Context Matters: Variation in Stigmatizing Language Across Patient Characteristics

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BACKGROUND

- Stigmatizing language often reflects unconscious attitudes that healthcare providers possess toward patients.
- Recent evidence suggests that stigmatizing language is prevalent within medical records, more often used in reference to minority patients, and associated with perpetuating bias to other providers.[1,2]
- However, we have limited information on the patterns of stigmatizing language in medical records to aid in the development of future interventions.
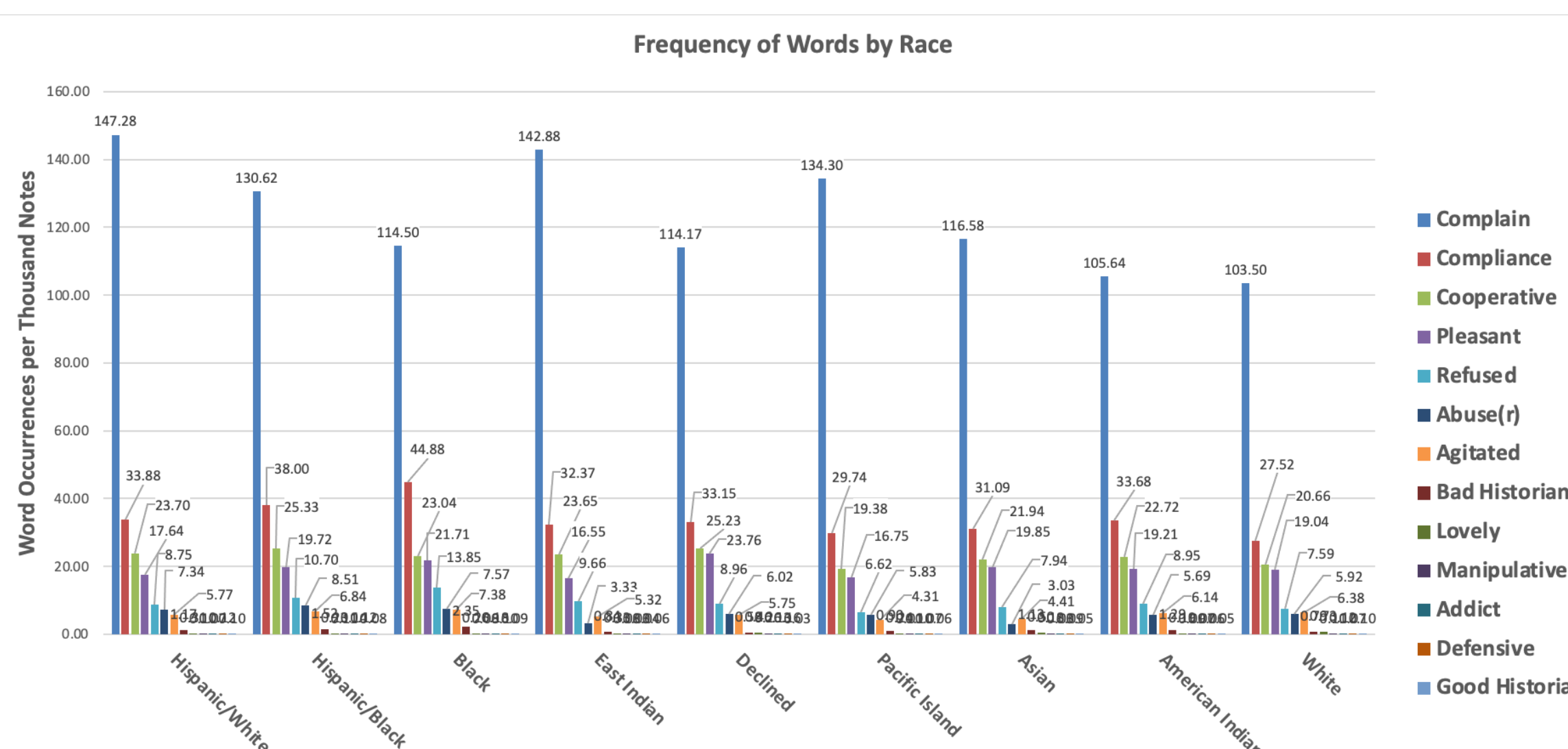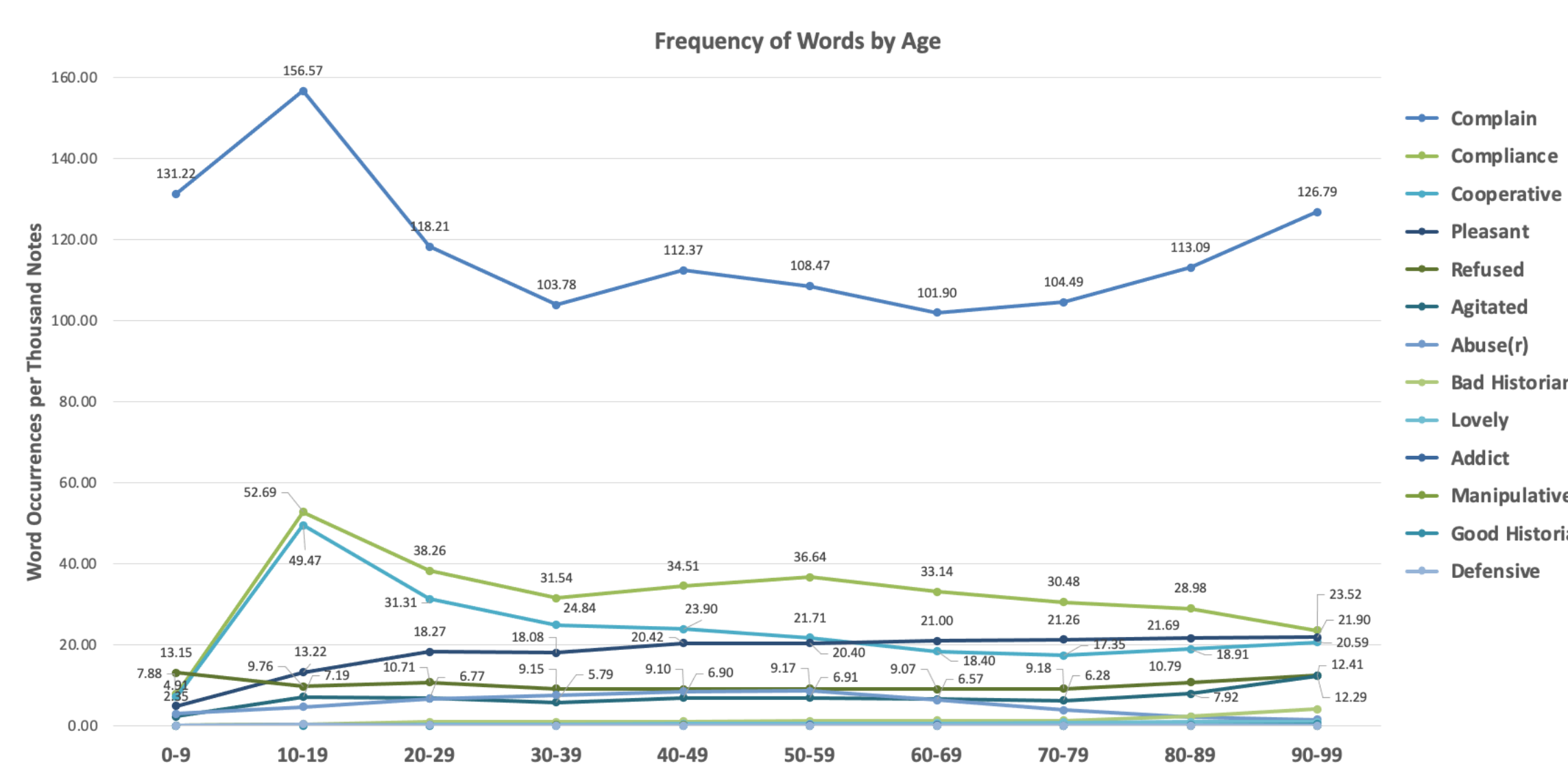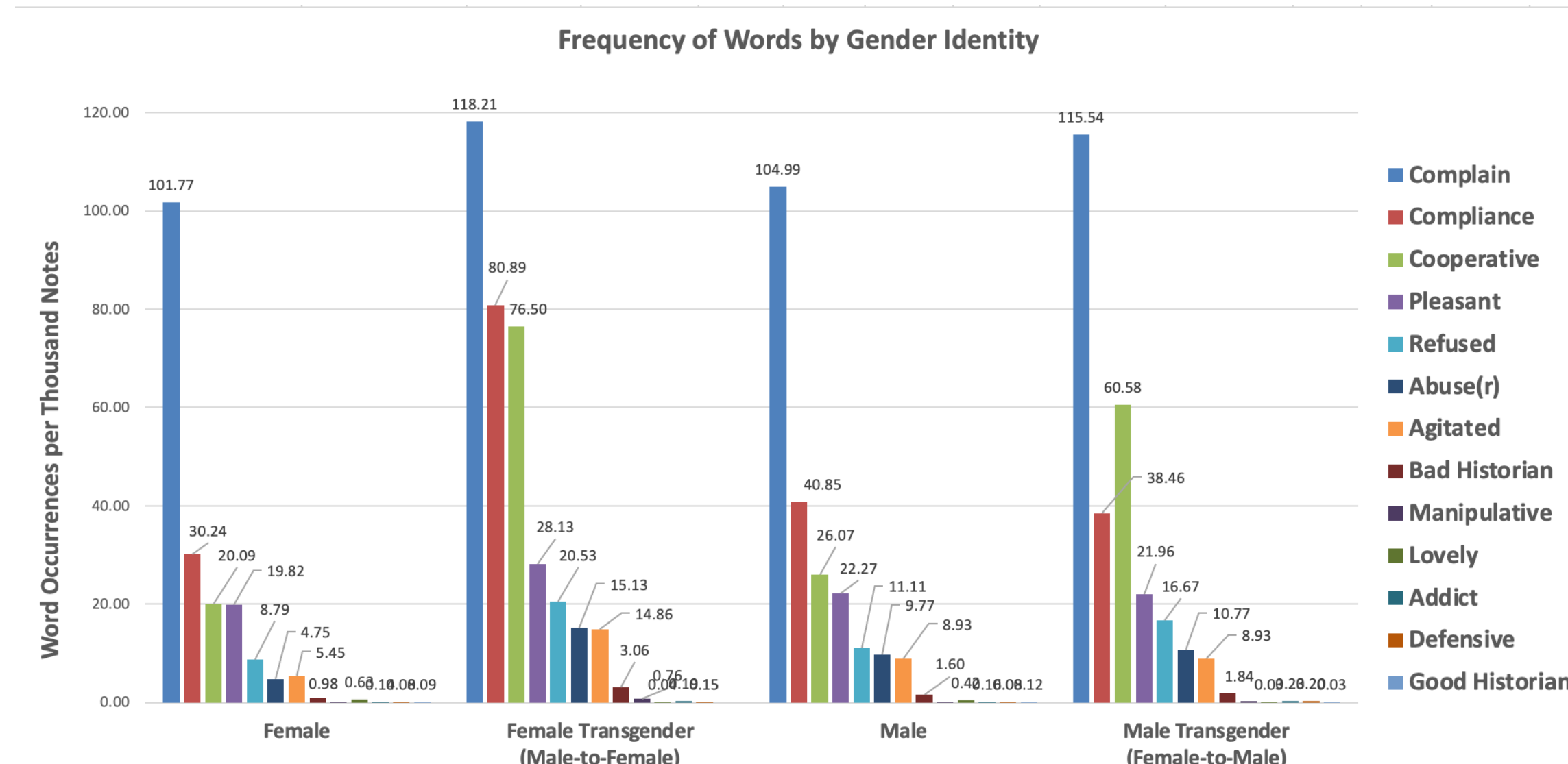
OBJECTIVE

To characterize variation in the usage of stigmatizing terms across patient demographics.

METHODS & BASELINE DATA

- We analyzed data from clinical notes written at Penn Medicine from April 1, 2017 to December 31, 2020.
- Corpus included inpatient, outpatient, emergency dept notes. All clinical notes were included such as admission, progress notes, discharge summaries, nursing notes, telephone encounters, result notes, triage notes etc.
- Sixteen negative + 4 positive descriptors were selected based on recommendations from the CDC and American Psychological Assoc. Negative descriptors with occurrences less than 0.2 words/million characters were excluded.
- We used simple regular expressions to identify occurrences of these words within the corpus. Two reviewers annotated snippets to identify unrelated terms and applied second-order rules to exclude these terms (e.g., 'lung compliance').

Characteristics	Corpus
Notes	67,001,270
Words	21,758,547,299
Characters	126,441,995,438
Negative Descriptors	Abuse, Addict, Agitated, Bad historian, Complain, Compliance, Defensive, Manipulative, Refused
Positive Descriptors	Cooperative, Good historian, Lovely, Pleasant
Excluded Descriptors	Bounce back, Exaggerate, Frequent flyer, Hysterical, Shooter, Sickler, Super utilizer
2017	12,185,190
2018	18,000,431
2019	19,048,849
2020	18,951,252

RESULTS

Frequency of Words by Gender Identity

Frequency of Words by Age

Frequency of Words by Race

Words	Total Word Occurrences by Year			
	2017	2018	2019	2020
Patient (control)	1319.71	1465.95	1729.40	1858.37
Complain	101.26	106.29	118.45	107.47
Compliance	28.22	31.25	35.91	35.65
Cooperative	19.09	21.29	24.36	22.03
Pleasant	14.97	14.99	15.33	32.07
Refused	7.26	8.99	10.42	10.62
Agitated	6.09	6.30	7.07	7.02
Abuse(r)	5.34	6.15	6.89	6.60
Bad Historian	1.28	1.25	1.29	1.22
Lovely	0.68	0.61	0.54	0.52
Addict	0.11	0.14	0.15	0.13
Manipulative	0.09	0.10	0.12	0.11
Good Historian	0.05	0.07	0.11	0.11
Defensive	0.06	0.06	0.09	0.11

CONCLUSIONS

- Our analysis found that the words compliance and cooperative decrease in frequency as age increases; however, the words agitated and refused increased in frequency after the 8th decade of life.
- We also found that the words compliance and cooperative were more frequently used in transgender patients and that there was no significant difference in use of descriptors by race.

POLICY IMPLICATIONS

- Understanding variation in usage by age, gender identity, and racial identity has the potential to aid in future study of the role of these terms in perpetuating stigma and bias to patients
- With the passage of the 21st Century Cures Act hospitals are required to offer patients access to their health records extending the impact of the clinicians' words to the patient-physician relationship.

References

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- P Goddu A, O'Conor KJ, Lanzkron S, et al. Do Words Matter? Stigmatizing Language and the Transmission of Bias in the Medical Record. *Journal of general internal medicine*. 2018;33(5):685-691.

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