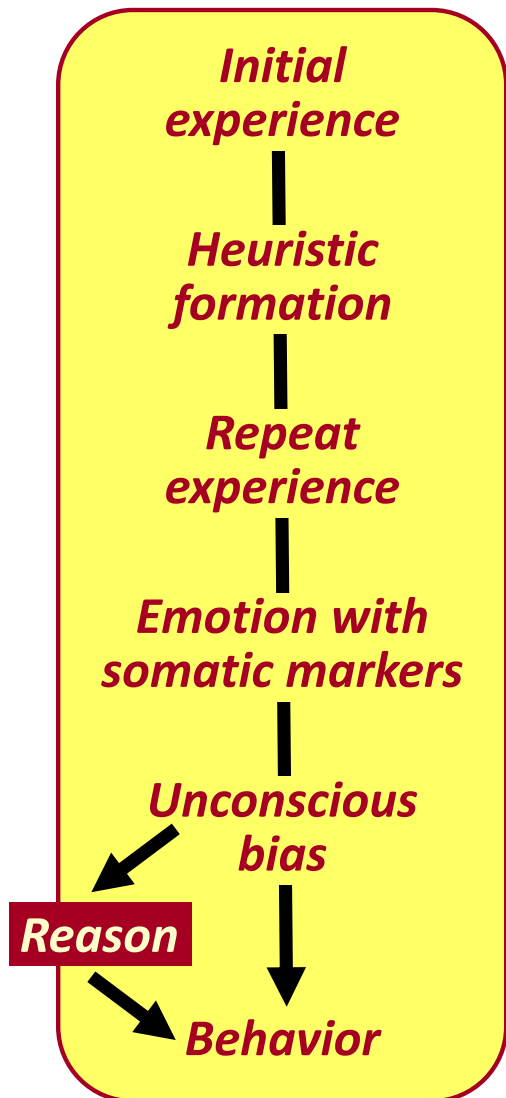
- Occurs as a normal consequence of experiential memory
- Manifested by gut feeling, intuition, or preconceived notion triggered by autonomic nervous system symptoms (somatic markers)
- Facilitates multitasking, promotes survival
- **May compel behavior**

Over the years, we all see the world through increasingly tinted (biased) glasses



EXPERIENCE, REASON, & BEHAVIOR

Bias Acquisition & Suppression



■ Heuristic

- Mental shortcut based on experiences & associated emotion-tagged memories processed via amygdala

■ Somatic markers – *Warning Bells*

- Autonomic nervous system symptoms generated by emotions in response to repeat experiences processed via amygdala & hypothalamus

■ Unconscious bias – *Thinking System 1*

- Gut feeling, intuition, or preconceived notion triggered by somatic markers via amygdala that may directly compel behavior (fight or flight) or trigger...

■ Reason – *Thinking System 2*

- Rational thought & awareness via prefrontal cortex triggered by gut feeling, incorporating factual memories from hippocampus

After Damasio 1994, Kahneman 2011



UNCONSCIOUS BIAS TYPES

Pertinent to Teaching Gen Z Learners

INSTRUCTORS

- Status quo bias
- Availability heuristic
- Confirmation bias
- Framing heuristic
- Implicit bias

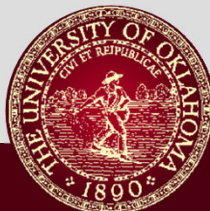
GEN Z LEARNERS

- Social harmony bias*
- Illusory truth effect**
- Halo & horns effects***

*Asch SE. *Scientific American*. 1955; 193:31-35

**Hasher L et al. *J Verbal Learning Verbal Behavior*. 1977; 16:107-112

***Thorndike EL. *J Applied Psychology*. 1920;4(1): 25–29



INSTRUCTOR PERSPECTIVES



EFFECTIVE TEACHERS

Adapt to their Audience



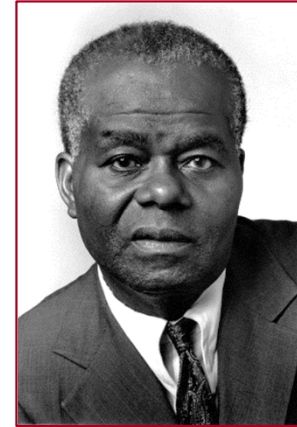
<https://www.campaignlive.co.uk/article/history-advertising-no-153-marshall-mcluhans-global-village/1371219>

Anyone who tries to make a distinction between education & entertainment doesn't know the first thing about either.

Marshall McLuhan

1911-1980

Canadian philosopher



<https://www.brhombic-int.com/resources/virtualmuseum/drjohnhenrikclarke/>

A good teacher, like a good entertainer, first must hold his audience's attention, then he can teach his lesson.

John Henrik Clarke

1915-1998

American historian

EFFECTIVE TEACHERS

Evolve with Their Learners

- *Teachers MUST understand learners to be effective*
- *To understand learners, teachers must understand psychology, including unconscious biases that affect themselves & their learners*
- *Learner psychology changes with societal changes*
- *“Practice-based learning & improvement” pertains to education as much as to medicine*

Practice-based learning & improvement (continuous quality improvement) of instructors limits the adverse effects of unconscious biases on their interactions with learners



INSTRUCTOR UNCONSCIOUS BIASES

Status Quo Bias, etc.

- ***Status quo bias*** – being influenced by comfort with status quo (we like what we know)
 - Results in people preferring:
 - Music from their high-school & college years
 - To raise children the way they were raised
 - To teach they way they learned
 - Inhibits further learning & growth & facilitates:
 - ***Availability heuristic*** – generalizing based on personal knowledge or experience
 - ***Confirmation bias*** – interpreting information in a way that confirms preconceptions
- ***Familiarity does not imply superiority & satisfaction with the status quo stymies both self- & systems improvement***



INSTRUCTOR UNCONSCIOUS BIAS

Framing Heuristic & Implicit Bias

- ***Framing heuristic*** – being swayed by wording or the way information is presented
- ***Implicit bias*** = attitude or belief about a person or group without awareness that affects behavior toward that person or group
- ***Many traditionally used terms in healthcare are stigmatizing & promote implicit bias against the patient or health professionals***
- ***Status quo bias of instructors perpetuates use of these terms***
- ***Gen Z is particularly sensitive to & offended by implicit bias***
- Examples of framing & implicit bias in healthcare language:
 - ***“Noncompliant”*** – paternalistic term meaning “nonsubmissive”
 - ***“Outside” hospital or “local” doctor*** – derogatory
 - ***“Denies”*** – implies patient is untruthful &, thus, is insulting
 - ***“Refuses”*** – confrontational & antagonistic
 - ***Drug or alcohol “abuse”*** – moralizing & judgmental
 - ***“Poor historian”*** – derogatory, defensive, & inaccurate
 - ***Race*** – social, not biologic construct; unhelpful & misleading



GENERATION Z LEARNER PERSPECTIVES



ARE GEN Z LEARNERS DIFFERENT?

Yes & No

YES

- Medical trainees in the era of Generation Z are different in 3 indisputable ways:
 - *Presence of digital social media (DSM)*
 - *More women in the workplace*
 - *Changes in societal culture*
- Gen Z learners often have decreased anxiety tolerance

NO

- Not every group member fits the group stereotype
- The human brain is not different
- Basic educational principles are not different
- Older generation bias exaggerates differences



GENERATION Z

Definition & Characteristics

- *Born 1997 to 2012*
- *Ages 10-26 in 2023*
- *“Generation We”*
- *Diverse, socially aware*
- *Tolerant, open-minded*
- *Justice-minded & canceling*
- *Pragmatic, creative*
- *Ambitious, cautious*
- *Responsible*
- *Compassionate*
- *Individualistic*
- *“Digital natives”*
- *More women in workplace*
- *Decreased use of sophisticated vocabulary & historical jargon*
- *FOMO (fear of missing out) is a motivator*
- *Marriage delayed*
- *Religion less important*

Hodgson 2018

Johnston 2018

Seemiller & Grace 2016

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GENERATION Z

Digital Social Media (DSM) Effects

- *Breaks down geographic barriers & physical separation*
- *Provides a peek behind the curtains* of others' thoughts, concerns, & beliefs
- *Facilitates shared experiences & empathy*
- *Redraws group lines & redefines diversity*
- *Binds its users (Gens Y & Z), but also magnifies peer pressure*
- *Limits time for other experiences (despite increased access)*
 - Less time to read books, watch old movies, listen to old songs
 - Effect is even greater in medicine with premed STEM focus & intense studying requirements during medical career
- *Promotes bias against & skepticism of nonuser opinions*
 - *“More than any other generation, today’s youth are extensively connected to and shaped by their peers.”* McCrindle & Wolfinger 2014



GENERATION Z

DSM Consequences—Benefits

- ***Loss of traditional group identities, social constructs, & morality***
 - Among Gen Z folks, DSM has lessened differences in nation, state, city, school, race, ethnicity, religion, mental health, economic class, musical interests, sexual orientation, & gender identification
- ***Facilitation of age-based group identities & morality***
- ***Increased tolerance of those in their own age groups***
- ***Increased social awareness (enlightened or “woke”)***
- ***Increased sensitivity, both personally & in defense of others****
- ***Focus on diversity, equity, & inclusion (DEI)***
- ***Increased knowledge of current events***
- ***Accelerated acquisition of generational dialect & vocabulary***

****Thus, the “we generation”***



GENERATION Z

DSM Consequences—Challenges

- ***Social harmony (conformity) bias***—being influenced by others due to a need to conform & belong to a group with magnified peer pressure, FOMO, & negative self esteem
- ***Illusory truth effect***—believing repeated assertions (in this case, easily spread via DSM) regardless of veracity
- ***Halo effect***—having a positive opinion of someone/thing based on an unrelated trait, e.g., misplaced trust in folks of their generation
- ***Horns effect***—having a negative opinion of someone/thing based on an unrelated trait, e.g., misplaced distrust of folks in older generations with potential adverse effect on their own education
- ***Decreased historical awareness***—knowledge of past history & culture
- *Inhibited acquisition of traditional dialect & vocabulary*
- *Inexperience with in-person behavior & nonverbal communication*

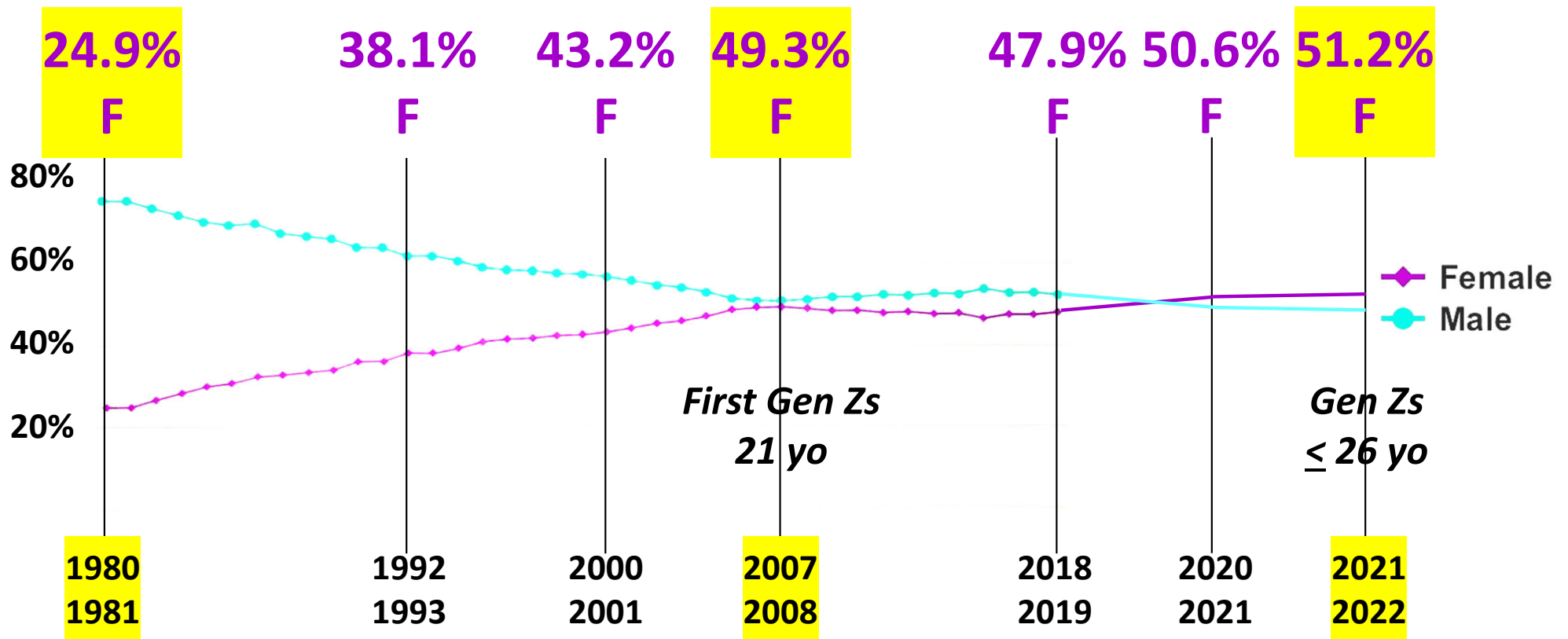


GENERATION Z

↑ *Women Physicians*

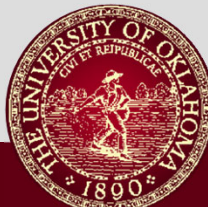
- <https://www.aamc.org/data-reports/students-residents/report/facts>
- <https://www.aamc.org/data-reports/workforce>
- <https://www.phq.com/2000/01/physician-statistics-summary/>

U.S. Medical School Graduates 1981-2022



Among ALL medical students, women have comprised > 50% since 2019—54% in 2023 (Gen Z med students have only known gender equality in terms of numbers).

Women physicians in workforce: 1980 12%, 2007 28%, 2021 37%.



GENERATION Z

↑ *Women Physicians Consequences*

- More right-brained thinking & *empathy*
- Increased emphasis on *interpersonal skills*
- Increased social awareness (“*minority perspective*”)
- Increased *cooperation*, less competition
- More *two-income families*
 - High individual salaries less important
 - Increased paternal responsibilities
 - Increased emphasis on *wellness & work-life balance* for all genders
- Popularity of empathic fields ↑, procedural fields ↓
- *Transformational (collaborative) leadership* as opposed to transactional (authoritative) leadership

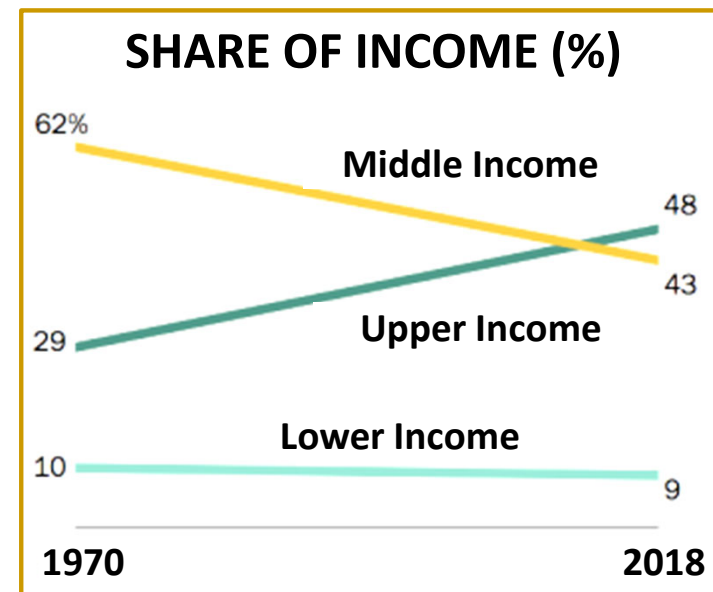


GENERATION Z

Societal Factors – Class, DEI, Climate

■ Generation Z did not create:

- Economic inequality →
- Systemic racism
- Gender discrimination
- Sexual intimidation & assault
- Homophobia & heterosexism
- Transphobia
- Mental illness
- Climate crisis



Horowitz et al 2020

- ### ■ *To its credit, however, Gen Z's reactions to these phenomena have opened our eyes & awakened our collective prefrontal cortices*

GENERATION Z

Decreased Anxiety Tolerance

- 1. A sense of anxiety is normal when learning new skills*
- 2. Gens Y & Z have a lower tolerance for anxiety*
- 3. For Gens Y & Z, anxiety is often disabling rather than motivating*

American Psychological Association Stress in America Survey 2018

■ *Gens Y & Z most stressed generations*

- On scale of 10: Gen Y 5.7 & Gen Z 5.3 vs. all respondents 4.9

■ *Gen Z more commonly report stress across all domains*, though sexual harassment, immigration, and gun violence are particularly stressful

■ *Gen Z most likely generation to report poor mental health* & seek professional help for mental health issues

■ *Gen Z affected most by social media, both positively & negatively*

- 55% report DSM provides feeling of support
- 45% report DSM makes them feel judged
- 38% report DSM use makes them feel badly about themselves



GENERATION Z

Preferred Educational Strategies

Gens Y/Z	Preferences
Real	<i>Credibility, transparency, honesty, understanding, & respect</i>
Relevant	Both content & communication style that are <i>pertinent</i> & <i>practical</i>
Responsive	<i>Learner-centric curricula</i> & judicious, appropriate technology use
Relational	<i>Openness</i> & <i>practical learning</i> , blending knowledge, skills, experiences

After McCrindle & Wolfinger 2014

Gen Z preferred educational strategies imply a need for collaborative leadership style with explanations for teaching content & strategies



GENERATION Z RESIDENT EXPECTATIONS



GEN Z RESIDENT EXPECTATIONS

Five Areas of Focus

- ***Collaboration***
- ***Consistency***
- ***Transparency***
- ***Tolerance***
- ***Wellness***

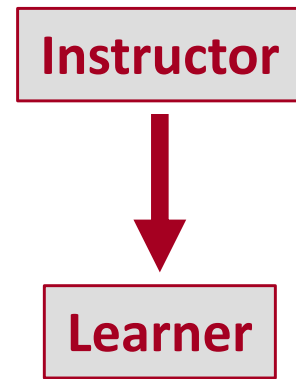


GEN Z RESIDENT EXPECTATIONS

Collaboration—Leadership Style

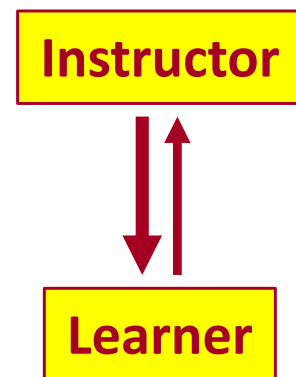
■ ***Authoritative (transactional) leadership***

- Traditional, male dominated
- Like coaching high-school athletes
- ***Directions without others' input or explanations***
- Transparency & modeling less important
- “Do as I say (not as I do)”



■ ***Collaborative (transformational) leadership***

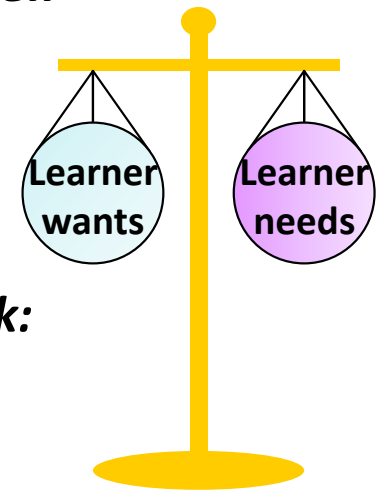
- Gen-Z preferred, female influenced
- Like coaching professional athletes
- ***Directions with others' input and with explanations***
- Transparency & modeling essential
- “That’s an excellent idea. Considering all the factors, I feel this is what we should do, because...”



GEN Z RESIDENT EXPECTATIONS

Collaboration—Wants vs. Needs

- **Learner feedback** is essential to curriculum quality improvement
- **Learner satisfaction** scores are the primary means of curriculum assessment by external monitoring agencies
- ***Yet, learners don't always know what's in their best interests—in terms of both curriculum content & delivery—regardless of generation***
- ***Gen Y/Z distrust of older generations particularly affects their perspective, potentially to their own detriment***
- ***Thus, educators must balance learner wants vs. needs***
 - ***Respond to learner feedback AND***
 - ***Provide what's best for learner regardless of learner feedback:***
 - Essential content
 - Effective educational strategies



- As ***collaborative leaders***, educators now must ***explain rationale for curriculum content & delivery strategies to learners***

GEN Z RESIDENT EXPECTATIONS

Consistency

Learning Environment

=

Declared Curriculum

+

Hidden Curriculum

- **Learning environment** = the sum of declared & hidden curricula; includes all circumstances & influences surrounding & affecting a person's learning
- **Declared curriculum**
 - Formal curriculum promoted by institution; esp. in classrooms, skills centers
 - *Theoretically represents ideal practice*
- **Hidden curriculum**
 - Informal learning that differs from declared curriculum; esp. in clinical settings
 - *Represents real-life practice &, thus, not always ideal*
 - *When consistent with declared curriculum (form of "curriculum alignment"):*
 - *Reinforces or enhances declared curriculum*
 - *Avoids hypocrisy & potential negative influence*

After Hafferty & Franks 1994

Gen Z learners expect SUPPORTIVE learning environment without hypocrisy

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GEN Z RESIDENT EXPECTATIONS

Transparency—Feedback Principles

- ***Distinguish generalizable from personal feedback***
 - Give generalizable feedback in front of the group
 - Give personal feedback privately
- ***Identify interaction as “feedback”***
- Include ***both achievements & opportunities for improvement***
- Use ***transparent***, mutual learning approach (not “sandwich”)
- Facilitate ***deliberate practice*** by promoting:
 - ***Growth mindset*** (vs. fixed mindset) – emphasize effort & self-improvement over talent & personality
 - ***SMART goals*** – Specific, Measurable, Attainable, Relevant, Time-bound
- ***Provide rationale for your feedback/advice***
- ***Request feedback from learner(s) & take it positively***

Schwarz 2013, Dweck 2006, Doran 1981



GEN Z RESIDENT EXPECTATIONS

Transparency—R2C2 Feedback

R2C2 CATEGORY	PHASE	GOAL
Relationship	Build <i>rapport</i> & relationship; <i>explain</i> the purpose of the assessment & learn about its context	Facilitator engages learners, builds relationship & <i>trust</i> , & establishes <i>credibility</i> of assessment
Reaction	Explore reactions to & <i>perceptions</i> of the report	Learners <i>feel understood</i> & know their views are heard & understood
Content	Explore <i>learner understanding</i> of the report's content	Learners are <i>clear about what the reports mean for their practices</i> & opportunities for change
Coaching	Coach for performance <i>change</i> <i>(Growth Mindset)</i>	Learners engage in “change talk” & develop <i>an achievable action plan</i> <i>(SMART Goals)</i>

Sargeant et al. 2015



GEN Z RESIDENT EXPECTATIONS

Tolerance

■ *Promotion of workforce diversity, equity, & inclusion*

- Focus on race, gender, sexual orientation, & gender identity
- Includes obesity, disability, ethnicity, spoken language, etc.
- Formal training & modeling
- Hiring & promotion practices

■ *Control of implicit bias against patients*

- Avoiding framing heuristic & stigmatizing language in verbal & written communications
- Disbelieving race-based scientific conclusions & statements

■ *Curbing microaggressions*

- Subtle acts of exclusion, subconscious or conscious; when subconscious, a subtle expression of implicit bias
- Directed toward colleagues or patients



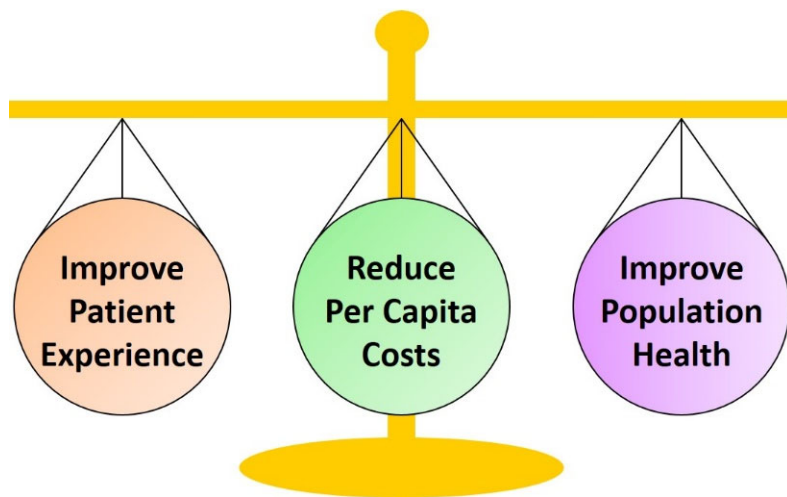
GEN Z RESIDENT EXPECTATIONS

Wellness – U.S. Healthcare

The Quadruple Aim & Provider Work Life

THE TRIPLE AIM

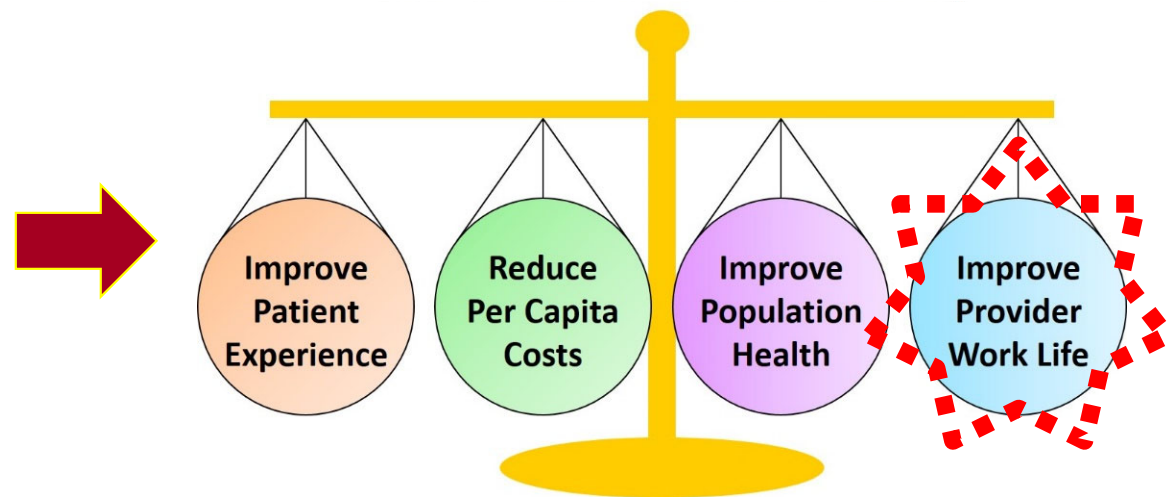
Focus on Value



Berwick et al. 2008

THE QUADRUPLE AIM

Focus on Value & Sustainability



Bodenheimer & Sinsky 2014

GEN Z RESIDENT EXPECTATIONS

Wellness – Definitions

The increase in women in the workplace has resulted in an increased emphasis on wellness & work-life balance for all genders with increased awareness & sensitivity regarding:

- ***Stress** – a feeling of emotional or physical tension*
- ***Anxiety** – feeling of fear, dread, or uneasiness*
- ***Wellness** – the state of being in good health*
- ***Wellbeing** – the state of being comfortable, healthy, or happy*
- ***Burnout** – exhaustion, perceived inefficacy, & cynicism
(physical, emotional, or mental exhaustion with decreased motivation, lowered performance, and negative attitudes towards oneself and others)*



GEN Z RESIDENT EXPECTATIONS

Wellness – Neurology

- ***Neurology*** is the only medical specialty among both
 - Highest rates of ***burnout***
 - Lowest rates of ***work-life balance satisfaction***¹
- In 2019, neurologists ranked #2 in burnout among physician specialties (53% vs. urology 54%)²
- ***Neurology residencies, in particular, should include formal wellness curriculum***

1. <https://www.aan.com/PressRoom/Home/PressRelease/1515>

2. Patel 2020

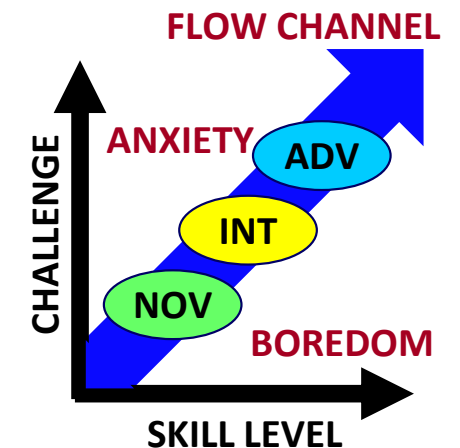
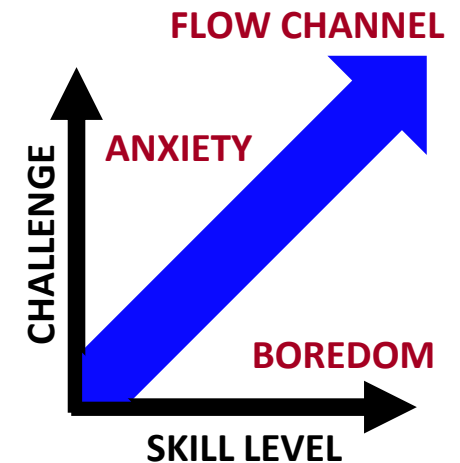


GEN Z RESIDENT EXPECTATIONS

Wellness – Flow & Anxiety

Flow = the state of optimal experience (enjoyment and maximal concentration)

- Perception that skills match challenge difficulty
- Occurs only in a structured system with feedback
 - Facilitated by didactic curriculum, priming, curriculum alignment, & deliberate practice
 - Cannot be achieved by independent experiences
- Provides a sense of accomplishment
- Facilitates continued growth
 - If challenge difficulty & skill level gradually increase together
 - If anxiety motivates & does not disable



NOV = Novice

INT = Intermediate

ADV = Advanced

After M Csikszentmihalyi 1990

CONCLUSIONS



GEN Z RESIDENT EXPECTATIONS

Five Areas of Focus

- ***Collaboration***
- ***Consistency***
- ***Transparency***
- ***Tolerance***
- ***Wellness***

Teaching Gen Z learners requires more energy, but meeting their expectations will make us better educators, physicians, & human beings &...

instructors are still responsible for identifying learner needs



RESIDENT EXPECTATIONS & GEN Z

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RESIDENT EXPECTATIONS & GEN Z

Learning Objectives

Upon completion of this session, participants will improve their competence and performance by being able to:

1. Describe how unconscious biases of both medical educators and Gen Z learners affect their relationship
2. Describe the effects of digital social media, more women in the workforce, societal changes, and anxiety intolerance on Gen Z learners
3. List five main expectations of Gen Z residents



THE END

