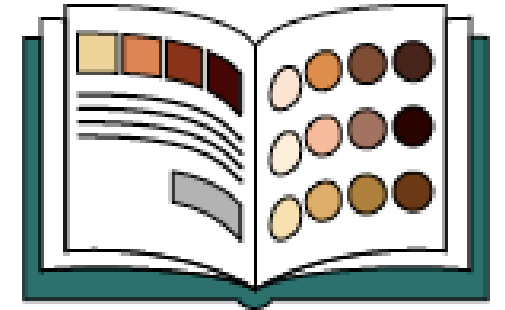


An Easy Fix: Improving Visual Diagnosis



Visual Learning Equity Team

Vera Obinwanne, MS4, MSM

Ryan Bills, BS

Alaina James, MD, PhD



NAM Scholars in Dx Ex
IN PARTNERSHIP WITH
THE COUNCIL OF MEDICAL SPECIALTY SOCIETIES

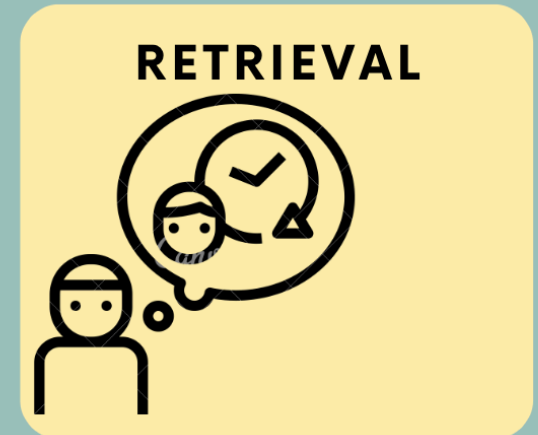
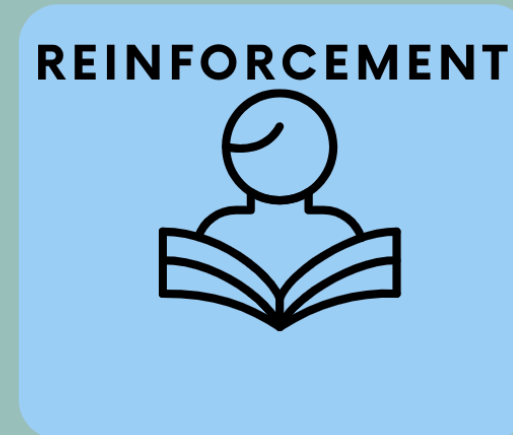


No financial disclosures

Visual Learning

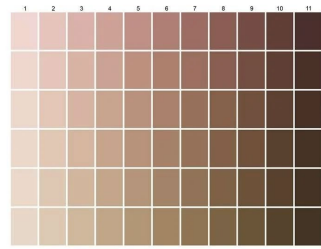
Images to facilitate knowledge acquisition and application

Focus: Visual learning of skin conditions



Visual Learning-----

Skin Color



-----Visual Diagnosis



Skin color affects the appearance of skin conditions













Problem

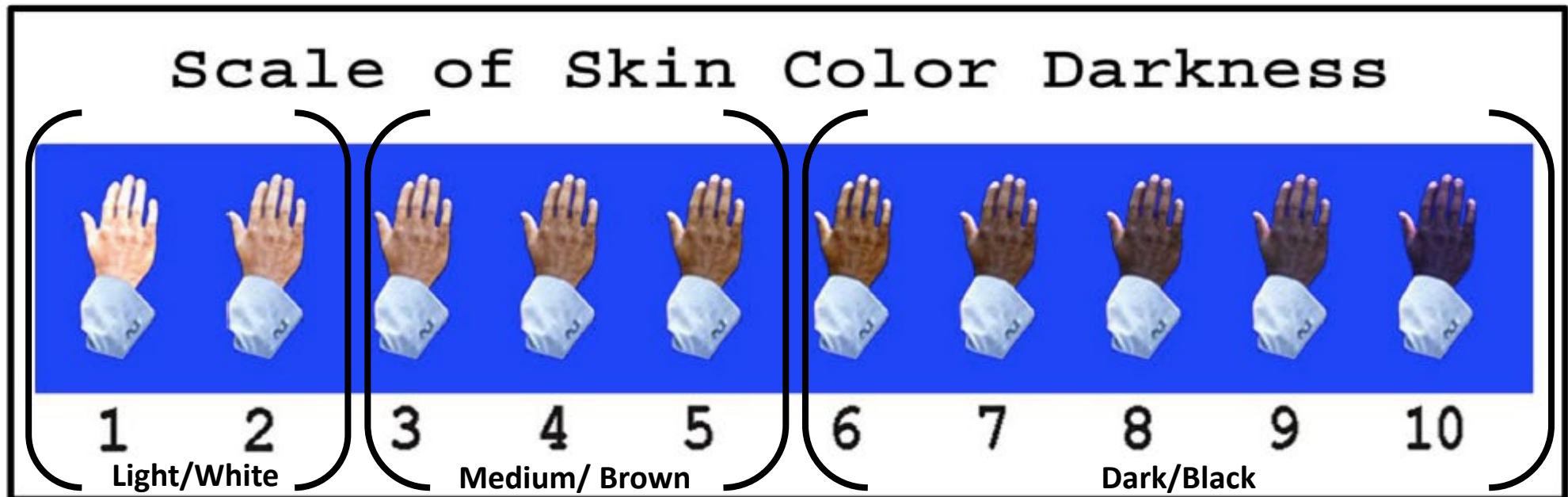
Striking underrepresentation of visual learning images with brown and black skin

- 91.7% of images on google image searches are white/light skin
- 88.6% of images in dermatology textbooks are white/light skin
- 84.3% of images in recommended medical student resources are white/light skin
- In a 2021 cross-continental and cross-specialty analysis only 5% of physicians in a 600-physician study sample were confident in diagnosing skin conditions across skin colors

Fix: Equitable representation of all skin colors in medical education resources

Methods

- Journals of 48 CMSS medical societies were reviewed (Jan 2020 – Dec 2021)
- 7 societies excluded due to limited cutaneous visual learning images
- Clinical images from 41 journals independently graded by 2 raters using the Martin and Massey NIS 10-point Skin Color Scale:



Massey-Martin scale with journal images

1



2



3



4



5



9



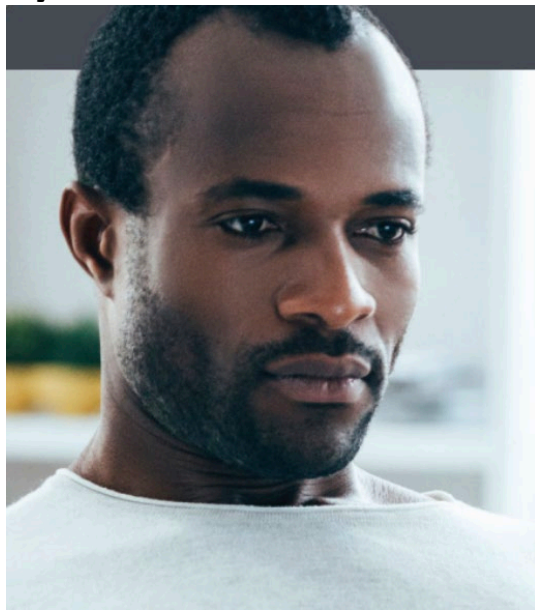
10



6



7



8



	Medical Specialty Societies	Academic Journals
1	American Academy of Allergy, Asthma & Immunology	JACI: Journal of Allergy and Clinical Immunology
2	American Academy of Family Physicians	AFP: American Family Physicians
3	American Academy of Neurology	Neurology
4	American Academy of Pediatrics	PEDIATRICS
5	American Thoracic Society	Annals of the American Thoracic Society (AnnalsATS)
6	American College of Cardiology	Journal of The American College of Cardiology
7	American College of Chest Physicians	CHEST Journal
8	American College of Medical Genetics and Genomics	Genetics in Medicine (GIM)
9	American College of Occupational and Environmental Medicine	Journal of Occupational and Environmental Medicine
10	American College of Preventive Medicine	The American Journal of Preventive Medicine
11	American College of Rheumatology	Arthritis & Rheumatology
12	American Geriatrics Society	Journal of the American Geriatric Society (JAGS)
13	American Society of Clinical Oncology	Journal of Clinical Oncology
14	American Society of Hematology	BLOOD
15	American Society of Nephrology	Journal of the American Society of Nephrology
16	American Society for Radiation Oncology	International Journal of Radiation Oncology • Biology • Physics (Red Journal)*
17	American Society for Reproductive Medicine	Fertility and Sterility medical journal
18	Infectious Diseases Society of America	Clinical Infectious Disease
19	Society of Critical Care Medicine	Critical Care Medicine Journal
20	Society of General Internal Medicine	The Journal of General Internal Medicine

	Medical Specialty Societies	Academic Journals
21	Society of Hospital Medicine	Journal of Hospital Medicine
22	American Gastroenterological Association	Gastroenterology
23	American Academy of Hospice and Palliative Medicine	JPSM: Journal of Pain and Symptom Management
24	American College of Obstetricians and Gynecologists	Obstetrics & Gynecology (the "Green Journal")
25	American Epilepsy Society	Epilepsy Currents
26	American Academy of Orthopaedic Surgeons	Journal of the American Academy of Orthopaedic Surgeons (JAAOS)*
27	American College of Surgeons	Journal of the American College of Surgeons
28	American Society of Colon and Rectal Surgeons	Diseases of the Colon & Rectum (DC&R)
29	American Society of Plastic Surgeons	Plastic and Reconstructive Surgery (PRS)
30	American Urological Association	The Journal of Urology
31	North American Spine Society	The North American Spine Society Journal (NASSJ)*
32	Society of Thoracic Surgeons	The Annals of Thoracic Surgery
33	Society for Vascular Surgery	Journal of Vascular Surgery
34	Society of Gynecologic Oncology	Gynecologic Oncology
35	American Academy of Ophthalmology	Ophthalmology
36	American College of Emergency Physicians	Annals of Emergency Medicine
37	American College of Physicians	Annals of Internal Medicine
38	American Academy of Physical Medicine and Rehabilitation	PM&R: The Journal of Injury, Function and Rehabilitation
39	American Society of Anesthesiologists	ANESTHESIOLOGY
40	American Academy of Dermatology	Journal of the American Academy of Dermatology (JAAD)
41	American Psychiatric Association	The American Journal of Psychiatry

Results

- 3501 images from 41 of the 48 CMSS member journals (26 images were excluded)
- 3475 images meeting our inclusion criteria:
 - 80% (2780) were classified as light/white skin
 - 14.65% (509) were classified as medium/brown skin
 - 5.35% (186) were classified as dark/black skin
- Infectious Diseases journal had the highest proportion of brown and black images at 47.37% (18/38)
- One journal had the lowest proportion of brown and black images at 0% (0/19)

CMSS is committed to supporting our member specialty societies and working together to **promote equity and combat racism** in healthcare and in our society.

Easy Fix: 3 Steps for Structural Change

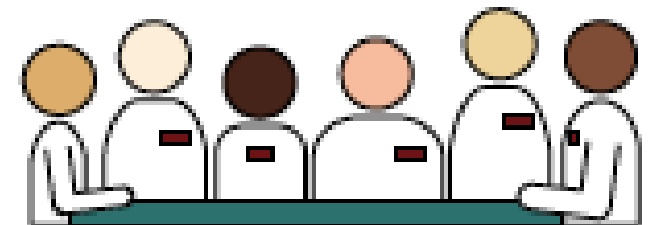
1. Awareness

2. Action

- Require diverse visual learning images and inclusive language in all learning and health publications
- Establish databases with high quality images depicting conditions on all skin types (white, brown and black)

3. Accountability

- Audits to ensure improvements and achievement of visual learning equity



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