



# THE FIRST 'PATIENT SAFETY ORGANIZATION' (PSO) FOR DENTISTRY

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WE THINK WE KNOW THE PROBLEM

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# Heinrich's law

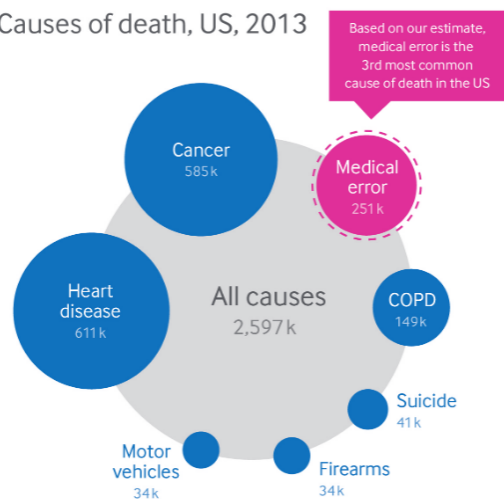
# 1 – 30 – 300

For Every Major Injury, there are 30  
Accidents that Cause Minor Injury, and  
300 Accidents that Cause No Injury



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## Causes of death, US, 2013



Based on our estimate, medical error is the 3rd most common cause of death in the US

However, we're not even counting this - medical error is not recorded on US death certificates

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Data source:  
[http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64\\_02.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf)



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# Dentistry is a “cottage” industry

## Growing public vigilance



- Regulated at the state level
- “Dental” events often minor
- No credentialing, oversight or peer review
- Incidents / close calls / unsafe conditions exist



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# Anesthesia Incidents

## Patient safety events

- **Incidents**
  - events that reach the patient, whether or not harm was done
- **Near misses (close calls)**
  - events that do not reach the patient
- **Unsafe conditions**
  - Circumstances that increase the probability of incident or near miss



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# Dentistry

- Complex Care- High Stress- High Stakes
- Unpredictable Outcomes
  - Requires Human Interaction on Both Ends – Doctor/Patient
- Harm Can Occur Even When We Have Done Everything We Were Supposed to Do
  - Standard of Care
- What Parts of the Equation are Controllable?



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Low Frequency  
High Impact Events

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# THE DEEP SLEEP

'6000 Will Die or Suffer Brain Damage'

**APRIL 22, 1982**

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The screenshot shows the APSF website homepage. At the top, there is a navigation bar with the APSF logo, a search bar, and links for Home, Share, and Print. Below this is a secondary navigation bar with buttons for Fire Safety, Med Safety, Monitoring OVI, POVL, and POVL Informed Consent. A main navigation bar includes links for About APSF, Donors, Donate, Initiatives, Resource Center, Grants, and Contact Us. The main content area features a mission statement: "The APSF's Mission is to improve continually the safety of patients during anesthesia care by encouraging and conducting:" followed by a list of activities: safety research and education; patient safety programs and campaigns; and national and international exchange of information and ideas. Below this is a photograph of two healthcare professionals. At the bottom, there are three columns: "NEWSLETTER" with a link to read the current issue and past issues; "MONTHLY POLL" with a link to read the current poll regarding workplace practice using handoffs; and "ANNOUNCEMENTS" with a list of recent news items, including Dr. Crystal Woodward receiving an award and a new study on surgical team composition.



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## What are the Barriers to Success in Dentistry?

- Concern about Exposure to Liability
- More Work for the Practitioner?
- Shame in Admitting Mistakes



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## What is a Patient Safety Organization (PSO)?

- Product of the U.S. Patient Safety Quality Improvement Act of 2005
  - Oversight by the Dept. of Health & Human Services
  - Management by the Agency for Healthcare Research & Quality (AHRQ)
- A PSO can collect information from adverse events involving patients
- Federal protection from legal discovery



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## Who is the DPSF ?

- State of Illinois not-for-profit corporation
- Primary and only activity
  - Improve Patient Safety and the Quality of Dental Care in the U.S.
- Patient Safety Organization
  - Data protected under federal law from discovery
- Independent Organization in Dentistry



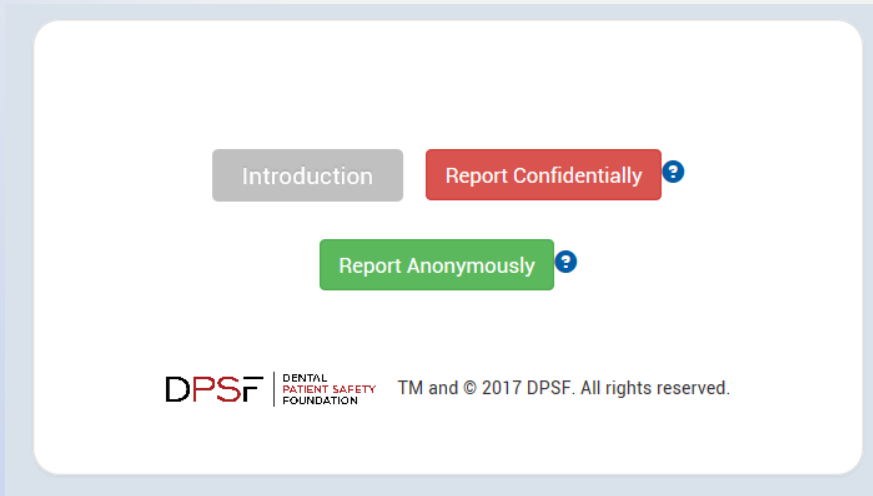
**DPSF**

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A screenshot of the Dental Patient Safety Foundation (DPSF) website. The header includes the DPSF logo, the text "DENTAL PATIENT SAFETY FOUNDATION", a search bar, and a "Report an incident" button. A navigation menu lists: HOME, ABOUT US, DONORS, DONATE, REPORTS, RESOURCES, CONTACT US. The main content area features a photo of three dental professionals and the heading "DENTAL PATIENT SAFETY FOUNDATION". Below the photo, there is a paragraph describing the foundation's mission: "The Dental Patient Safety Foundation is an independent, non-profit organization whose only mission is to improve safety and quality of dental care, regardless of specialty, by non-partisan collecting, aggregating and analyzing information about patient safety events (adverse incidents, near misses or unsafe conditions), which can be safely, voluntarily and confidentially reported in the reporting tool." Another paragraph states: "The DPSF is a listed Patient Safety Organization (PSO) in compliance with the Patient Safety Rule of the Federal Department of Health and Human Services, which legally protects and maintains the confidentiality of all disclosures. The Patient Safety Rule was enacted to encourage voluntary reporting of sensitive information without the risk of liability." A final paragraph says: "The DPSF will swiftly and frequently report back to the dental profession to inform of ways to reduce risk, minimize hazards and improve the quality of care the delivery of dental care." To the right of the text is a small version of the Listed PSO Organization logo. At the bottom of the main content area, there are two red buttons: "REPORT YOUR PATIENT SAFETY EVENT HERE" and "REPORTS RESOURCES". Below the screenshot, the website URL "www.dentalpatientsafety.org" is displayed in large black text. The background of the slide is a light blue gradient with a wooden floor texture at the bottom.

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## About the tool



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PATIENT SAFETY  
FOUNDATION

## WHO CAN REPORT ?

ANY LICENSED HEALTH CARE PROVIDER

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# WHAT GETS REPORTED ?

“PATIENT SAFETY EVENTS”

ALL DATA IS PRIVILEGED AND CONFIDENTIAL

## Safety Reports Available on the Website

**DPSF DENTAL PATIENT SAFETY FOUNDATION**

**Shared Learning**  
from the Dental Patient Safety Foundation Reporting Tool

"What gets measured gets managed" is the DPSF philosophy to encourage reporting. All measured information about patient safety events (events, incidents, near misses or adverse events) are automatically de-identified for confidentiality to be preserved, aggregated, analyzed and shared with relevant reports from our DPSF dashboard. Reports are generated and disseminated as the only reports to learn from our errors. The information in these peer-reviewed reports is provided for its educational use only, and does not pertain to identifying any single provider or provider of care. Feedback encouraged.

**Case 2018.1A: Crossed O<sub>2</sub> and N<sub>2</sub>O Gas Lines**

**Situation:** A patient presented to a recently completed dental office for extraction of four wisdom teeth under deep sedation, with midazolam, fentanyl and propofol, supplemented with a 30:70 N<sub>2</sub>O / O<sub>2</sub> mixture. During the procedure, the patient's blood pressure and heart rate dropped and the surgeon switched the patient to 100% oxygen while the staff took measures to address the hypotension and bradycardia. After several minutes, the patient became apneic and EMS was called. The patient was transported to a local hospital where he was diagnosed with hypoxic encephalopathy resulting in permanent brain injury. It was later discovered that the oxygen and nitrous oxide lines had been crossed during construction of the new building and the patient had been receiving 100% nitrous oxide during resection.

**What we learned:** Building codes and enforcement of those codes vary across the United States. In this particular case, the mechanical engineers of the new building mislabeled and improperly labeled the oxygen and nitrous pipelines on the blue print drawings. The plumbing contractors, who were not certified to install medical gases, then followed the blueprints without checking the lines had been mislabeled. The dental supply company in turn installed the mislabeled and other hardware to the crossed lines without confirming their correct placement. Finally, the city building inspectors failed to take steps to assure the gas lines had been installed properly by skilled and certified installers and that proper testing had been performed. This case is another example of Reason's Swiss Cheese Model of Accident Causation where multiple safeguards (holes of cheese) fall (holes in slices), and seemingly minor deviations from safe practice accumulate and temporally align, thereby reaching the patient and possibly causing injury.

**Recommendations and actions:** Dentists contemplating new construction or a remodel of existing space should only hire qualified contractors who are licensed and certified in their specific area of the project. Municipal building codes for medical and dental offices should be standardized in all states and practitioners should insist on an independent analysis of medical gases once construction is complete. This case serves a reminder that facilities can injure patients, and that low frequency, high impact events require the same vigilance and attention to remediation as do high frequency, small conditions or near misses that often do not reach the patient.

**Additional reading:**  
Reason J. The contribution of latent human failures to the breakdown of complex systems. Phil Trans R Soc London B. 1990;327:473-484.

**www.dentalpatientsafety.org**  
16011 S. 108<sup>th</sup> Ave., Olathe Park, IL 60467  
833.216.7931 708.460.7919

# How can you help?

- Explore the Website
- Subscribe to Receive Monthly Reports
- Talk with Colleagues About DPSF
- Encourage Associations/Societies to Take Part
- Report Events!
- Consider A Donation



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## Contact Us

Thank you for your interest and support of the Dental Patient Safety Foundation. Your questions and comments are welcome and can be submitted anonymously.

**GET IN TOUCH**

Name


Email

Contact Number

Subject

Message

**SUBMIT**

 **Dental Patient Safety Foundation**  
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Orland Park, IL 60467

 833-216-7931

 708-460-7919

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