



AMENDED REPORTS IN SURGICAL PATHOLOGY: POST-LEAN OUTCOMES 2001-2008

Ruan C. Varney CT., Frederick A. Meier MD., Rita D'Angelo MS., Richard J. Zarbo MD.,
Henry Ford Hospital, Detroit, Michigan USA



“Our own attitude is that we are charged with discovering the best way of doing everything”
-Henry Ford

ABSTRACT

Introduction

Amended pathology reports are re-issued to change originally reported information. This wasteful re-work results in confusion and distrust in the laboratory. We monitored this performance parameter and evolved a validated taxonomy of report defects to standardize data capture. We report our experiences with amended reports subsequent to our adoption of LEAN quality initiatives.

Materials & Methods

reports were issued according to inconsistent criteria applied by numerous users. In 2004, we implemented CoPath LIS, standardizing diagnostic reporting. In 2005, we developed a defined pathway for amended report modification restricted to control by a quality coordinator. Employing an amendment dictionary created in CoPath, we classified all report defects according to the following taxonomy of defects: 1) Mis-interpretation, 2) Mis-identification, 3) Specimen related and 4) Non-diagnostic reports defects. LEAN quality initiatives began in 2006. In 2007, barcoded histology processes were innovated and “quick text” menus standardized gross exam and diagnostic reporting. “Double reading” of breast, prostate and all malignancies were adopted in 2008 to mistake proof mis-interpretation defects.

Results & Conclusion

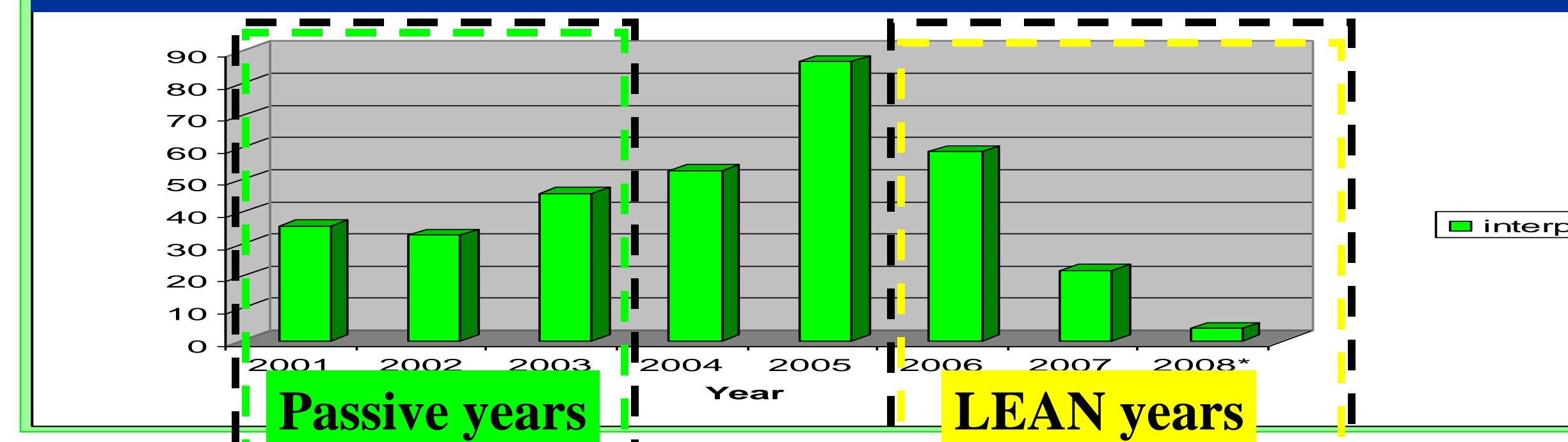
Frequency in 2001-2003 was 2.8-3.4/1000 cases. In 2004-2005, with more active surveillance and defined pathways, the rate increased from 4.8 to 10.1. With subsequent LEAN process changes, the rate per 1000 cases decreased from 7.8 (2006) to 6.3 (2007) to 5.5 (2008). In the 3 years since adopting LEAN, in a stable data capture mode, we have continually reduced the overall defects rate of amended reports by 46%.

TRENDED AMENDED SURGICAL PATHOLOGY REPORTS

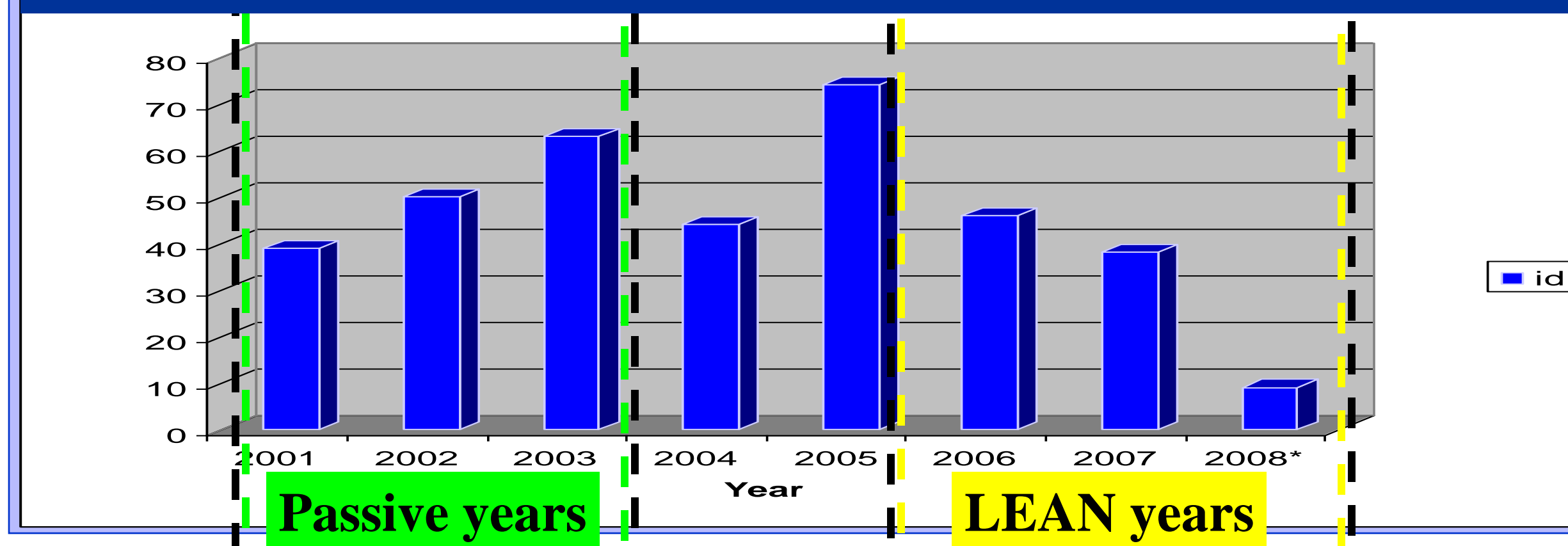
Year	2001	2002	2003	2004	2005	2006	2007	2008*
Total Amended	141	131	158	225	475	374	306	261
Total Surgicals	50,317	50,398	47,153	46,468	46,880	48,010	48,422	47,457
Defects/1000	2.8	2.6	3.4	4.8	10.1	7.8	6.3	5.5
Defect Types:	%	%	%	%	%	%	%	%
Interpretation	26	25	29	23	18	16	7	2
Identification	27	35	38	20	16	12	12	5
Specimen	4	11	6	9	2	4	11	3
Report	44	35	29	48	64	68	70	90

(*annualized)

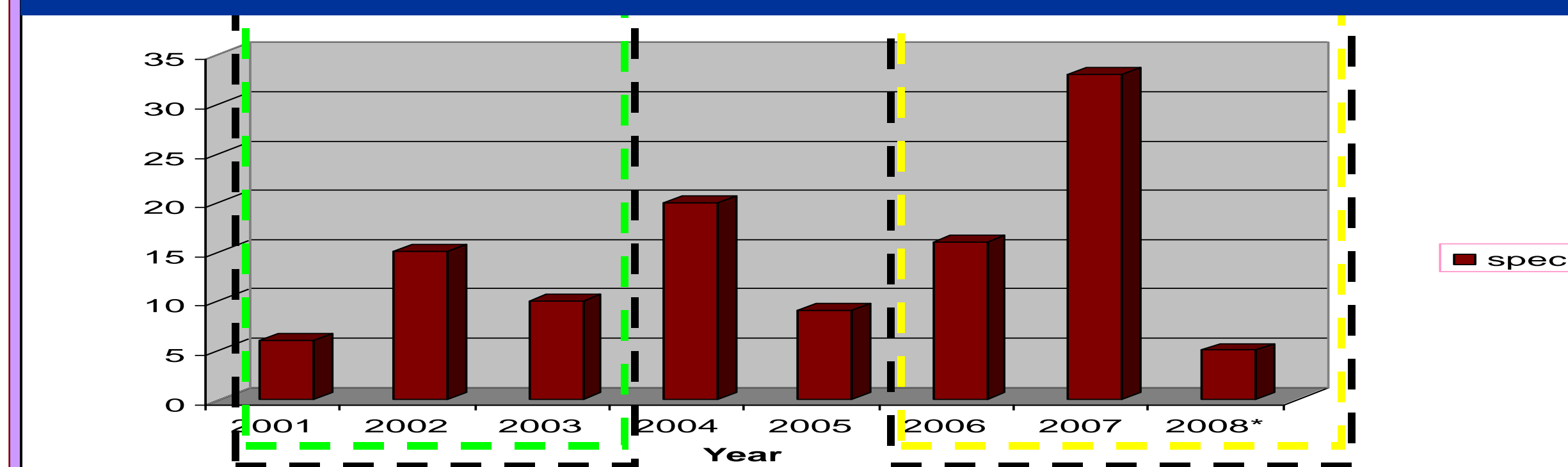
TRENDED INTERPRETATION DEFECTS



TRENDED IDENTIFICATION DEFECTS



TRENDED SPECIMEN RELATED DEFECTS



ERROR TAXONOMY

1. Mis-Interpretation

Primary diagnosis revised,
Secondary information corrected,
Misclassification of disease

2. Mis-Identification

Patient, Tissue, Laterality, Location

3. Specimen Related Defects

Lost, inadequate size, wrong measurement, description, inadequate representation of tissue/blocks/ levels, ancillary studies not done, additional specimen received

4. Non-Diagnostic Report Defects

Missing information, dictation, typographical, formatting or transmission errors

AMENDED PROCESS

1. Identify case & refer to coordinator
2. Gather triggering information
3. Communicate to pathologist
4. Investigate root cause
5. Document old & new info
6. Date & Time noted for revised diagnosis & mis-identified pt.
7. Route primary revised diagnosis and mis-ID changes to chairman and division head
8. Route clinician requested reviews of revised diagnosis and TNM staging to Amended Review Committee
9. Documents filed in 4 categories

CONCLUSIONS

- The non-standardized passive baseline frequency in years 2001-2003 was 2.8 to 3.4 amended reports per 1000 cases.
- With adoption of CoPath LIS in late 2004 and active surveillance of amended reports in 2004-2005 with defined pathways, the frequency increased from 4.8 to 10.1 amended reports per 1000 cases.
- LEAN process improvements decreased the overall rate per 1000 cases from 7.8 in 2006 to 6.3 in 2007 to 5.5 in 2008.
- Mis-identification as a percentage of amended reports was reduced from 30% in 2001-2004 to 5% in 2008.
- Further pathologist diagnostic consultation review mechanisms adopted from 2005-2008 specifically reduced the mis-interpretation percentage from a mean of 26% in 2001-2004 to just 2% in 2008.
- Thus, we have shown dramatic reductions in categories of defects since adopting LEAN, and have continually reduced the amended report defect rate since 2005.
- Compared to 2001-2003 passive interval, we have effected a 46% overall reduction of amended reports since 2005.

BIBLIOGRAPHY

- Meier FA, Zarbo RJ, Varney RC, Bonsal M, Schultz DS, Vrbin CM, Grzybicki DM, Raab SS: Amended Reports. Development and validation of a taxonomy of defects. *Am J Clin Pathol* 2008;130:238-246.
- Zarbo RJ, D'Angelo R. Effective Reduction of Process Defects and Waste in Surgical Pathology. *Am J Clin Pathol* 2007;128:1015-1022.