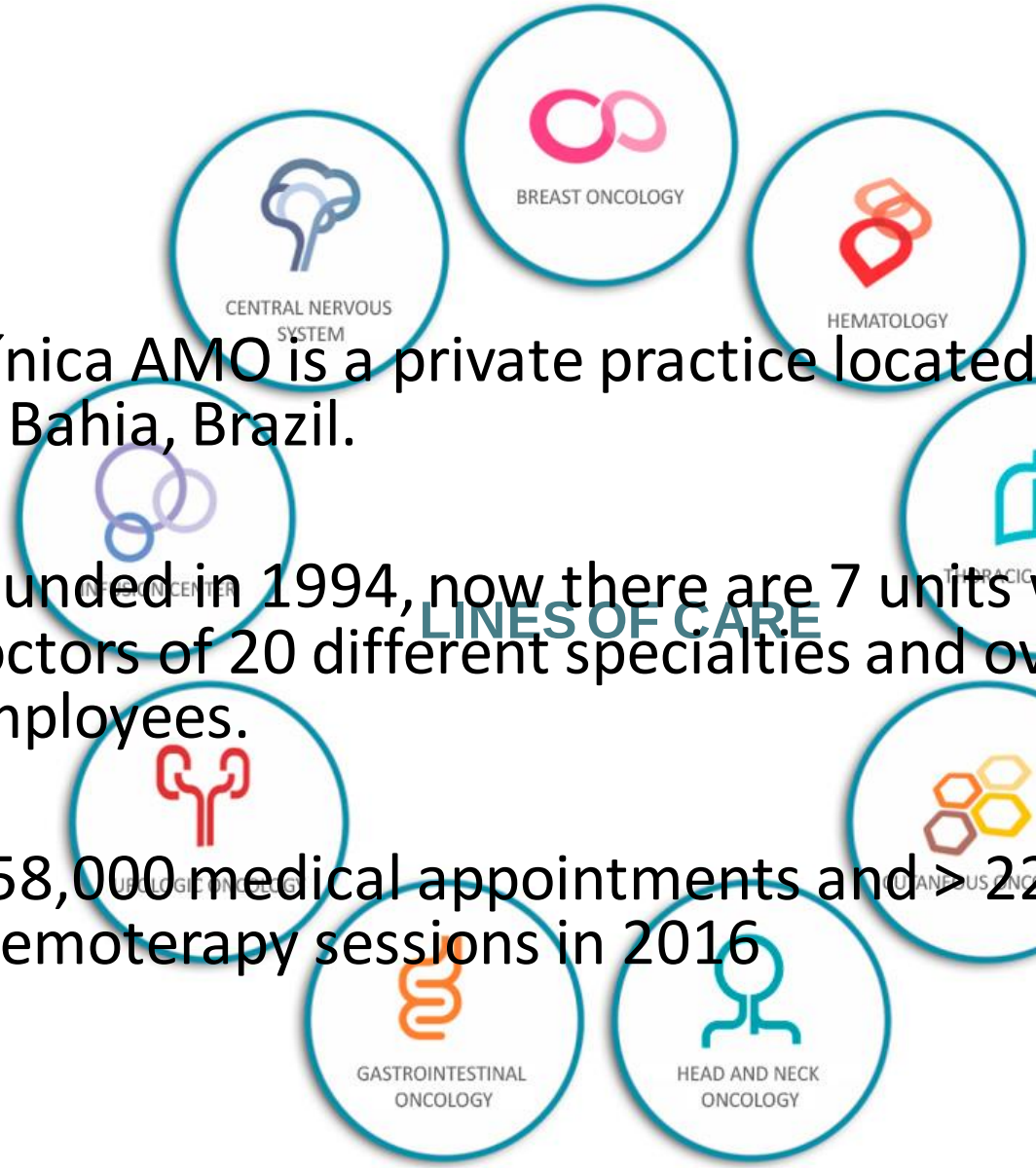
ASCO's Quality Training Program

Project Title: Creating a Safer Medical Record:
ICD code entered and correct

Presenter's Name: Thamine Lessa,
Nelson Pestana,
Álvaro Machado

Institution: Clínica AMO

Date: October 4th, 2017



- Clínica AMO is a private practice located in the state of Bahia, Brazil.
- Founded in 1994, now there are 7 units with 125 doctors of 20 different specialties and over 240 employees.
- > 58,000 medical appointments and > 22,500 chemoterapy sessions in 2016

Team Members

Team Leader: Thamine Lessa, MD - Pneumologist

Team Members:

- Nelson Pestana, CEO
- Adriana Alves, Nurse Manager
- Paulo Amaral, MD – Surgeon
- Olga Neves, Administrator
- Mariane Machado, Nurse
- Álvaro Machado, BPharm
- Maria Dias, MD – Hematologist
- Caio Silverio, MD – Oncologist
- Elder Pimenta, IT Manager

Project Sponsors: Carlos Sampaio, MD, President of Clínica AMO; Nelson Pestana, CEO of Clínica AMO.

Problem Statement

In 2016 at AMO, **20.7%** of our patients following the third visit have missing or incorrect ICD documentation in the appropriate field in the electronic medical record (EMR). This leads to lack of coordination amongst the multidisciplinary team and inconsistencies in data gathering and analysis focused on clinical research and management.

Applying the ICD Code

Chosen eligible ICDs for monitoring: E.g. R91 (Thoracic Mass)

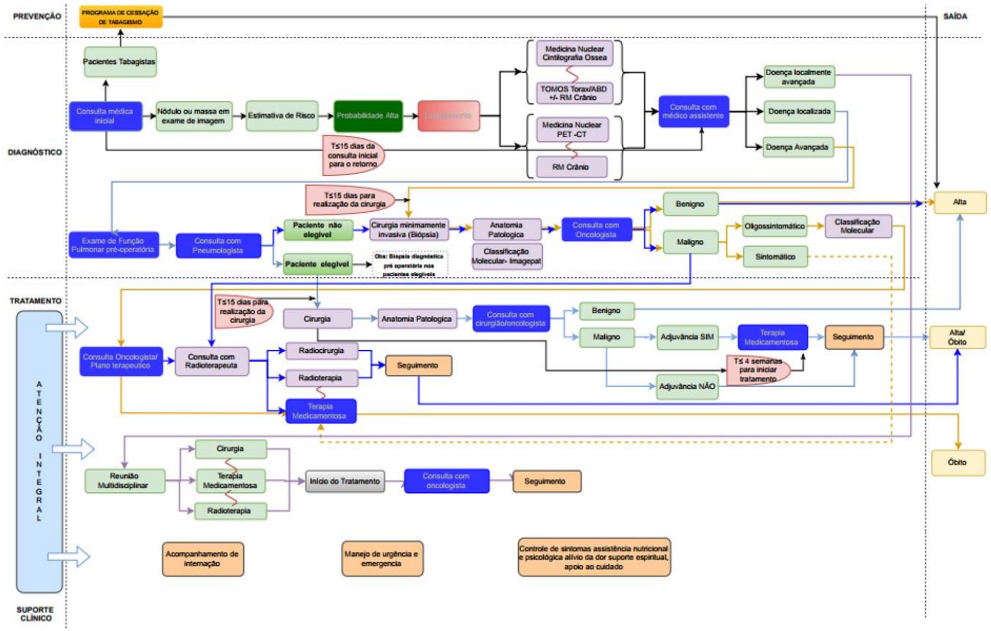
When correct documented in EMR

Patient automatically starts on the Line of Care and begins being monitored by the multidisciplinary team

Log the time between each and every events (E.g. From diagnosis to surgery)

Line of Care for Thoracic Oncology

(High Probability of Lung Cancer)



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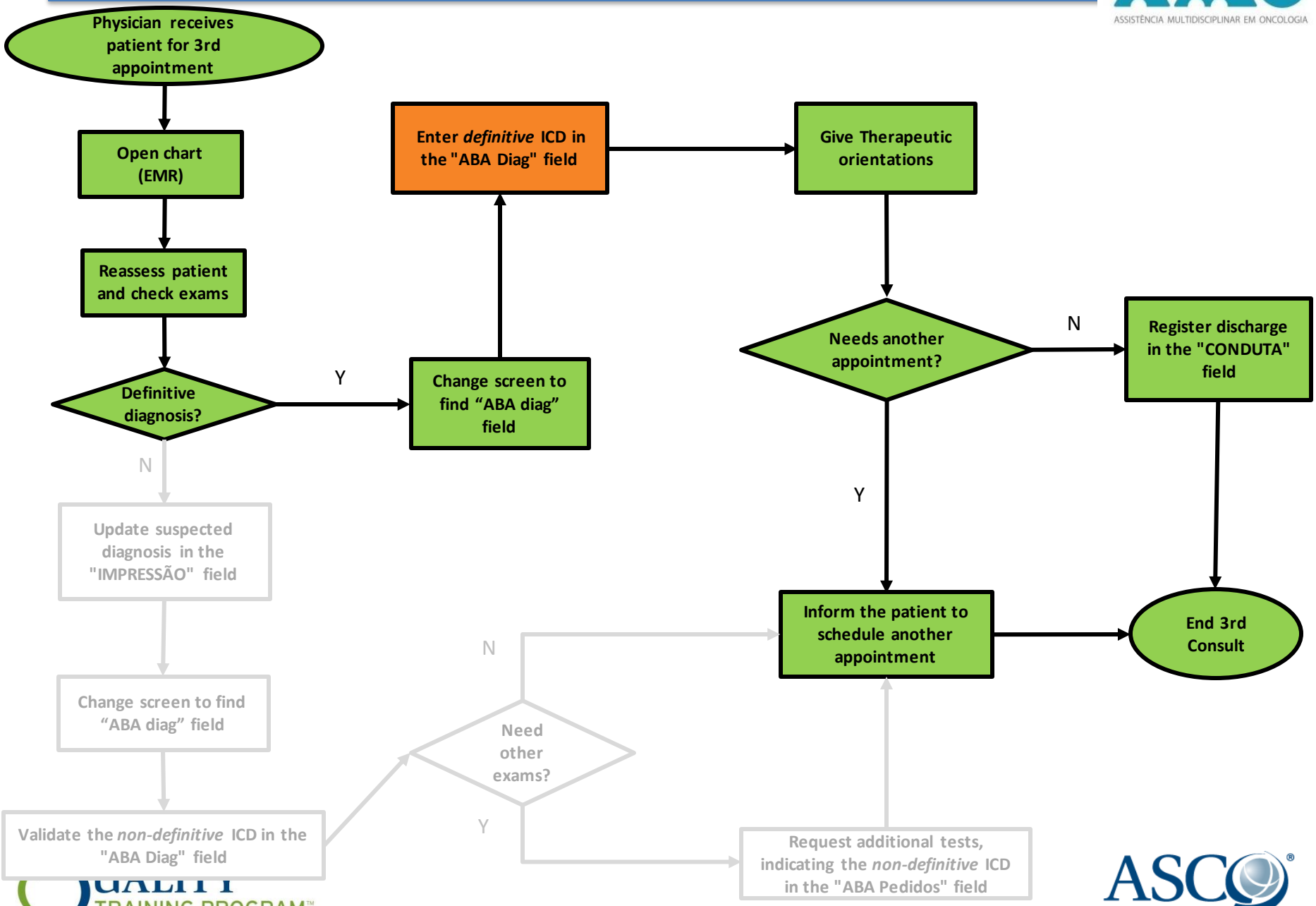
Process Map



AMO
ASSISTÊNCIA MULTIDISCIPLINAR EM ONCOLOGIA

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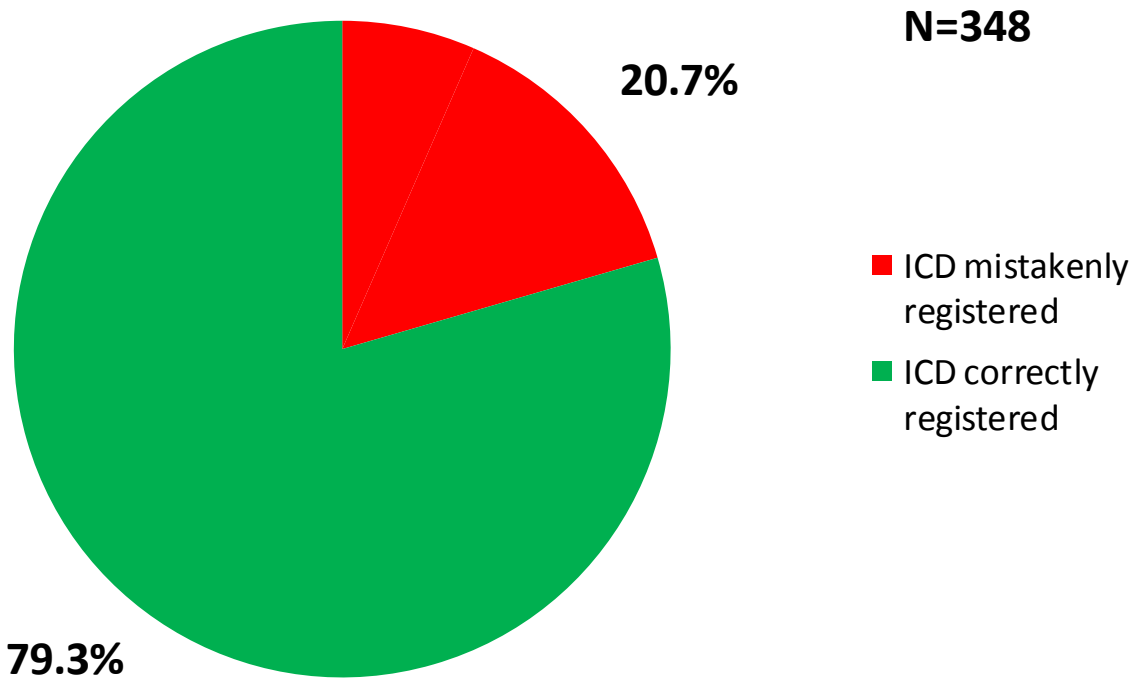
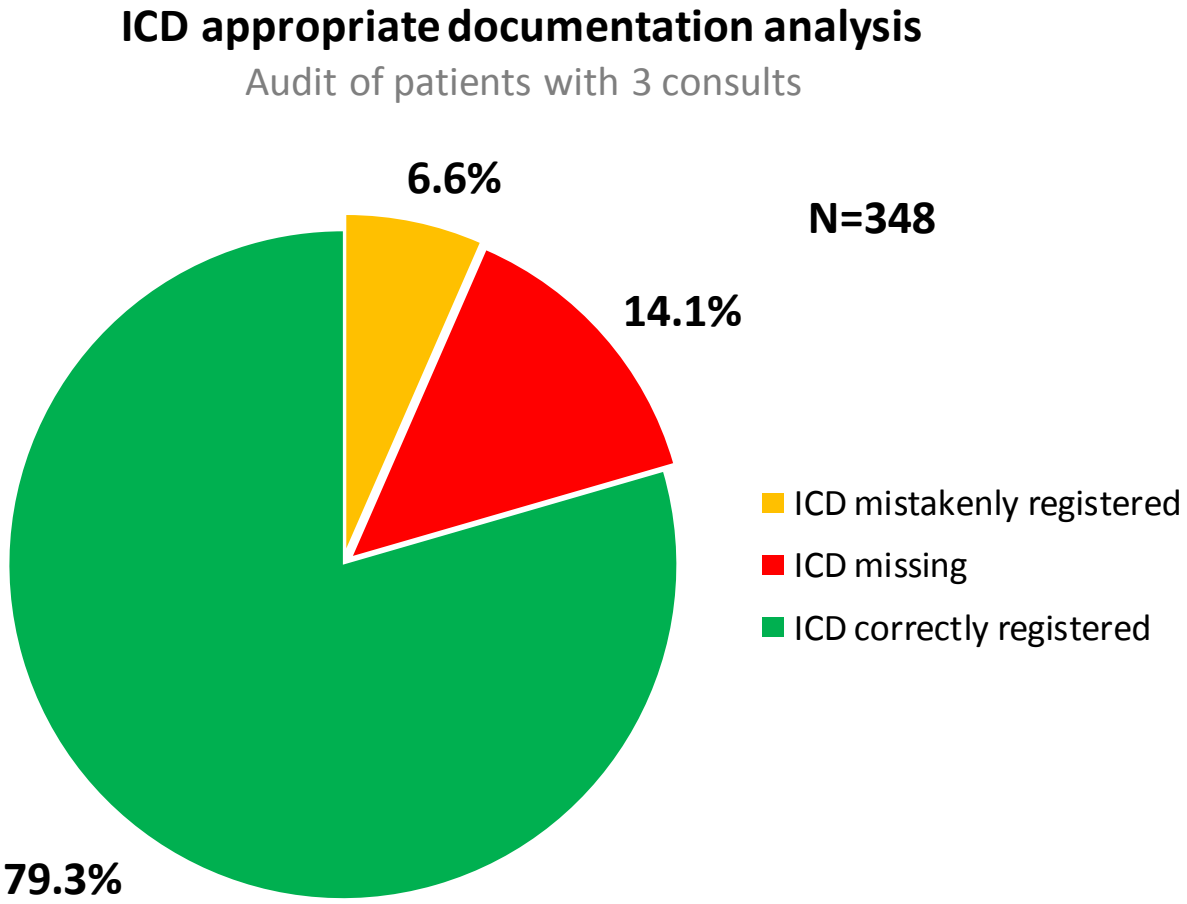
Baseline Data

ICD appropriate documentation analysis

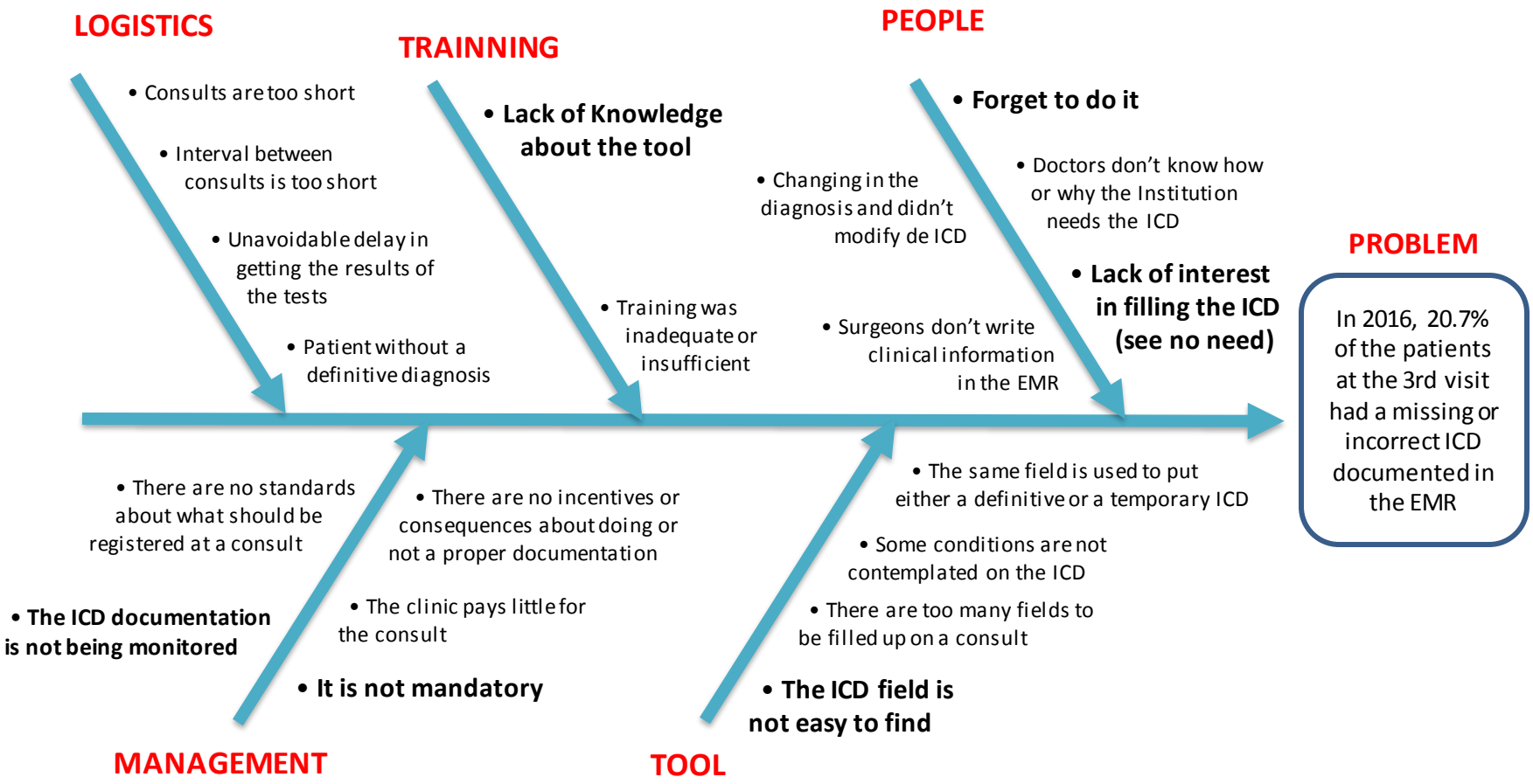
Audit of patients with 3 consults



Baseline Data



Cause & Effect Diagram



Collecting Diagnostic Data

Identify the average time of your 1st consults

( ) Less than 10 minutes
( ) 10 to 20 minutes
( ) 20 to 30 minutes
( ) more than 30 minutes

Indicate the average time of your general consults
( ) Less than 10 minutes
( ) 10 to 20 minutes
( ) 20 to 30 minutes
( ) more than 30 minutes

Indicate wheather you do or don't know the appropriate field in the EMR for ICD registration: ( ) Yes ( ) No

Describe what you think is the utility of the ICD in the: [ ]

Indicate how importante you think it is to register the ICD in the EMR:
( ) Irrelevant
( ) Not importante
( ) Important
( ) Very Important
( ) Indispensable

Pick 3 options which you think describe the main reasons why the ICD may not be properly registered in the EMR:

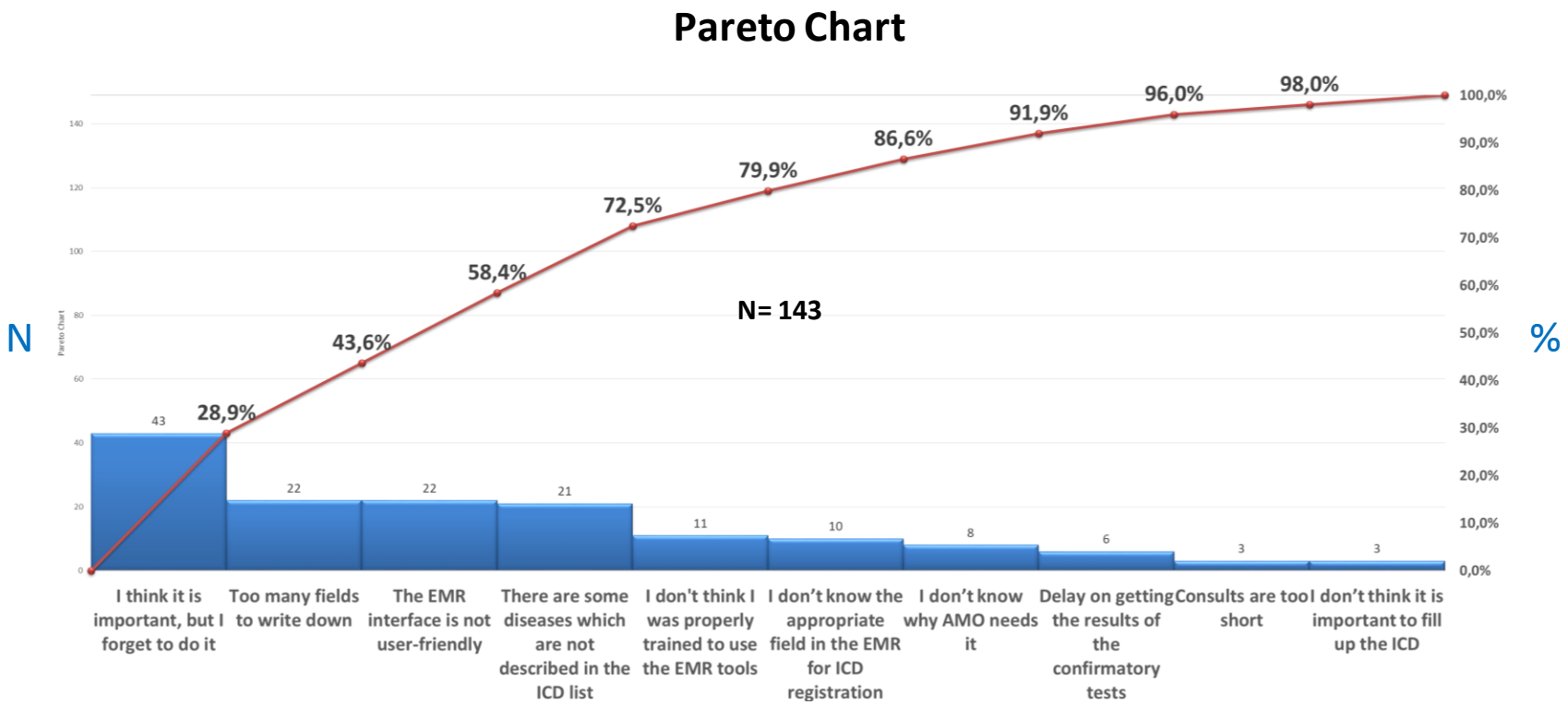
1) Consults are too short
2) Too many fields to write down
3) I don't think it is important to fill up the ICD
4) I think it is important, but I forget to do it
5) I don't know why AMO needs it
6) Patient doesn't have the results of the confirmatory tests yet
7) There are some diseases which are not described in the ICD list I think I was not well trained to use our EMR
8) The EMR interface is not user-friendly
9) I don't know the politics for proper clinical registration dictated by the Institution

Other not listed above: [ ]

Other coments:

[ ]

Diagnostic Data

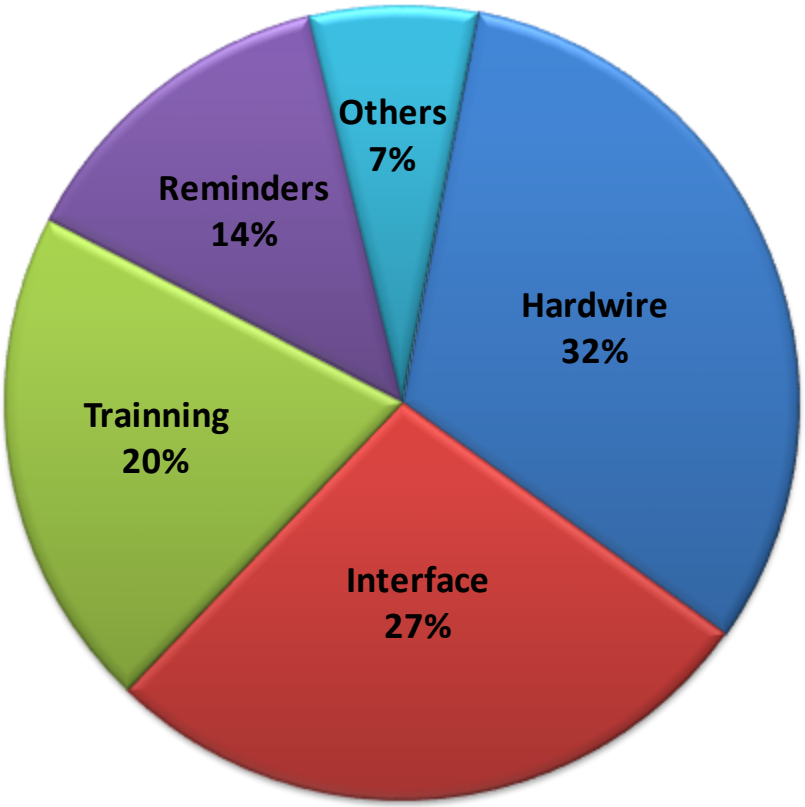


Main reasons not to document ICD

Diagnostic Data

Actions Suggested

N= 143



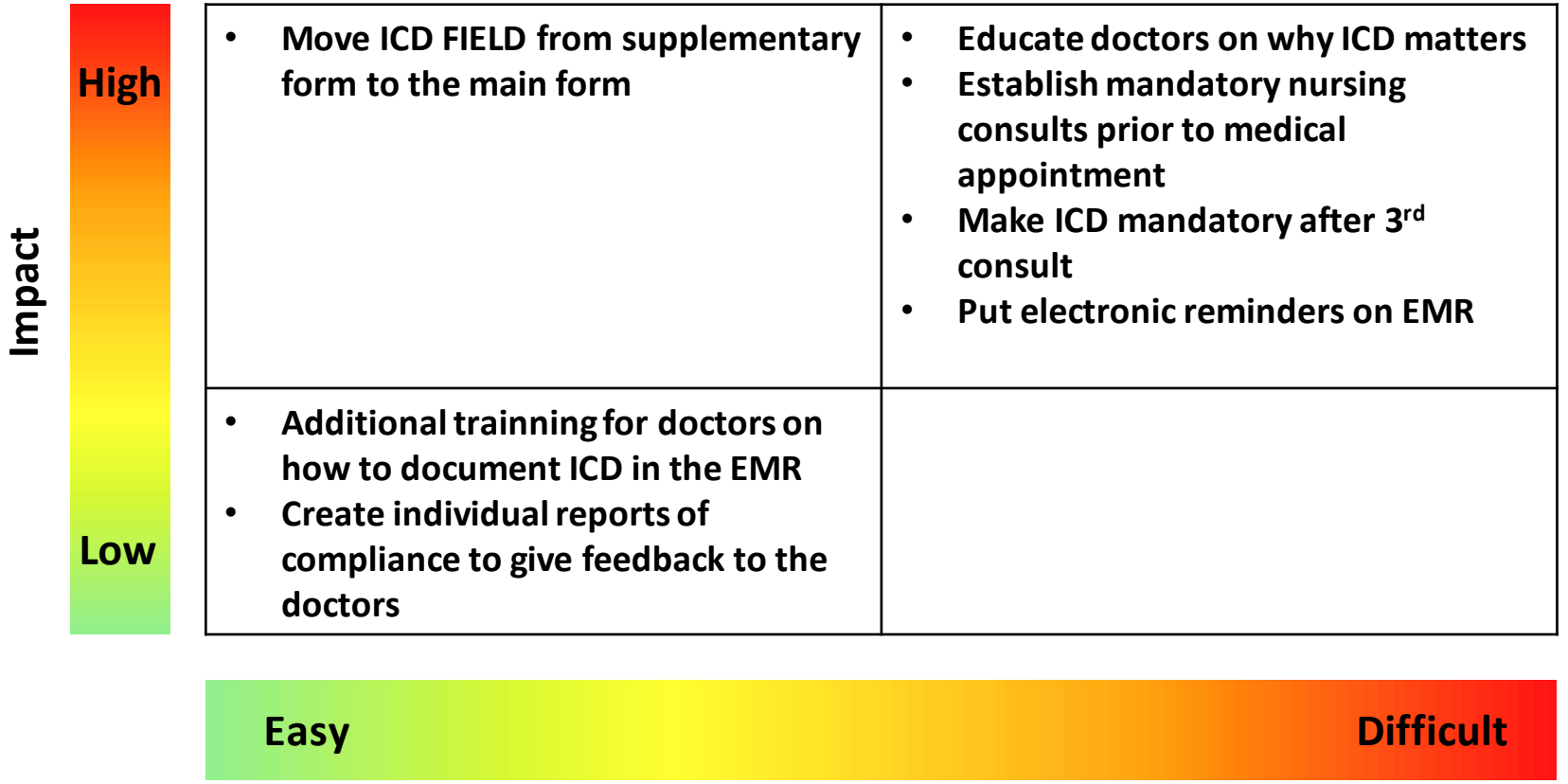
Aim Statement

Reduce the percentage of missing or incorrect ICD documentation following the 3rd consult to 5% within 6 months

Measures

- **Measure**: Outcome - % of patients with correct ICD registered in the proper field in the EMR
- **Patient population**: Patients with 3 office appointments with his/her doctors
- **Calculation methodology**: Patients with 3 appointments with proper ICD registered in the ICD field / Total of patients with 3 appointments
- **Data source**: EMR
- **Data collection frequency**: Every 1/3/6 months
- **Data quality(any limitations):** Potential for human error; Sample size.

Prioritized List of Changes (Priority/Pay –Off Matrix)



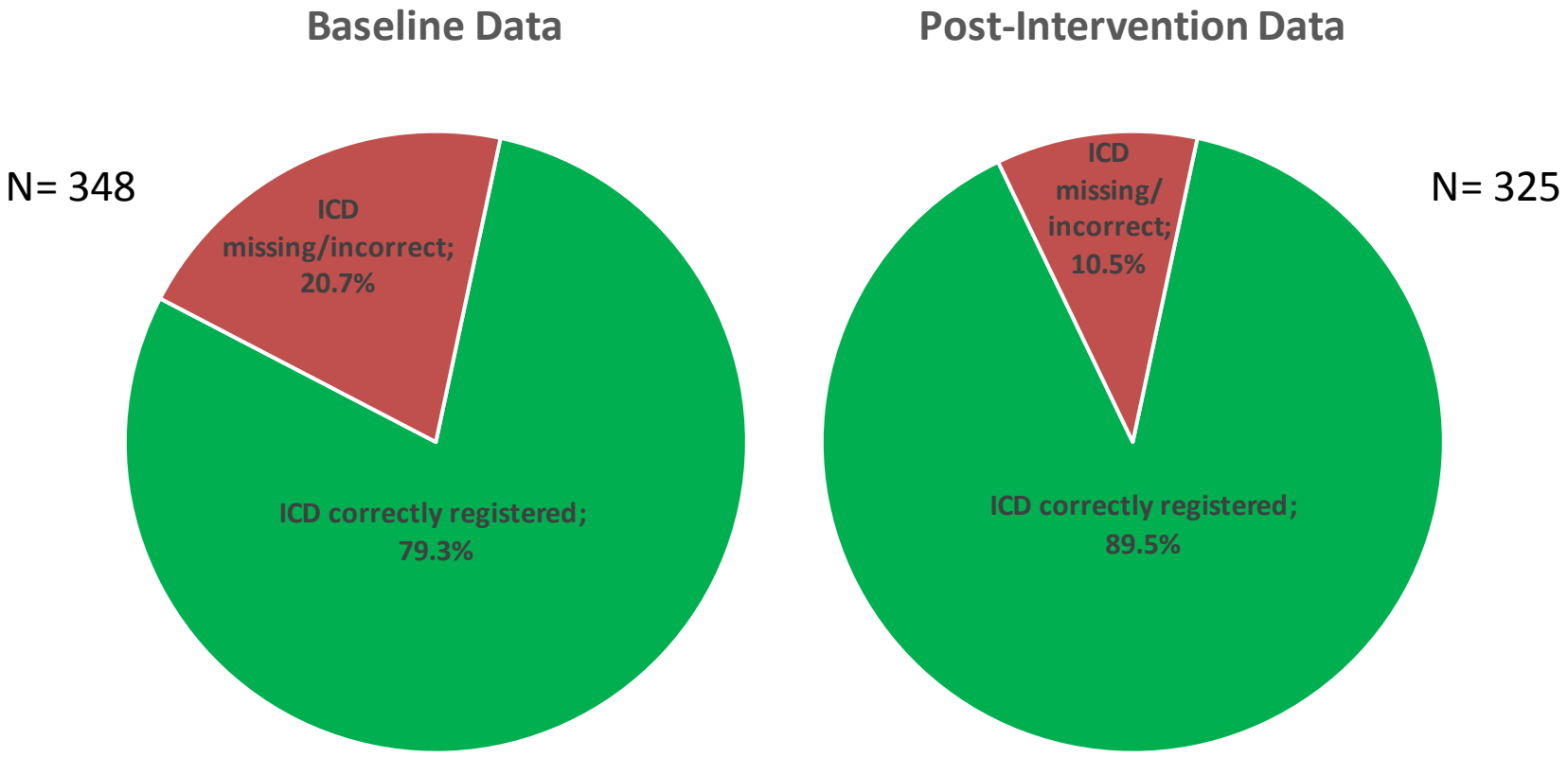
PDSA Plan (Test of Change)

Date of PDSA Cycle	Description of Intervention	Results	Action Steps
August 22nd	Move ICD FIELD from supplementary form to the main form	Completed	• Get approval from the Chart Commission • Design the change on the form • Implement change • Communicate doctors
August 22nd- September4th	Education actions towards showing importance of ICD and correct documentation	Completed	• Sent e-mail with orientations • Reinforced importance of ICD documentation during weekly meetings with doctors
August 22nd- September29th	IT staff coaching	Completed	• IT staff working one-on-one with doctors in clinic to coach and answer questions about ICD documentation

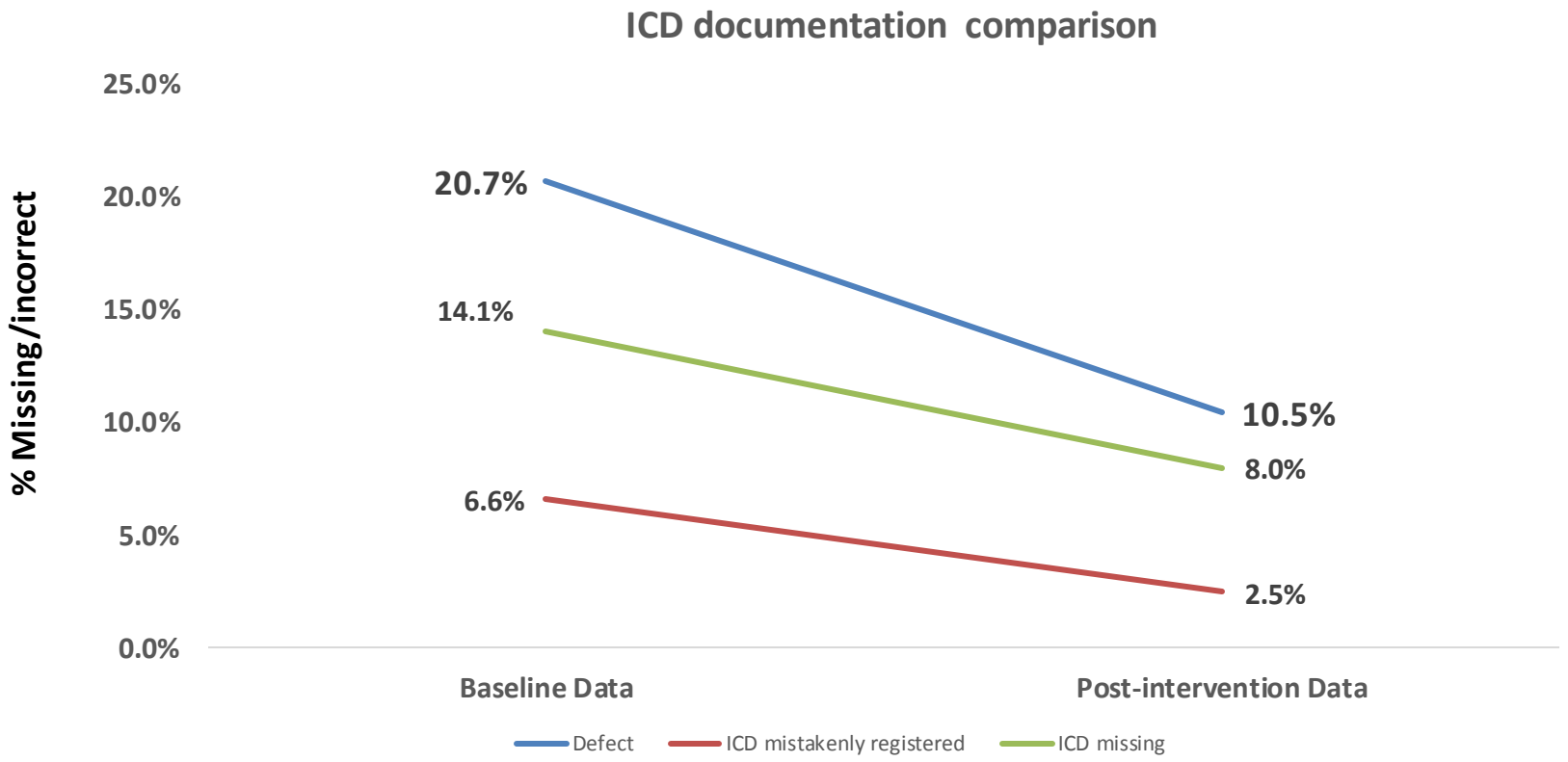
PDSA Plan (Test of Change)

Date of PDSA Cycle	Description of Intervention	Results	Action Steps
August 22nd - December	Make ICD mandatory in the EMR from 3rd appointment and beyond	TBD	• Request made to software company
August 22nd – December	Put electronic reminders on EMR	TBD	• Request made to software company
August 22nd - November	Create individual reports of compliance to give feedback to the doctors	TBD	• Request made to internal IT development team

Change Data


Baseline Data
N= 348
ICD missing/incorrect; 20.7%
ICD correctly registered; 79.3%
Post-Intervention Data
N= 325
ICD missing/ incorrect; 10.5%
ICD correctly registered; 89.5%

Change Data


ICD documentation comparison
% Missing/incorrect
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
20.7%
14.1%
6.6%
10.5%
8.0%
2.5%
Baseline Data
Post-intervention Data
Defect
ICD mistakenly registered
ICD missing

Conclusions

- Despite we did not yet reach our goal, we reduced error rate by 45.8%;
- It was very helpful to have a multisciplinary team and to include all doctors in the analysis and generating solutions;
- The fact that we were able to reduce by half the defects with only three easy to implement actions makes us very confident to apply this methodology in order to solve many other problems;
- We improved the consistency of an importante parameter our database;

Next Steps/Plan for Sustainability

- Implement additional actions as planned on the beggining;
- Measure the results over time
- Apply the methodology to other problems in our institution

Thamine Lessa, MD - Pneumologist
Álvaro Machado, BPharm
Nelson Pestana, CEO

Creating a safer Medical Record – ICD entered and correct

AIM: Reduce the percentage of missing or incorrect ICD registration up to the 3rd consult to 5% in within 6 months

INTERVENTION:

- Change the local where the doctors shall input the ICD on EMR, because it was located in a place that was not easy to remember, and many doctors suggested that change;
- The medical director sent some e-mails to the doctors about the importance of putting the appropriate ICD in the correct field of the EMR
- The medical director used his weekly meeting with the doctor to talked about the correct way to register ICD and why it is important to the institution
- IT staff became available at the office's floor for a month to help doctors with any difficulties they might have in using the EMR properly

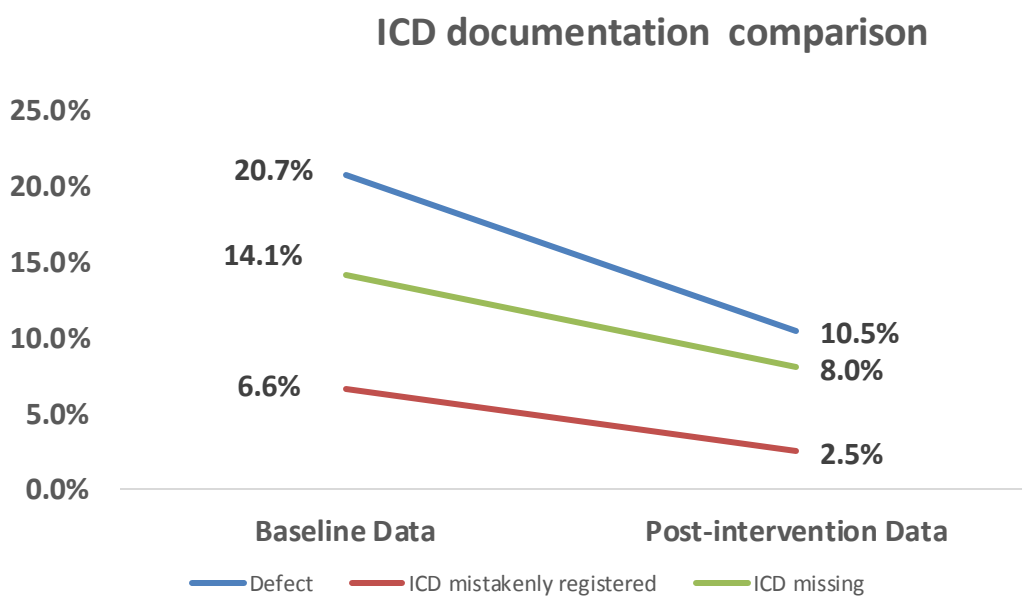
TEAM:

- Nelson Pestana, CEO;
- Álvaro Machado, BPharm;
- Adriana Alves, Nurse Mngr
- Maria Dias, MD
- Paulo Amaral, MD
- Caio Silverio, MD
- Olga Neves, Administrator
- Elder Pimenta, IT manager
- Mariane Machado, Nurse
- Thamine Lessa, MD

PROJECT SPONSORS:

- Carlos Sampaio, President of AMO

RESULTS:



CONCLUSIONS:

- Although we did not yet reach our goal, we reduced error rate by 45.8%;
- It was very helpful to have a multisciplinary team and to include all doctors in the analysis and generating solutions;
- The fact that we were able to reduce by half the defects with only three easy to implement actions makes us very confident to apply this methodology in order to solve many other problems;
- We improved significantly the consistency of our database;

NEXT STEPS:

- Implement additional actions as planned on the beginning;
- Measure the results over time
- Apply the methodology to other problems ins our institution