Study on Medical Scribing Errors at IKS Health, Mumbai

By

Shiv Kant

Dissertation submitted for the partial fulfillment of the

MBA Hospital and Health Management

Academic year, 2016-2018

The IIHMR University, Jaipur

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INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr. Shiv Kant** student of **MBA Hospital and health management** from **The IIHMR University**, Jaipur has undergone internship training at **IKS Health**, **Mumbai** from **5th Feb 2018 to 5th May 2018.**

The Candidate has successfully carried out the study designated to him during dissertation training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.

Dr (Col) Ashok Kaushik
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IKS HEALTH

Date: 03rd May 2018

To whomsoever it may concern

This is in recognition that **Dr. Shiv Kant,** student of IIHMR University has successfully completed his dissertation over a period of 3 months from **February 05, 2018 to May 05, 2018** at IKS Health, Mumbai.

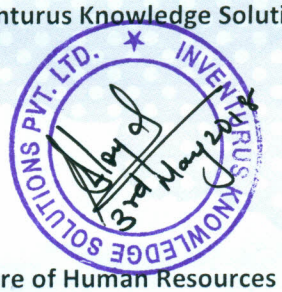
During the period of dissertation he worked on a project "**A study on medical scribing and its errors**" and was able to manage, coordinate and document the project proficiently.

He comes across as a committed, sincere and diligent individual and who has a strong zeal for learning. We wish him all the very best for his course completion.

For **Inventurus Knowledge Solutions Pvt Ltd**

Signature of respective reporting manager

For **Inventurus Knowledge Solutions Pvt Ltd**



Signature of Human Resources

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled A study on Medical Scribing Errors at IKS Health, Mumbai and submitted by **Dr. Shiv Kant** Enrollment No **0519**under the supervision of**Dr. Susmit Jain (Assistant Professor)**, THE IIHMR UNIVERSITY, Jaipur for award of MBA in Hospital and Health management of the University carried out during the period from 2016 to 2017 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.

Signature

Name → Shiv Kant

Roll No → 0519

Acknowledgements

I wish to express my gratitude and sincere thanks to Dr. Akbar Thanawala (Quality Manager,IKS Health) andMsPasangFernandes(Sr. Quality Analyst, IKS Health) for helping me in the completion of myproject.

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Last but not the least; I would like to give my sincere thanks to my parents for supporting me throughout this course.

Dr. Shiv Kant
Roll No- 0519

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Abbreviations	**Full forms**
HER	Electronic Health Record
SLA	Service Level Agreement
HPI	History of Present Illness
WHO	World health organization
ED	Emergency Department

1. Introduction

A Medical Scribe is essentially a personal assistant to the physician; performing documentation in the EHR, gathering information for the patient's visit, and partnering with the physician to deliver the pinnacle of efficient patient care.Prescribing faults and prescription errors are major problems among medication errors. They occur both in general practice and in hospital, and although they are rarely fatal they can affect patient's safety and quality of healthcare.Medication errors are among the most common medical errors in the hospitals. Scribing error is a specific type of medication errors and is due to data entry error that is commonly made by the human operators. Prescription errors encompass those related to the act of writing a prescription, whereas prescribing faults encompass irrational prescribing, inappropriate prescribing, under prescribing, overprescribing, and ineffective prescribing, arising from erroneous medical judgment or decisions concerning treatment or treatment monitoring.

Prescription errors encompass those related to the act of writing a prescription, whereas prescribing faults encompass irrational prescribing, inappropriate prescribing, under prescribing , overprescribing, and ineffective prescribing, arising from erroneous medical judgment or decisions concerning treatment or treatment monitoring. Appropriate prescribing results when errors are minimized and when the prescriber actively endeavors to achieve better prescribing: both actions are required.

Medication error is one of the critical aspects involved in patient safety and hence is identified as one of the quality indicators for nursing and pharmacy. This study will provide the base line data regarding the rate of scribing error prevalent in a group of hospital and their causes.

Objectives

1. To measure the percentage of scribing error for the study period.
2. To identify the causes leading to prescription error.

2. Literature Review

Electronic health records (EHRs) are frequently recognized as a promising tool to help improve health care quality, safety, outcomes, and productivity.In the United States (US), the Health Information Technology for Economic and Clinical Health Act of 2009 established incentive programs to promote meaningful use of EHRs within primary care and other health care settings.

As of 2012, 72% of US office-based physicians described using some type of EHR or electronic medical record system: 40% described using a basic EHR system, and 24% reported a fully functional system.Among US general, acute care hospitals in 2012, 27% reported using a basic EHR system and 17% reported a comprehensive system.By 2019, an estimated 80% of physicians in large group practices, 65% in small group practices, and 66% of all other specialists are expected to have achieved meaningful use.

The increasing burden of documentation experienced by doctors threatens the efficiency in EDs and increases the likelihood of documentation errors.

Medical scribes afford the opportunity to allay this burden by removing a large component of the doctors' documentation task. Scribes have been embedded successfully in US EDs, and the effects have been mostly advantageous.

A study showed correlation between a scribes system and thousands of dollars in savings per patient. The study compared standard visits (20-minute follow-up and 40-minute new patient) to a scribe system (15-minute follow-up and 30-minute new patient) in a cardiology clinic. Direct and indirect revenue combined resulted in $2,500 more per patient with the use of scribes.

Physicians using scribes saw ~10% more patients. This improved productivity resulted in 84 additional new patients and 423 additional follow-up patients seen, generating 3,029 additional wRVUs. The use of scribes resulted in an additional CV revenue of $1,372,694 at a cost <$100,000 for the scribes

3. Methodology

3.1 Study Design

Descriptive Cross- Sectional Study Design

3.2 Setting Area

IKS Health (Mumbai)

3.3 Duration of study

5 Feb 2018 to 5 May 2018

3.4 Sample Size

450 patient chart notes.

150 patient chart notes per month (February, March, April).

3.5 Sampling Technique

Simple Random Sampling.

3.6 Sample selection

Inclusion criteria: - OPD and Day care patients.

Exclusion criteria: - IPD and Emergency Patients.

3.7 Data collection procedure

Data was collected from a US group of Hospital.

3.8 Data analysis procedure

Data was analyzed using Microsoft excel and graphical representation including Bar Graphs, Pie charts of the result done as per the need of the study.

4. Results

Table 1: Distribution of Errors in February 2018, March 2018 and April 2018.

Sl. No	Error Type	February	March	April
1	Critical - Client SLA	2	5	6
2	Critical - Incorrect data - Patient Safety	0	0	0
3	Critical - Missed data - Patient Safety	0	0	0
4	Critical - Patient ID error	0	0	0
5	Major- Failure to Flag	0	0	0
6	Major - Incorrect Word	8	5	2
7	Major - Incorrect Doctor Name	0	0	2
8	Major - Incorrect Gender	3	1	1
9	Major - Incorrect Data Capture	6	22	28
10	Major - Missed Data	25	19	16
11	Major - Plan - Use of layman terminology	1	1	1
12	Minor - Formatting Error	34	46	59
13	Minor - Grammar Error	44	36	31
14	Minor - Spelling - Medical	2	10	3
15	Minor - Spelling - Non Medical	3	7	9
16	Minor - Omitted Word/s	3	9	9
17	Minor - Incorrect Word/s	44	56	58
18	Minor - Historian captured incorrectly	3	0	0
19	Minor - Patient words not captured (HPI)	4	4	3
20	Minor - Punctuations	20	18	14
21	Feedback - Others	30	20	15
22	Feedback - Storyline	0	1	1
23	Feedback - Crispness	6	3	1

4.1. Month-wise distribution of errors:

4.1.1. In February 2018, minor errors (157) comprise the major part of total errors (238) with 66%. Major errors (53) and feedback (36) comprises 18% and 15% respectively. One percent critical errors (2) are present.

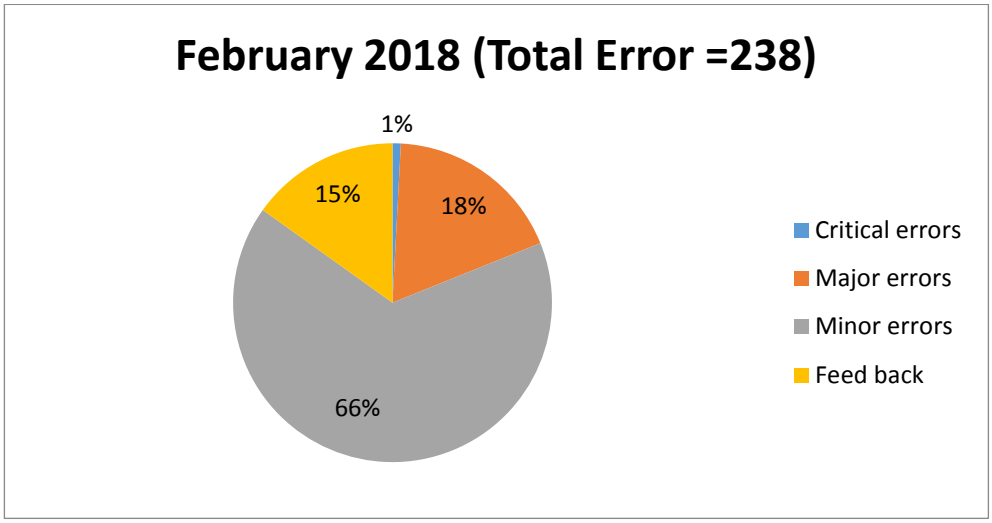

Figure 4.1.2: Distribution of errors in the February 2018.

4.1.2. In March 2018, minor errors (186) comprise the major part of total errors (261) with 71%. Major errors (46) and feedback (24) comprises 18% and 9% respectively. Two percent critical errors (5) are present.

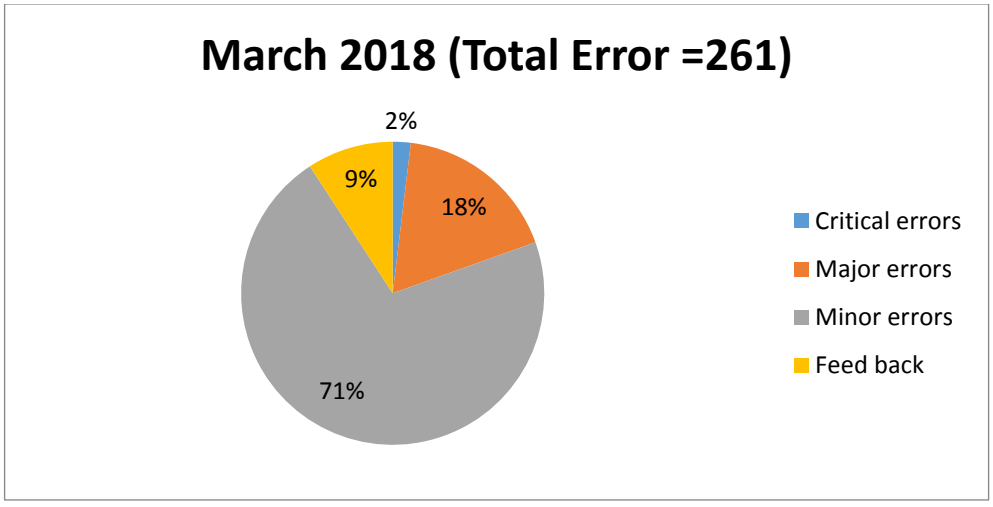

Figure 4.1.3: Distribution of errors in the March.

4.1.3. In April 2018, minor errors (186) comprise the major part of total errors (259) with 72%. Major errors (50) and feedback (17) comprises 19% and 7% respectively. Two percent critical errors (6) are present.

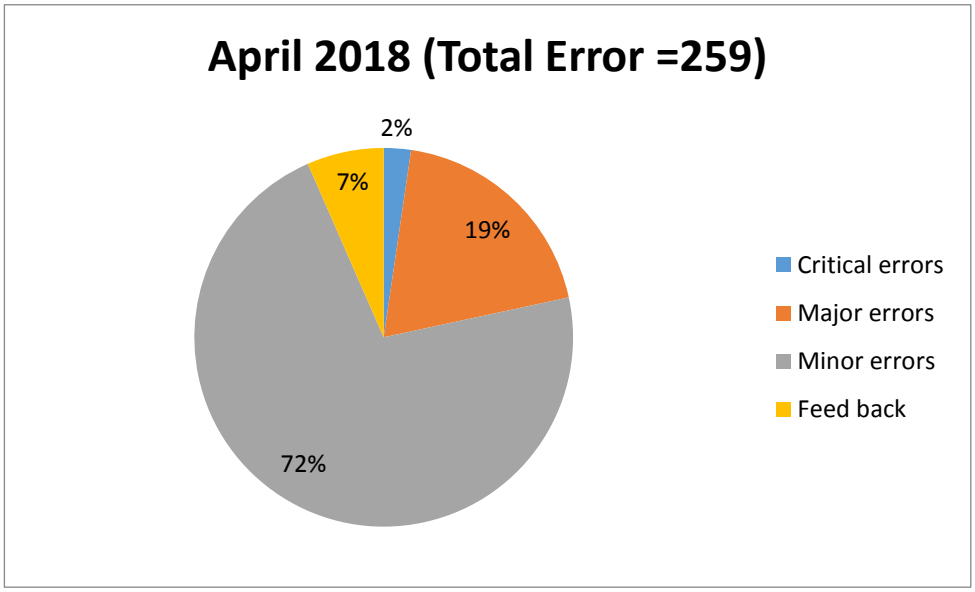

Figure 4.1.4: Distribution of errors in the April

4.2Comparison of errors in February, March and April (2018).

There is remarkably increase in the errors (critical errors, major errors and minor errors) from February to April. Feedback decreases from 36 to 17 in the same duration. The biggest concern is increase in the critical errors, from two to six.

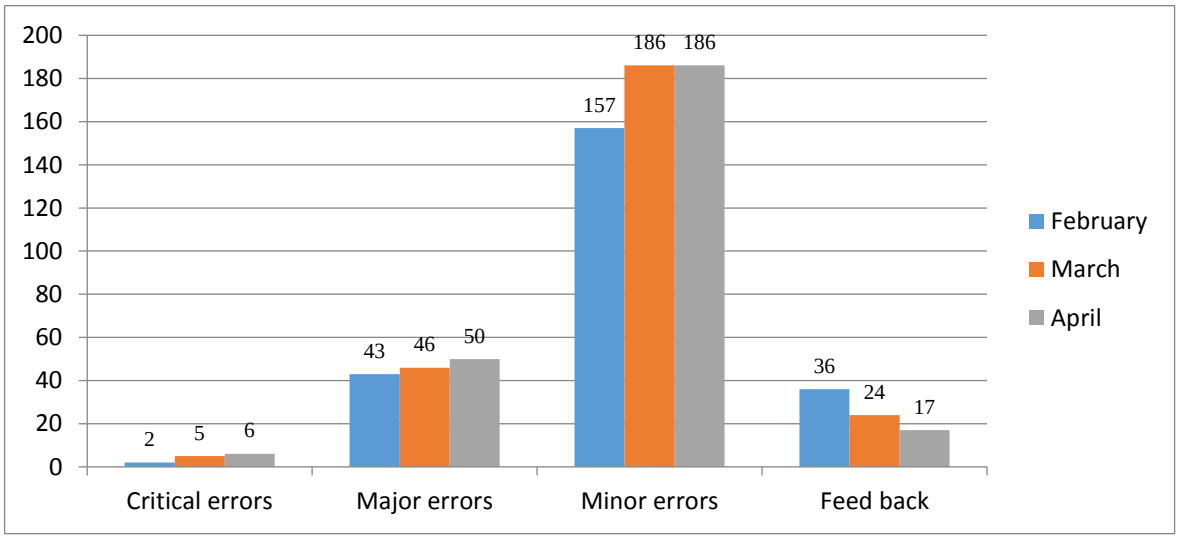

Figure 4.2: Comparison of errors in February, March and April.

4.3Types of Errors mainly increased in the period; February (2018) to April (2018).

The following are the errors which mainly increases in this duration (February, March, April)

a) Critical – Client SLA (from 2 to 6).

b) Major – Incorrect Data Capture (from 6 to 28).

c) Minor – Spelling – Non medical (from 3 to 9).

d) Minor – Omitted word/s (from 3 to 9).

e) Minor – Incorrect word/s (from 44 to 58).

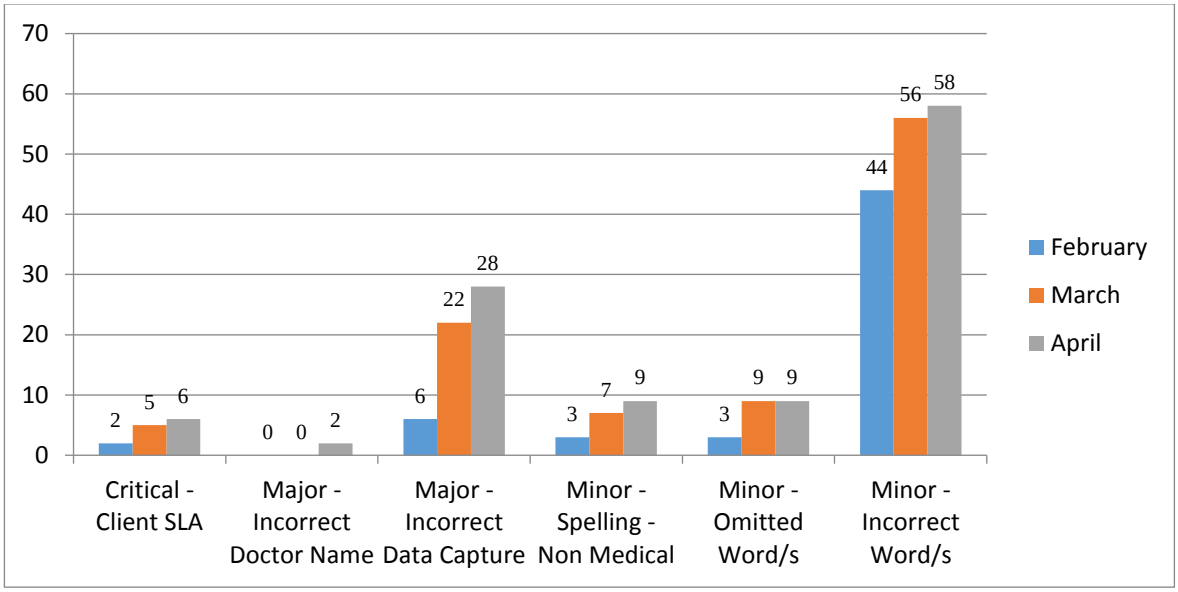

Figure 4.3: Types of Errors mainly increased in the period; February to April.

4.4Types of Errors mainly decreased in the period; February 2018 to April 2018.

The following are the errors which mainly decreases in this duration (February 2018, March 2018, April 2018)

a) Major – Incorrect word (from 8 to 2).

b) Major – Incorrect Gender (from 3to 1).

c) Major – Missed Data (from 25 to 16).

d) Minor – Punctuations (from 20 to 14).

e) Feedback Others (from 44 to 58).

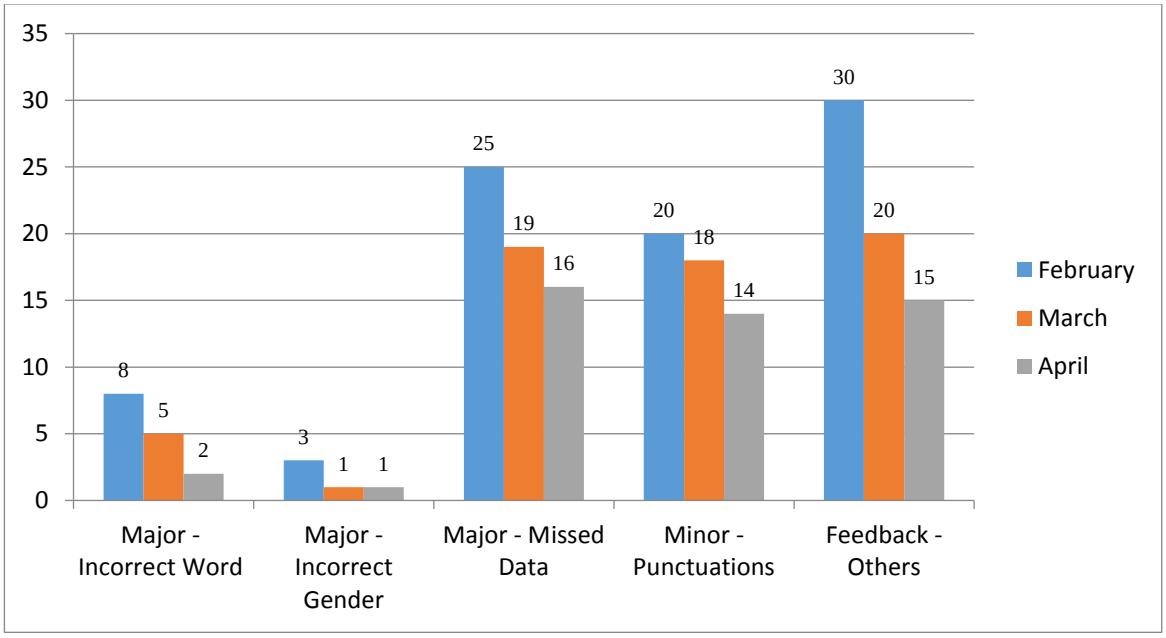

Figure 4.4: Types of Errors mainly decreased in the period; February 2018 to April 2018.

4.5 Total Errors:

There is remarkably increase in number of errors in the March (263) as compared to February (238). But slight decline is seen in number of errors in the April (259), when compared with the March (263).

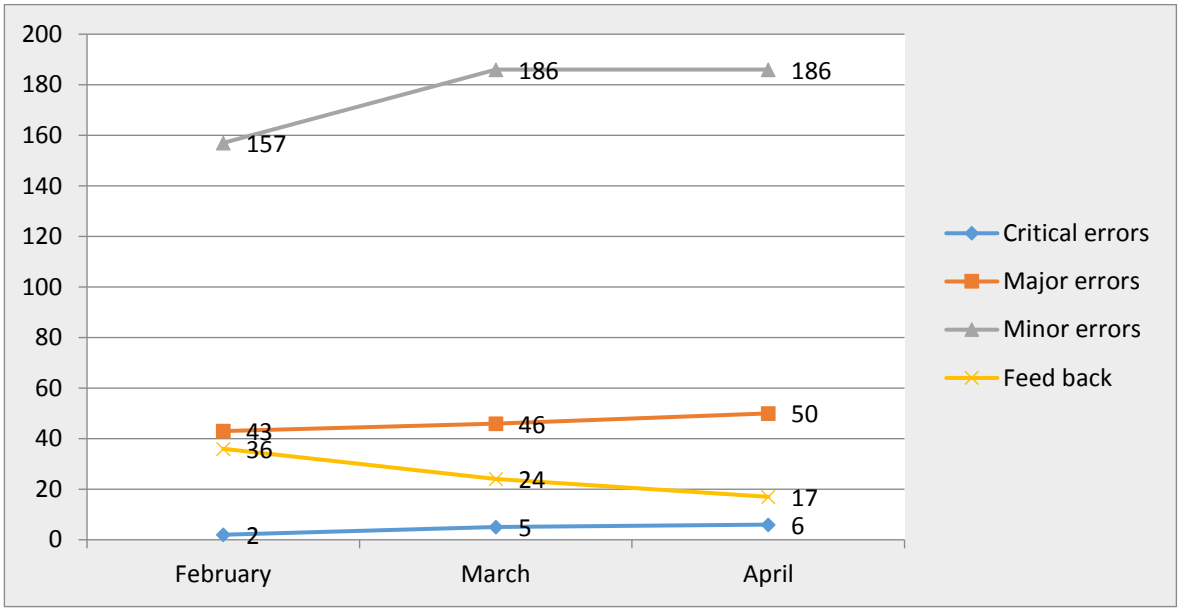

Figure 4.5: Total errors in the month of February, March and April.

4.6 Category-wise distribution of errors in February 2018, March 2018 and April 2018.

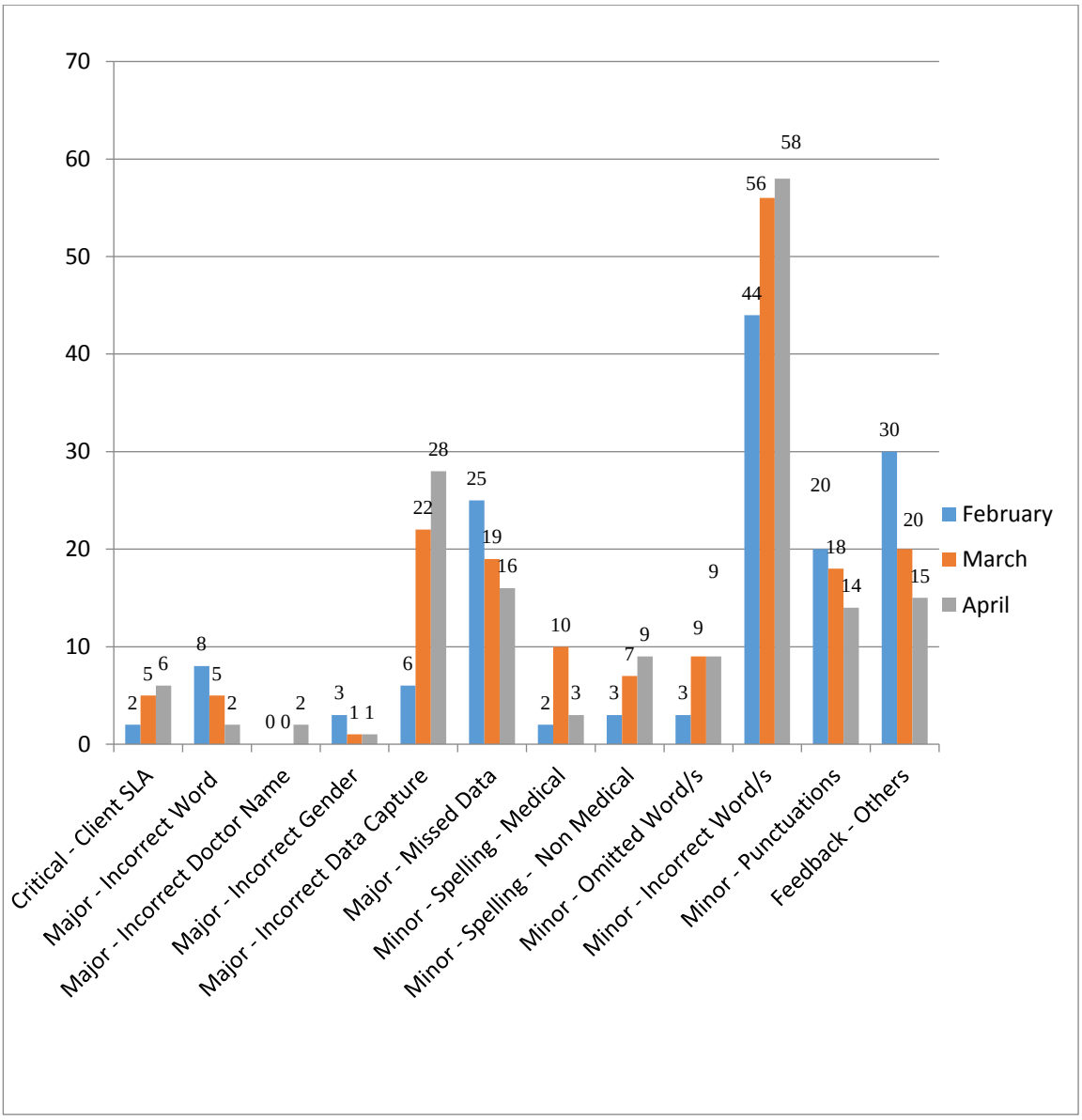

Figure4.6: Category-wise distribution of errors in February 2018, March 2018 and April 2018.

5. Discussion

Following are the reasons of errors.

1. High attrition rate.
2. Lack of one to one feedback system between quality analyst and scribe.
3. Relatively less time for proof reading of the medical chart note due to over productivity.
4. Variation in training methodology.

6. Suggestions:

1. Create an employee friendly working environment to reduce the high attrition rate.
2. Establish a process of one to one feedback between quality analyst and scribe.
3. Reduce little work load on the scribe, which increases the time for proof reading of the medical chart note.
4. Standardized training process, which reduces the variation in the training methodology.

7. Conclusion:

There was remarkably increase in the scribing errors seen in the given time duration (February 2018 to April 2018). A slight change in company policy in creating an employee friendly working environment along with standardized training process may well reduce many of the errors. It is certainly not a panacea to address the problem, however, and systems to address and ameliorate new and continuing errors need to be sought and implemented.

8. Appendices

Table 2: Description of Medical Scribing error type.

Sl. No.	Error Type	Description
1	Critical - Client SLA	These errors impact the set SLAs for the client, physician preference / glossary terms, rules for the account.
2	Critical - Incorrect data - Patient Safety	These errors directly impact patient safety, and include medical word misuse, Incorrect drug name or drug dosage, incorrect lab values and test names, incorrect punctuation.
3	Critical - Missed data - Patient Safety	These errors directly impact patient safety, and include omitted drugs or drug dosage, omitted lab values and test names.
4	Critical - Patient ID error	Patient identification error, impact HIPAA, severely comprising the safety to the patient information.
5	Major- Failure to Flag	These errors impact document integrity, and failure to flag a document, and protocol failures.
6	Major - Incorrect Word	These errors impact document integrity, and include failure to flag a document, and protocol failures.
7	Major - Incorrect Doctor Name	Failure to capture the correct name of a provider mentioned in the report.
8	Major - Incorrect Gender	Failure to capture the correct gender.
9	Major - Incorrect Data Capture	These errors impact document integrity and include incorrect words incorrect punctuation that does not impact patient safety but changes the meaning of the sentence, and abuse of flagging documents, incorrect template used, drug/dosage misspelling/ typos or named a drug that does not exist.
10	Major - Missed Data	These errors impact document integrity, and include omitted words which impacts the document in a major way.
11	Major - Plan - Use of layman terminology	Use of layman terminology in the plan section of the report.
12	Minor - Formatting Error	These errors include formatting errors which do not impact the document in a critical or major way.

13	Minor - Grammar Error	These errors include grammar errors which do not impact the document in a critical or major way.
14	Minor - Spelling – Medical	These errors include spelling errors/British spelling/typos, which do not impact the document in a critical or major way.
15	Minor - Spelling - Non Medical	These errors include non-medical spelling errors/British spelling/typos, which do not impact the document in a critical or major way.
16	Minor - Omitted Word/s	These errors include omitted words which do not impact the document in a critical or major way.
17	Minor - Incorrect Word/s	These errors include incorrect words used which do not impact the document in a critical or major way.
18	Minor - Historian captured incorrectly	Captured the historian of the report incorrectly.
19	Minor - Patient words not captured (HPI)	Not used words as told by the patient in the HPI section of the report.
20	Minor – Punctuations	Punctuation errors which do not impact the document in a critical or major way.
21	Feedback – Others	These are educational improvement comments on flaws.
22	Feedback – Storyline	To check how accurately the information flow is captured to understand why the treatment plan was made; if the words, meanings, and intent were clearly conveyed into the report leaving no ambiguity to the reader.
23	Feedback – Crispness	To ensure putting in sentence that is clear and to the point, avoiding the use of unnecessary words.

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