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Migraines in the Emergency Department: Setting the Stage for a Pathway

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Background

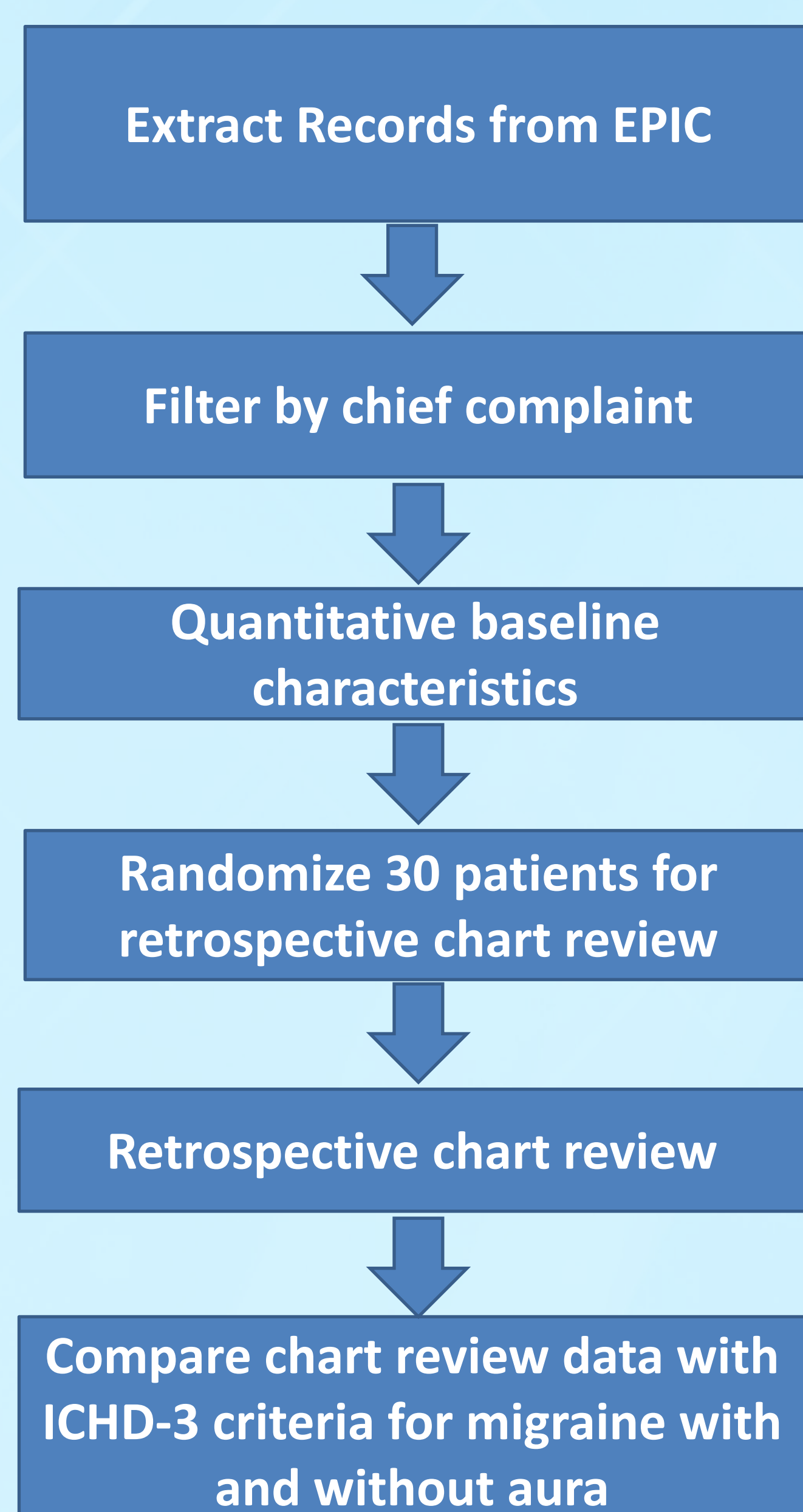
- Headaches are one of the most common complaints in the Emergency Department
- Migraines can mimic dangerous neurologic diseases
- Work up to rule out other neurologic diagnoses can be expensive
- Treatment for migraines must be specific



Problem Statement

How many patients at Lehigh Valley Health Network Cedar Crest Emergency Department are being diagnosed and treated as migraine without meeting International Classification of Headache Disorders 3rd edition (ICHD-3) criteria?

Methods



Results

Variable	N (%)
Sex	
Female	48 (86)
Male	8 (14)
Average Age (years, range)	30.5 (10 - 76)
Diagnoses	
Migraine	43 (77)
Other Headache	9 (16)
Other	4 (7)
Disposition	
Admit to Observation	2 (4)
Discharge	52 (93)
Left Without Being Seen	2 (4)
Average Length of Stay (minutes, range)	279.68 (54 - 773)

Table 1. Baseline characteristics of 56 patients presenting to the emergency department with a chief complaint of migraine or headache.

Variable	N (%)
Sex	
Female	24 (83)
Male	5 (17)
Average Age (years, range)	26.6 (10 - 70)
Percentage of Questions Not Documented	
Exacerbation with Physical Activity	20 (69)
Photophobia	9 (31)
Phonophobia	16 (55)
Severity	15 (52)
Quality	8 (28)
Location	6 (21)
Nausea/Vomiting	2 (7)
Duration	1 (3)
History of Headaches	
Yes	22 (76)
No	7 (24)
ED in the Past 6 Months for Headache	
Yes	7 (24)
No	22 (76)
Has a Neurologist Following	
Yes	15 (52)
No	14 (48)

Table 2. Baseline characteristics of 29 patients who were randomized for retrospective chart review

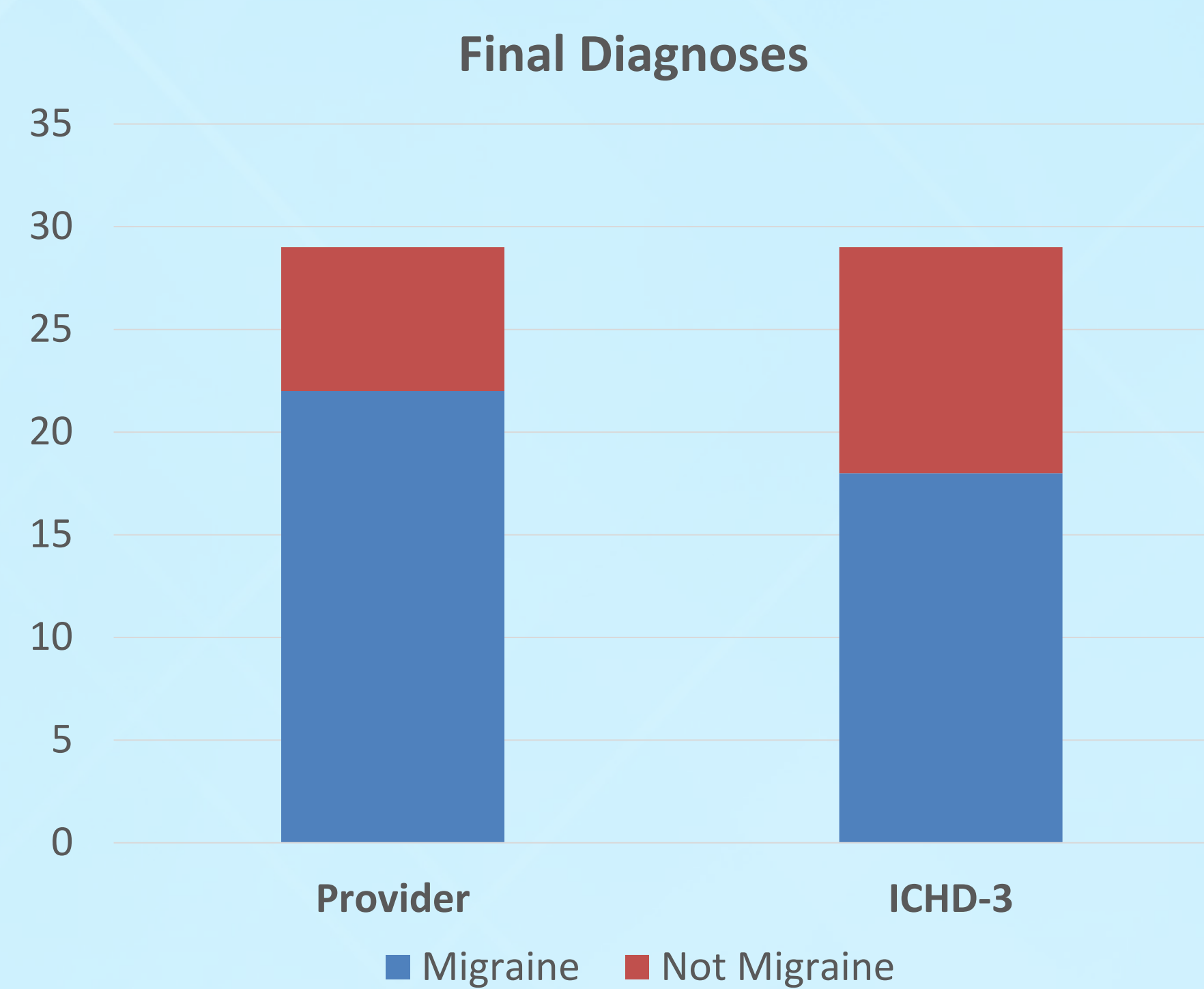


Figure 1. Bar graph comparing the diagnosis breakdown between Emergency Department Provider and ICHD-3 criteria

	True Migraine	Not Migraine	Total
Migraine Diagnosis	17	5	22
No Migraine Diagnosis	1	6	7
Total	18	11	29

Table 3. 2x2 Table comparing the final diagnoses made by the emergency department providers to the final diagnoses as determined by the ICHD-3 criteria

	True Migraine	Not Migraine	Total
Treated as Migraine	15	3	18
Not Treated as Migraine	3	8	11
Total	18	11	29

Table 4. 2x2 Table comparing the treatment given to patients to the final diagnoses as determined by the ICHD-3 criteria

Discussion

- Emergency Department physicians are excellent at identifying and treating true migraines.
- Need for education in other primary headache disorders
- Documentation needs to be improved
- Migraine pathway can reduce healthcare costs by reducing length of stay and expensive workup
- Migraine pathway can expedite migraine-specific treatment and improve patient satisfaction

Conclusions

- Further education and improved documentation will improve the accuracy of migraine and non-migraine diagnoses and inform treatment decisions.
- Migraine pathway is currently under development with plans for implementation in 2020

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