

**DEMONSTRATIVE EVIDENCE:
INNOVATIVE APPROACHES FOR IMPACTFUL PERSUASION**

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THE CHALLENGE – COUNTERING PERCEPTIONS

Janine Smith sits in the courtroom, her tinted wavy hair showing no signs of grey, her minimal makeup carefully applied, elegantly wearing the understated gold jewellery inherited from her mother – for good luck. She nervously looks through her bifocals and glances down at the nails she painted the night before, as she twists her wedding band and glances at her watch – an anniversary present from her husband. She wears a conservative maroon pantsuit, low healed shoes, and a simple white blouse. Few saw her walk into the courtroom using the cane that now leans against the table in front of her. Fewer yet saw her grimace as she straightened her left leg as she sat down in the courthouse chair to relieve the pressure on the joints.

Mrs. Smith is your client – poised, hard-working, stoic, dressing to hide her scars and appearing composed despite her anxiety, depression, pain and mobility limitations. And as your client, the yet-to-be-selected jurors may view her as not having all that many more troubles than they have. And there lies the challenge – to demonstrate that all is not well with 52-year-old Janine Smith – that underneath the gabardine fabric, is a body damaged from a head-on collision four years prior, that resulted in numerous fractures, soft tissue injuries, a closed head injury and other trauma to her body and psyche. Showing the underlying reasons for how she was forever changed in subtle but significant ways, including a lack of insight into her altered mental abilities is critical for a successful outcome of the case.

Countering her visual appearance of doing “okay” requires strong visual storytelling – showing that her ongoing complications are truly organic in nature and directly linked to the MVA. Integrating demonstrative evidence that illuminates the trauma findings, surgical issues, and injury complications is essential (see Figure 1). Information presented in this way is especially persuasive - it involves the viewer and is remembered (Oatley 1998).

As every good teacher knows, visual aids – by allowing jurors to *see* abstract concepts and relationships – significantly enhance both understanding and retention. Most jurors receive their primary information from television and are conditioned to learn more from visual images than from words alone (Babcock and Bloom 2001), so the use of innovative demonstrative evidence can assist in telling the entire story of Mrs. Smith.

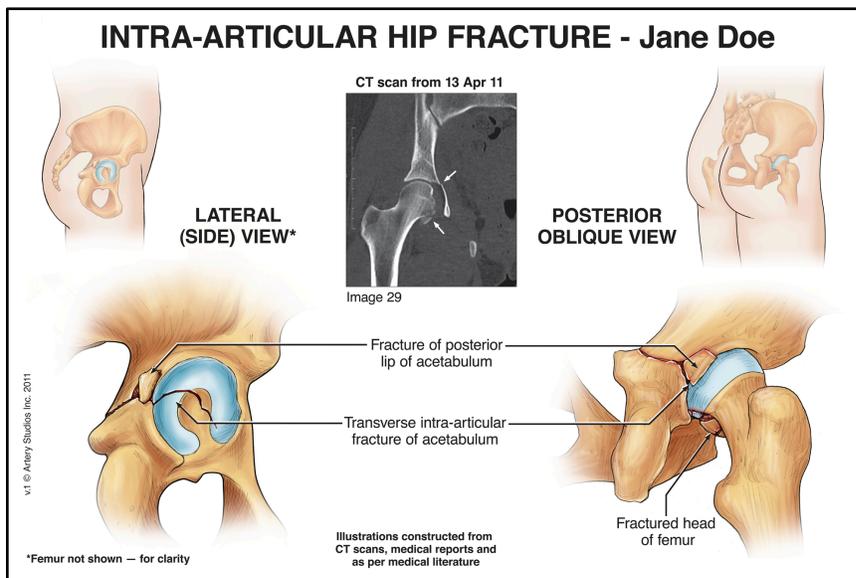


Figure 1: Complex trauma issues must be communicated visually to counter the perception that the client ‘appears’ to be doing well.

VISUAL LEARNING – MAKING THE MEDICINE MEMORABLE & IMPACTFUL

Although most of us participated in Show and Tell early in school, we may have forgotten how natural it was to communicate visually while explaining something orally. Research has shown that visuals assist the viewer in perceiving and retaining the information presented (Cooper 1999, Weiss-McGrath 1989).

Legal participants have difficulty absorbing complex information that is delivered only orally (Ferguson 2004). In the classic Weiss-McGrath report, the authors examined how people best retain information (Weiss-McGrath 1989). In that study, information was presented to individuals in three ways: orally only; visually only; and both visually and orally. The study found a 100% increase in jurors’ retention of information when presented visually, versus orally, and a significant 600% increase in retention of information when presented in a combination of visual and oral presentations, over oral presentations alone (see Figure 2). The authors concluded

that when information is presented through combined visual and oral modalities, there is significantly increased retention, for a longer period of time.

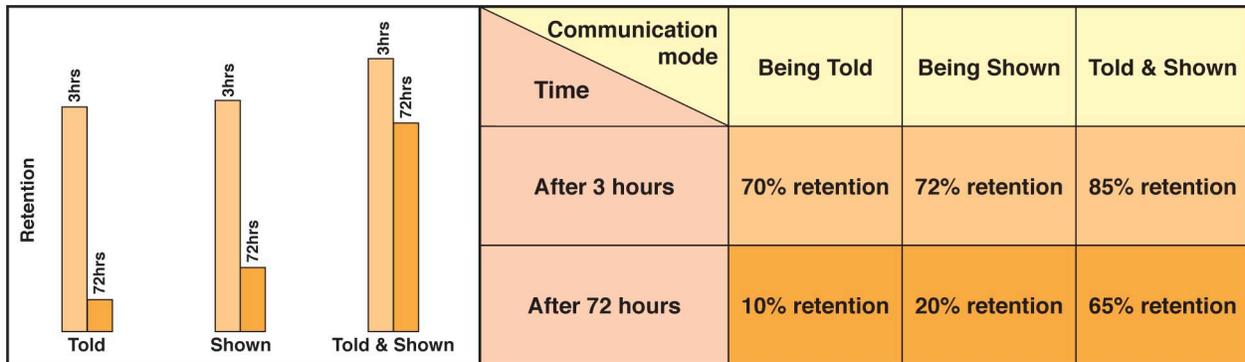


Figure 2: Findings of Weiss-McGrath report, showing the dramatic increase in long-term retention of information when presented to jurors both visually and orally.

By extension of this research, trial efficiency is increased when visuals are used that “... enhance retention of information by the jury, summarize large amounts of information in an understandable fashion, simplify complex information, and assist the witness in explaining his or her testimony” (Legate 2006).

SHOWING THE ENTIRE ICEBERG

Seeing Mrs. Smith sitting in the courtroom or witness box is similar to seeing only the tip of the iceberg that thrusts out of the ocean. The 10% that we see – her mobility issues, and stiff leg may be evident, but the pain, wear and tear on her body, the internal scar tissue that has formed, the initial trauma of broken bones and soft tissue disruption that triggered degenerative changes, her loss of cognitive function and mood disturbance – the other 90% that remains below the surface, must to be demonstrated (see Figure 3). Replacing the jury’s perceptions of how well she appears is facilitated by visual communication (with its associated higher retention rate) showing the underlying problems that have compromised her enjoyment of life. These visuals can reveal:

- the pathology of her brain injury, from the gross to cellular level
- how this pathology compares to normal
- the details of her shoulder dislocation
- what soft tissue structures were permanently damaged in her body

- the extent of the comminuted fracture of her left hip and the associated surgery that was required allow the bones to knit together again
- the arthritis that has developed in her hip joint and what this will look like as it progresses with wear and tear
- how her gait is affected
- how her hip joint will need to be replaced in future and what that surgery entails
- the extent of her ankle fracture, including how it disrupted the articular cartilage
- how this might also degenerate with osteoarthritis in future and also require surgery, in the form of either an ankle joint replacement or joint fusion

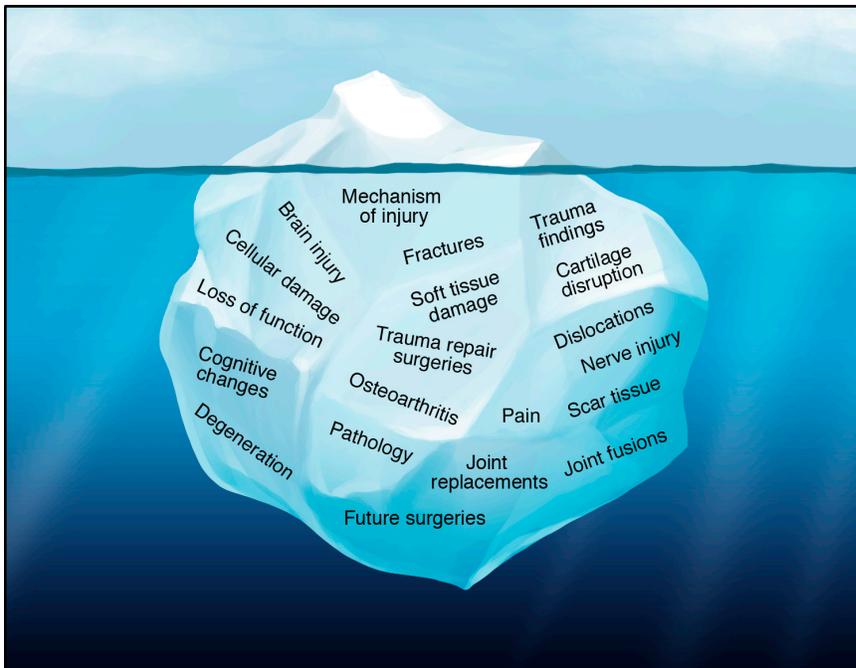


Figure 3: Like an iceberg that lies mostly under the surface, many medical factors remain hidden by the external appearance of the client.

Many factors must be taken into consideration in a complex medical file and the decisions associated with the demonstrative evidence need to be weighed accordingly (see Figure 4).

FACTOR	COMPLEXITY ISSUES	NOTES
RADIOLOGICAL DATA		
X-rays	<ul style="list-style-type: none"> • structures overlap • lucencies/opacities need to be interpreted 	
CT/MRI scans	<ul style="list-style-type: none"> • body is imaged in slices – can be confusing • not all negative readings indicate normal • images are displayed as though looking from feet of patient 	
Ultrasound imaging	<ul style="list-style-type: none"> • diffuse/fuzzy appearance • differentiation of structures difficult for non-specialists to appreciate • angles of 'slice' of US wand can be confusing as plane of orientation varies 	
Nuclear scans (e.g., bone scans, SPECT studies)	<ul style="list-style-type: none"> • subtleties of imaging hard to interpret • comparison to normal not evident 	
SPECIALIZED SUBJECT MATTER		
Anatomy	<ul style="list-style-type: none"> • includes neuroanatomy (brain, spinal cord); cardiopulmonary; abdominal; joints; organs 	
Body systems	<ul style="list-style-type: none"> • musculoskeletal; cardiovascular; other 	
Physiological	<ul style="list-style-type: none"> • e.g., healing process; hormonal factors; bone remodelling; blood chemistry 	
Pathology	<ul style="list-style-type: none"> • myriad of disease states • final outcome of client must be appreciated • classification of diseases is complex 	
Surgical	<ul style="list-style-type: none"> • highly detailed; many unique procedures 	
MEDICAL REPORTS		
Hospitals/Physicians/Experts	<ul style="list-style-type: none"> • hospital records (including radiology reports) • fetal monitor recordings • specialist reports (between physicians, etc.) • operative notes • expert reports 	
MEDICAL LITERATURE (RESEARCH)		
Journals/Texts	<ul style="list-style-type: none"> • geared to medically trained audience • specialized • technical jargon 	

Figure 4: Overview of factors of medical complexity associated with personal injury files.

INNOVATIVE APPROACHES FOR IMPACTFUL PERSUASION

Mrs. Smith’s issues of trauma, surgeries and other treatments, functional complications, and the doctors’ predictions of what the future may hold for her, may be presented in different visual formats. With the understanding of the impact demonstrative evidence can have on a juror, consider utilizing the following approaches to persuade with visual aids:

1. SHOW HOW THE CLIENT WAS INJURED

If the police reports, engineering opinions, or reports from other experts on the file, provide an analysis of the forces of impact or the movement of the occupant in the motor vehicle, these factors may be demonstrated to show the resultant trauma to the underlying anatomy. Figure 5 demonstrates how this can be depicted in a clear but non-inflammatory manner.

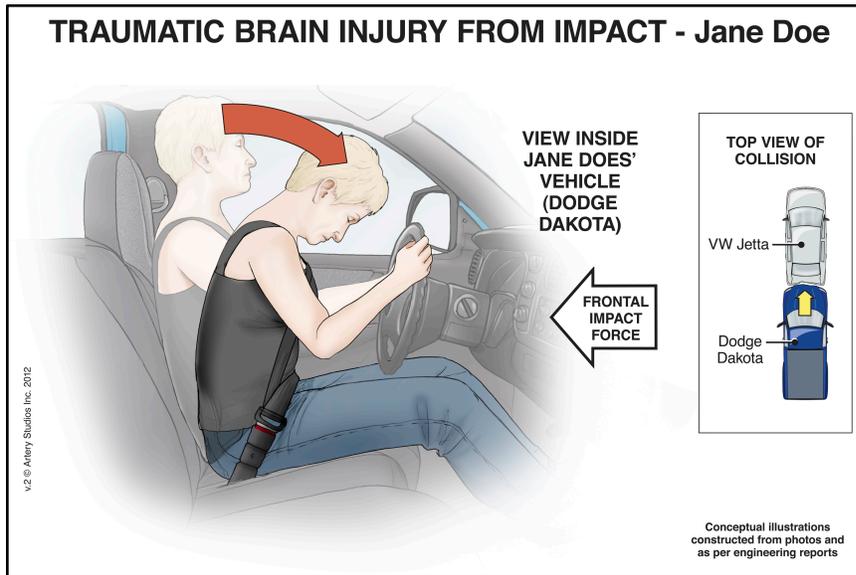


Figure 5: Visuals showing the mechanism of injury can link directly to the underlying trauma that the client experienced.

2. SIMPLIFY COMPLEX RADIOLOGY

Because x-rays, CT and MRI scans, and other forms of radiology are often complex, even highly trained radiologists must carefully analyze them to fully appreciate all details. In orthopedic injury cases, x-rays are common, and many hospital records include dozens of film studies. Yet interpreting these relatively common radiological images accurately requires specialized

knowledge and experience, and an ability to visualize anatomical structures three-dimensionally. These diagnostic images capture anatomy in two-dimensions only, often with critical subtleties not evident to the untrained eye. Yet testifying medical experts often use radiology when on the stand – which may be virtually incomprehensible to a lay audience when communicating injury details to the jury (Irwin 1987).

A. RADIOLOGY EXHIBITS (ENHANCED RADIOLOGY POSITIVES)

Adding overlays onto x-rays or scans can clarify such things as intracranial bleeding, fracture details or information from the radiologist’s report. As well, colour, shading and titles, can be added to assist in communicating the radiological findings (see Figure 6). These images may also be presented as static images or digital displays (see “Compare Views” below).

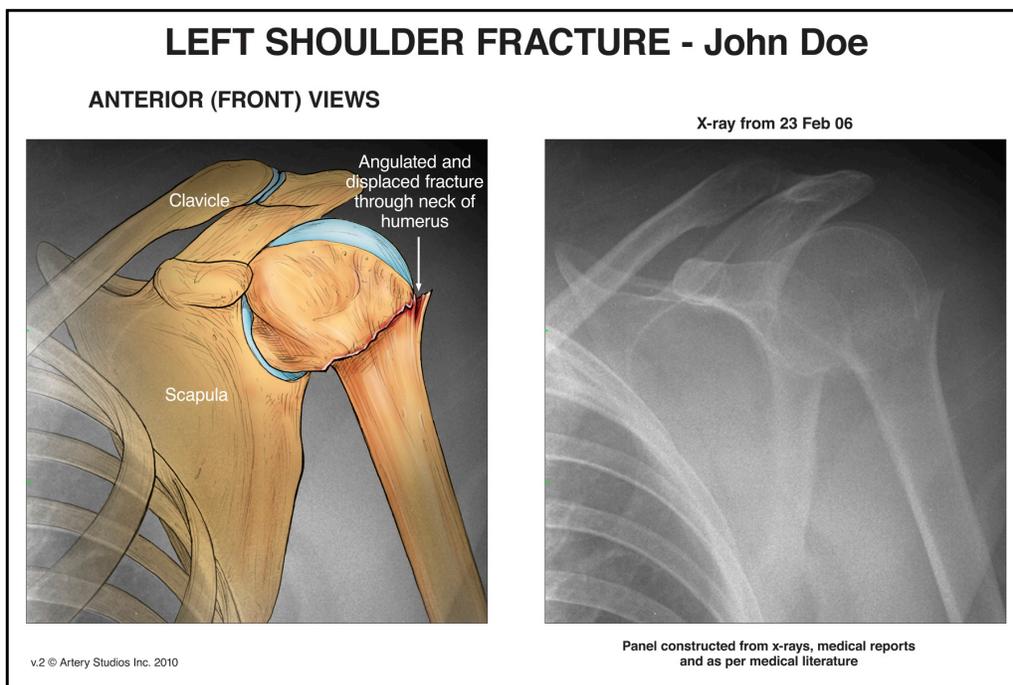


Figure 6: Example of an enhanced radiology image with the addition of colour, outlines, shading, injury details and labels.

B. VIRTUAL 3D RADIOLOGICAL IMAGES

Imaging software allows for the creation of digital models from CT and MRI data. By controlling the software parameters, specific anatomical structures may be demonstrated (e.g., bones), and others excluded (e.g., soft tissues or internal organs), in order to depict trauma issues such as fractures (see Figure 7).

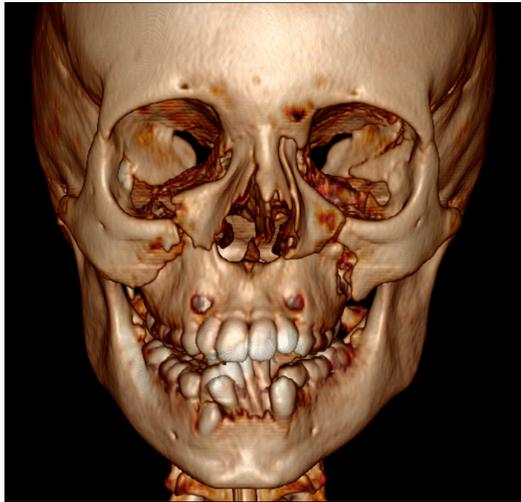


Figure 7: A virtual 3D radiological image constructed from CT data. Fractures of the facial bones are demonstrated – note fractures below the orbits and through the nasal bones.

3. DISTILL THE MEDICAL INFORMATION

Innovative and effective visuals are simplified to show only those anatomical, surgical or pathological issues that are relevant and important for understanding the critical issues of the file. The amount of information communicated in each illustration, animation or interactive presentation is limited so as to not overwhelm the viewer. For example, voluminous medical records (e.g., x-rays, radiology reports, observations of trauma pathology contained in operative reports, etc.) may be encapsulated by one clear visual that demonstrates the salient injury features (Figure 8).

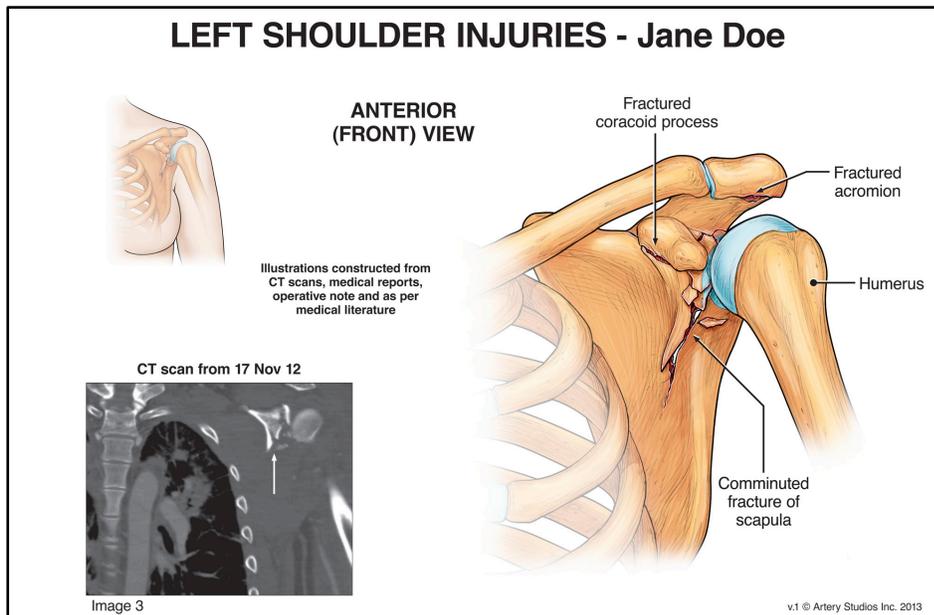


Figure 8: A medical visual can incorporate and summarize x-ray or CT scan findings, as well as written descriptions in the radiological reports, operative notes and other hospital records.

4. ENGAGE THE VIEWER WITH INTERACTIVE PRESENTATIONS

In our digital era, most people are adept at navigating through information in an electronic format. Interactive displays encourage engagement of the viewer, to better allow for the communication to them of critical case details. This is particularly relevant when viewing larger amounts of information. Interactive presentations in the courtroom engage the juror or judge and allow for more flexibility of presentation when guiding the medical expert through the evidence. It is equally practical when presenting the information at mediation or other pretrial discussions. Forms of interactive presentations include:

A) INTERACTIVE MEDICAL ILLUSTRATIONS

The functionality of presentation software (e.g., Flash™, HTML5, JavaScript®) can be integrated into visuals that are interactive – including for the iPad or other tablets. In this format, an illustration an orientation image can ‘anchor’ the visual to allow branching off points to view additional information. In this way, when specific ‘hot points’ are selected, a larger, detailed report, illustration or other image can provide more information (see Figure 9). This type of presentation is ideal for cases that require depictions of injuries to numerous parts of the body or to show large volumes of hospital records organized chronologically or by injury area.

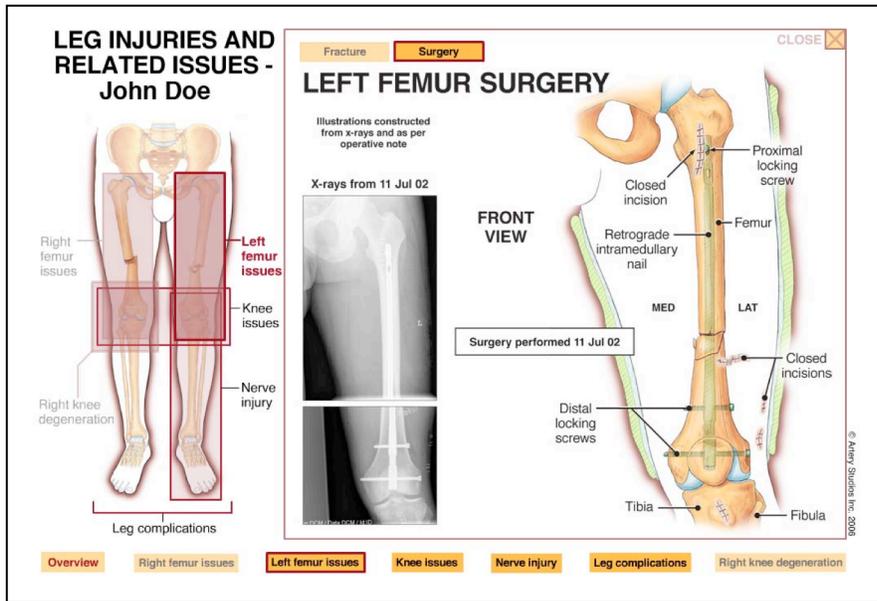


Figure 9: Frame from an interactive medical illustration. The illustration on the left provides orientation, while enlarged images, presented consecutively, demonstrate details of each injured region.

B) DIGITAL FETAL MONITORING STRIPS

In birth trauma files, the fetal heart monitoring strip (or tracing) documents specific medical findings of both the fetus and mother during labour, including the baseline heart rate, accelerations and decelerations to the rate, and uterine contractions. Interactive Fetal Monitoring Strips are created by digitally assembling the long tracing into a seamless display, thereby showing several hours of monitoring in an easy-to-use format (see Figure 10). Electronic interactivity is added to assist in presenting key information in the tracing, such as the ability to scan back and forth, pause on a critical point, highlight and annotate areas and search by time stamp. Explanatory illustrations may be added to demonstrate issues such as placental abruption or other birth trauma complications.

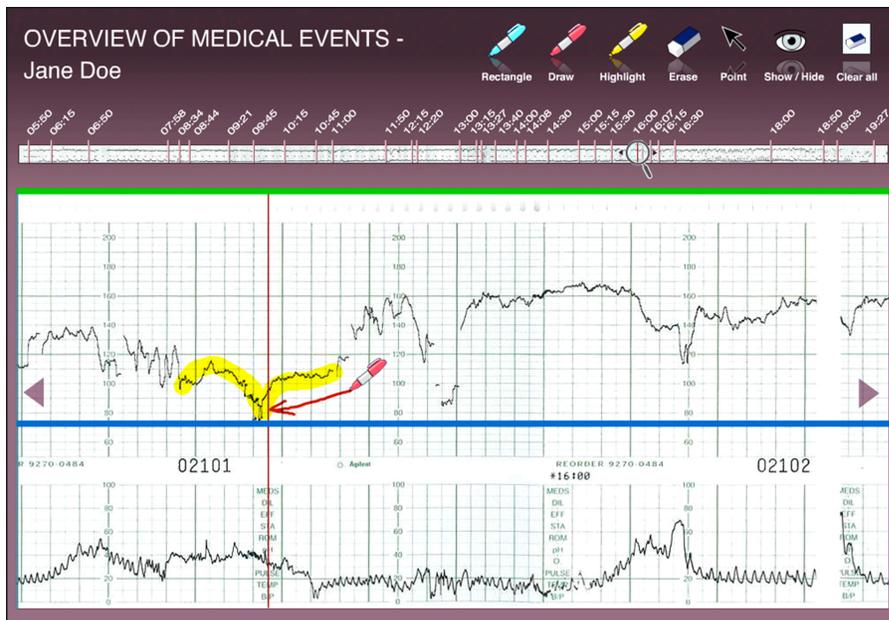


Figure 10: Screen from a Digital Fetal Monitoring Strip showing highlighting and other interactivity options.

5. SHOW ISSUES STEP-BY-STEP

Although published studies report that delivery of information simultaneously, versus sequentially, enhances visual short-term memory retention (Frick 1985, Hoffman 2011, Shiffrin 1972), litigators report this not to be the case. Anecdotally they report that varying levels of intelligence and speed of comprehension by participants in litigation proceedings is ameliorated by disseminating information in amounts that can be readily appreciated, before moving on to the next point. For example, when discussing the intricacy of a complex surgery, breaking down the medical concepts into smaller pieces of information is an effective approach. A few ways that this may be done are:

A) STORYBOARDS

Storyboards are composed of sequential drawings (see Figure 11) that represent a frame-by-frame account of what a full animation would depict (Mader 2006) or the presentation of a story in visual format with accompanying text. This visual is analogous to a comic strip, except that the drawings are detailed, realistic and without dialogue balloons (Bailey 1994). Each frame contains enough information to tell that stage of the story, building upon the prior and preparing the viewer for the next. In this way, storyboards are effective visual aids to allow for controlled communication of case issues.

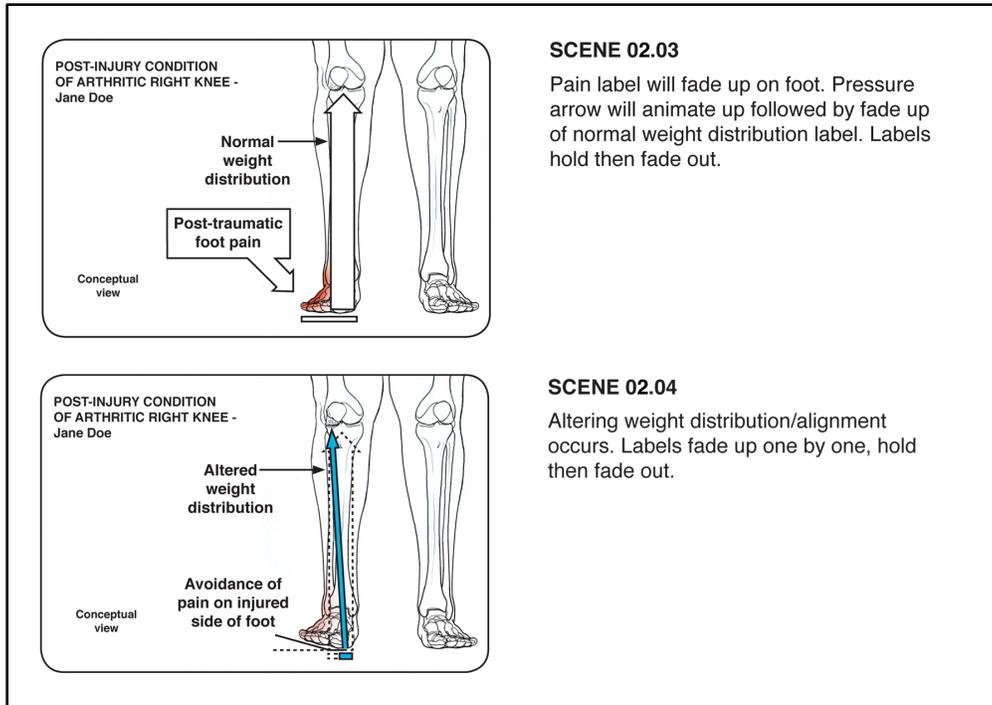


Figure 11: Example of two frames from a storyboard depicting mobility complications from an ankle injury.

B) STEP-BY-STEP SLIDE PRESENTATIONS

Step-by-step slide presentations communicate the critical stages of an event as though in time-lapse format (see Figure 12). They are typically integrated into PowerPoint™ or Keynote™. The lawyer or expert can display each image for as long as is required in order to explain it fully. This visual format is ideal for showing surgical or degenerative issues.

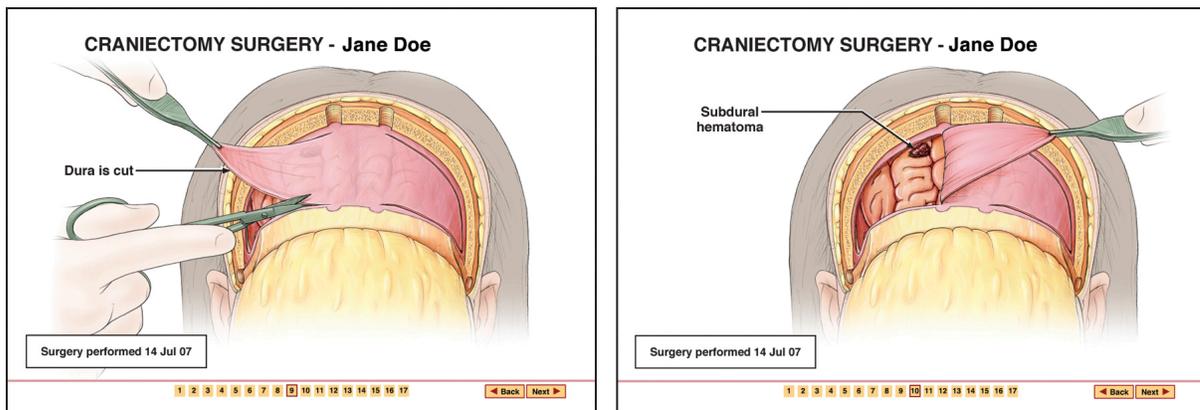


Figure 12: Frames from a step-by-step presentation. Each slide demonstrates one key stage in a process or procedure.

6. EXPLAIN CRITICAL SURGERIES

A patient may endure intricate, highly complex and time-consuming surgeries to repair fractures and other trauma. Visuals are created after carefully analyzing the detailed operative report and identifying the critical steps the surgeon followed. These key stages are then presented in visual format, removing unnecessary detail and focusing the viewer on the most important facts (see Figure 13). These images may include transparent renderings of structures that are on deeper planes, details of surgical hardware inserted, and simple titles, labels, arrows and other graphics, to make the procedure more readily understandable to the non-medical courtroom participant.

These case-specific visuals can portray medical information not readily demonstrated by photographs taken at surgery, which may be monochromatic, confusing or off-putting. Illustrations can do what the camera cannot – depicting what lies beneath the surface and on the other side of a structure, in a way that is more visually acceptable to the squeamish viewer.

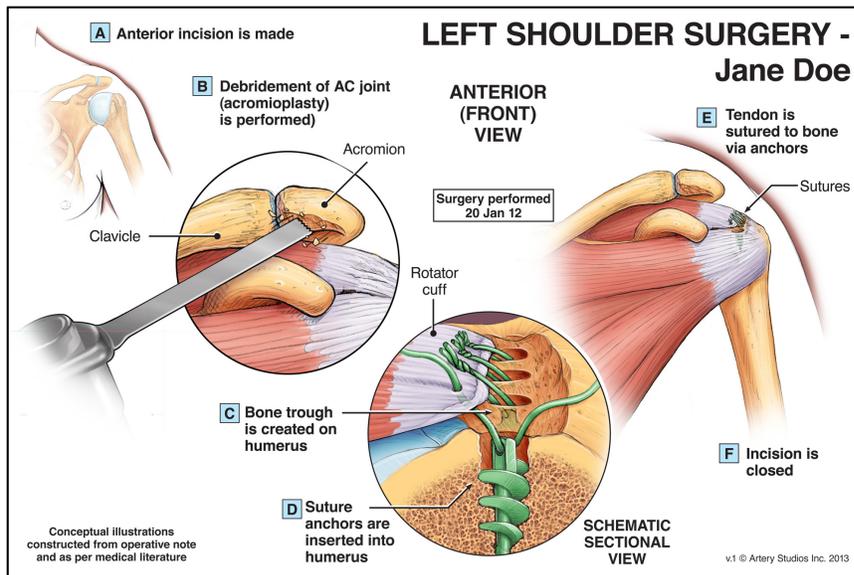


Figure 13: Complex trauma issues must be communicated at mediation or other settlement meetings or at trial so that all participants fully appreciate the injury implications.

7. UTILIZE PHYSICAL MODELS FOR TACTILE COMMUNICATION

Innovations in 3D rapid prototyping allow for a radiology model to be ‘printed’ as an actual physical life-sized (or scaled) model that can be held in the hand for stimulation of the tactile senses as the model is examined by the judge or juror (see Figure 14). CT and MRI data are reformatted (similar to Virtual 3D Radiological Images – see above), with details included to

demonstrate the injury issues. Colour is added to portray fracture patterns or other pathology. Trauma, surgery, long-term degeneration and other injury issues may be demonstrated with this innovative type of demonstrative evidence.



Figure 14: Photographs of a Rapid Prototype Medical Model constructed from CT data, cast as a life-size physical model, and details hand-painted to depict pathology (fractures).

8. ESTABLISH THE TIMELINE

In many cases judges appreciate a timeline (Ferguson 2004). Each juror can also follow the historical details of a case – dates and times of trauma, surgeries, visits to treating physicians, appointments at clinics, medications prescribed, casts removed, back to work attempts, etc. Timelines are essential for complex cases such as those with pre-existing findings, re-injury or those involving multiple surgeries.

Digital timelines are an innovative approach to depicting the data correlated with each time unit (hours, days, weeks, etc.) including notations from the hospital records or test results, and may also incorporate radiology, medical illustrations and animations that are displayed upon clicking on the associated field (see Figure 15).

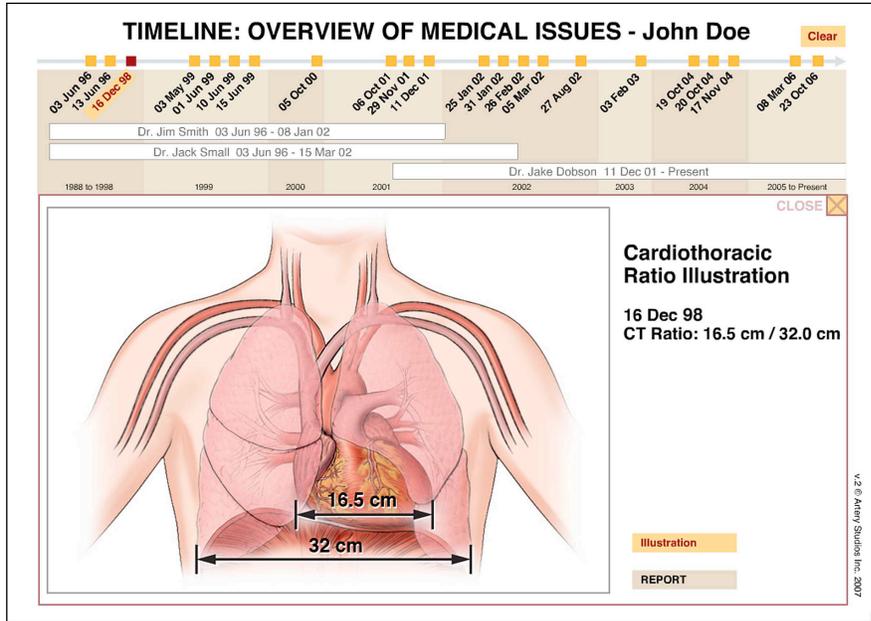


Figure 15: Frame from an interactive timeline. When a date is selected, details of the medical issue associated with that time enlarge to fill the screen.

9. CHART VOLUNINOUS DATA AND CLINICAL FINDINGS

Medical records can be voluminous. Charts showing such issues as medications, medical treatments and employment patterns can organize and display significant quantities of important and complex information spanning periods of time (see Figures 16 and 17). This format of presentation can demonstrate patterns and/or critical aberrations from a trend.

Often the most effective way to describe, explore, and summarize a set of numbers – even a very large set – is to look at pictures of those numbers. ... of all methods for analyzing and communicating statistical information, well-designed data graphics are usually the simplest and at the same time the most powerful. (Tuft 2001)

The most effective charts and graphs provide the viewer with the clearest understanding, in the shortest time possible, in a succinct and efficient visual depiction. (Tuft 2001)

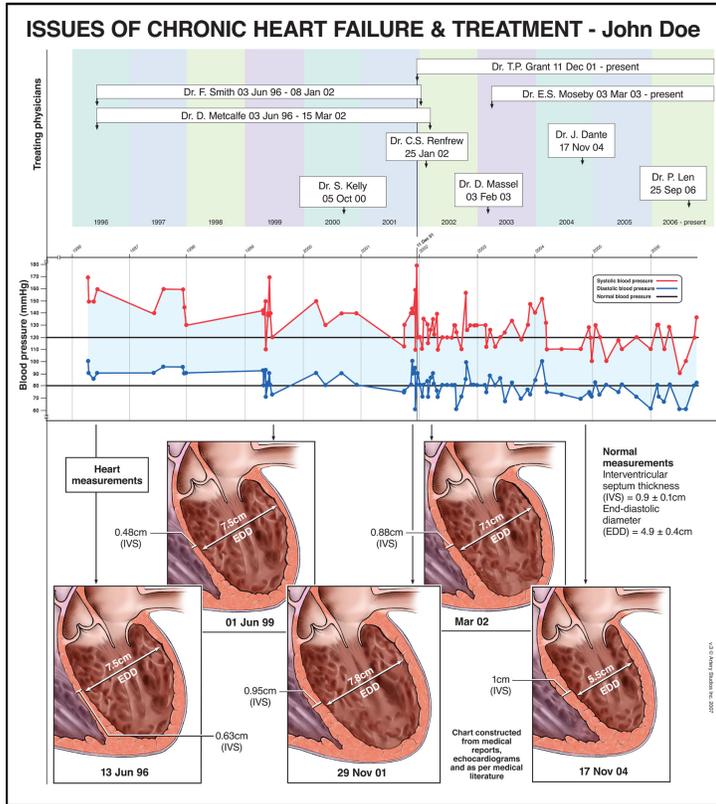


Figure 16: Example of a medical records chart, which includes measurements of the thickness of the ventricular wall. This visual was created for a medical malpractice case involving improper treatment of a chronic heart condition.

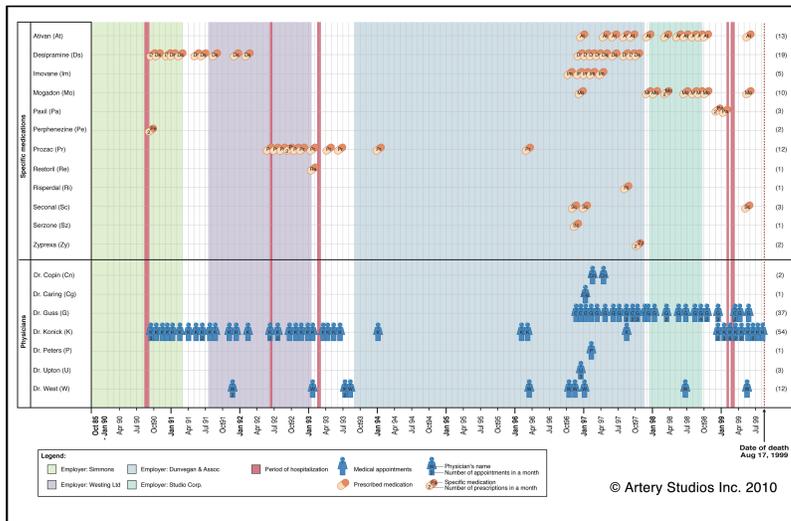


Figure 17: Example of a treatment chart, which provides a visual representation of a large volume of data, thereby revealing patterns.

10. ANIMATE MOTION AND TIME-BASED CONCEPTS

Animations depict issues that are best demonstrated by showing moving elements in virtual 2D or 3D space. They are motion-based depictions of a medical expert's opinion (Rogers 2004). Issues of time and motion may be presented in this format, such as the proposed mechanism of injury, trauma complications or mobility issues (see Figure 18). Digital animations clearly and persuasively communicate technical concepts to a non-technical audience (Oatley 1999).

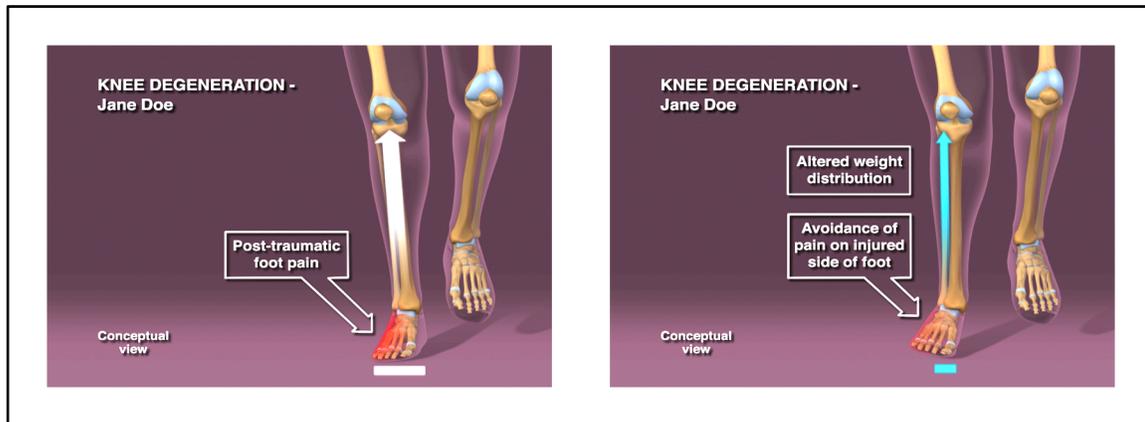


Figure 18: Still frames from an animation that depicts mobility complications.

11. INTEGRATE VISUAL METAPHORS TO INCREASE COMPREHENSION

Sometimes complex medical and technical concepts can be confusing to jurors or even highly-educated (but not medically-trained) judges, as well as adjustors and defense counsel. Visual metaphors constructed from familiar symbols that are representative of something simpler can be used to enhance understanding (see Figure 19). Not only does this increase comprehension, but its use can facilitate longer-term retention of critical information.

...visual metaphors can provide powerful templates for experts who wish to communicate their knowledge... (Eppler 2003).

To be effective, a metaphor must not be too complex, with a limited number of visual cues to be processed (Wisegeek 2003). These images organize information meaningfully, thereby graphically structuring it and providing an insight into the nature of the information being portrayed by the choice of metaphor utilized (Eppler 2003).

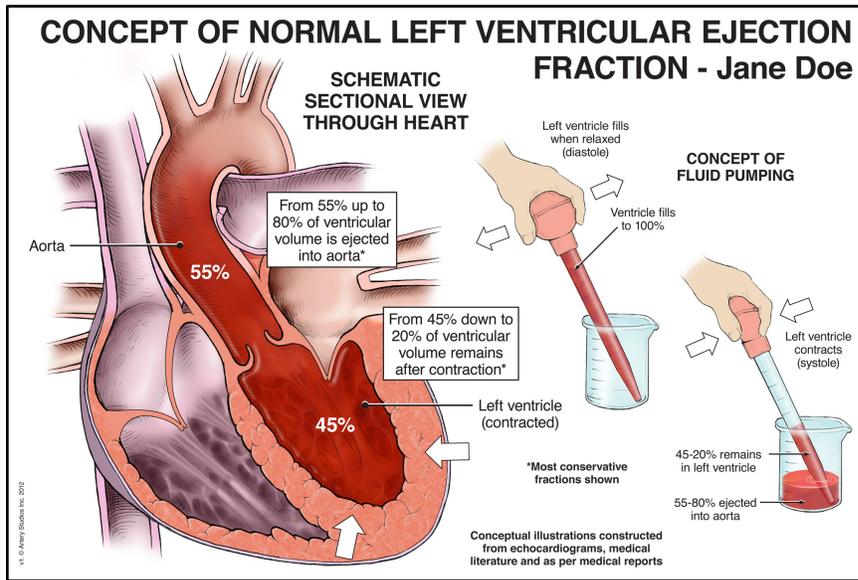


Figure 19: Visual metaphors may increase comprehension. In this image an analogy of the pumping action of the heart is made to that of a turkey baster bulb being squeezed.

12. DEMONSTRATE TECHNICAL FACTORS

Cases may involve technical considerations that contributed to, or caused, the trauma – e.g., a faulty tire, a missing or broken part, a defect in the road or an improperly installed fixture, etc. Showing the ‘anatomy’ of the underlying problem, based upon input from consulting engineers, is a way of establishing how the damages resulted (see Figure 20).

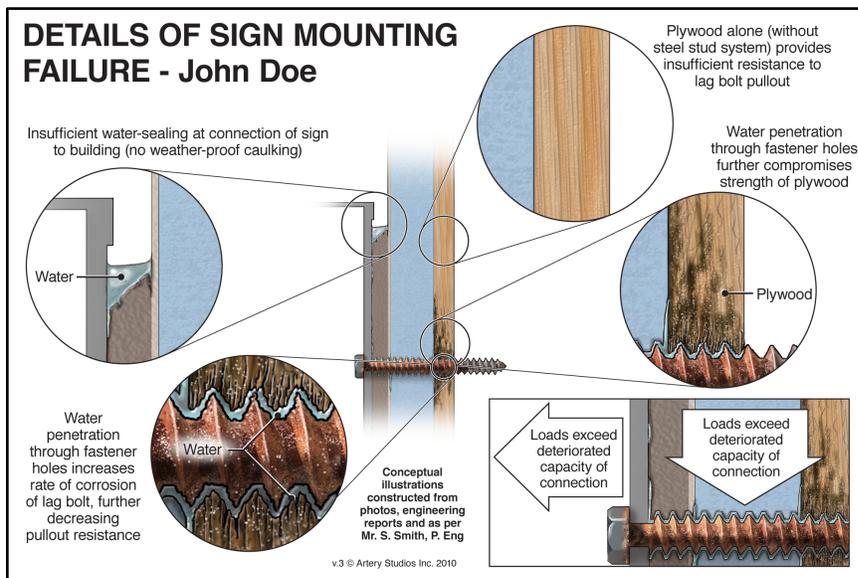


Figure 20: Technical illustrations are effective tools to assist in the communication of causation factors.

13. COMPARE VIEWS

A. COMPARISON TO NORMAL

Many times the viewer may be able to understand that something is wrong, but comparing this to normal allows them to appreciate the extent of how ‘abnormal’ it is (see Figure 21). When viewing the spine, adjacent uninjured levels contrast effectively with the injured areas and a separate visual may not be required. Or when a bone should be continuous and uninterrupted and is clearly broken and the ends displaced, demonstrating the pre-accident ‘normal’ isn’t likely required. But, other more intricate pathology may require comparators in order for the juror to fully appreciate such things as brain swelling and edema, abdominal trauma or complex articulated joints like those in the foot or wrist.

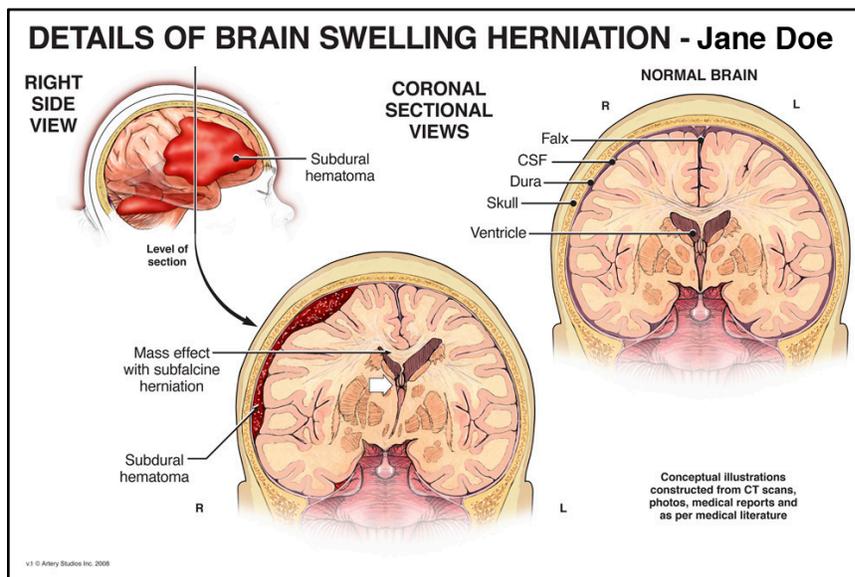


Figure 21: Abnormal findings (as seen on the lower left) may be better appreciated if a depiction of normal anatomy (upper right) is also depicted.

B. COMPARISON OF WHAT HAPPENED TO WHAT SHOULD HAVE OCCURRED

In medical malpractice files, visual comparisons allow for contrasting procedures or outcomes to be presented. For example, operative errors may be contrasted with what should have been done by the surgeon (see Figure 22).

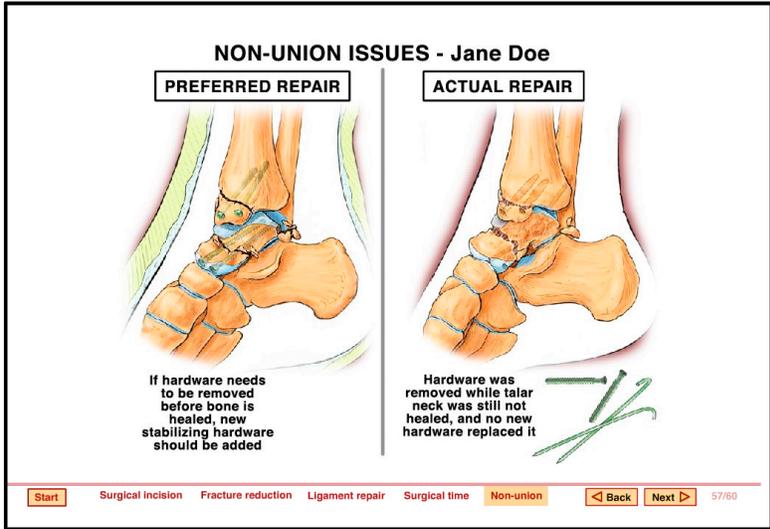


Figure 22: Frame from a Comparator Slide Presentation. Contrasting images allow for comparison between possible options. Illustration on left shows what surgical procedure should have been performed; image on right shows what was actually done.

C. TRANSITIONAL IMAGE SLIDERS

Utilization of current design software allows for the creation of electronic presentations that permit transitioning (or ‘morphing’) between one image and another¹ (see Figure 23). This allows for depiction of such things as comparisons between ‘before’ and ‘after’, explanations of radiological images with a registered illustration on top (Mader 2006), or other visuals that morph from one view to another.

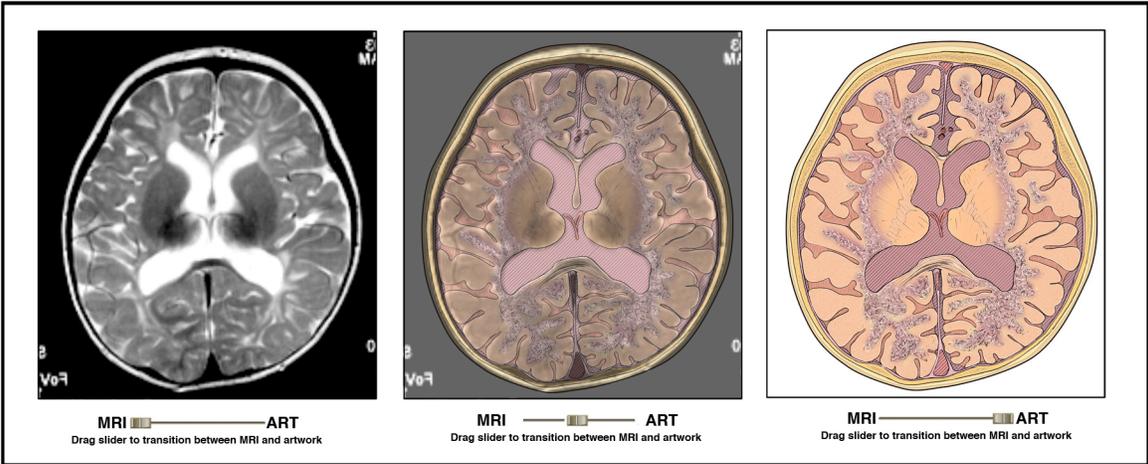


Figure 23: Stages of a Transitional Image Slider, which morphs between a CT scan and a corresponding illustration. Exact explanation of the radiology, while not losing a depiction of the original, may be obtained with this type of visual.

¹ Initial research in the academic use of Flash™-based medical-legal visuals was performed at the University of Toronto (Division of Biomedical Communications), by Assistant Professors Leila Lax and Jodie Jenkinson.

14. SHOW THE FUTURE

Medical experts often provide predictions of future degenerative processes expected to occur in the client's body. Osteoarthritis from articular injury (see Figure 24), bone collapse after spinal fractures, further functional complications, etc., may all be presented visually.

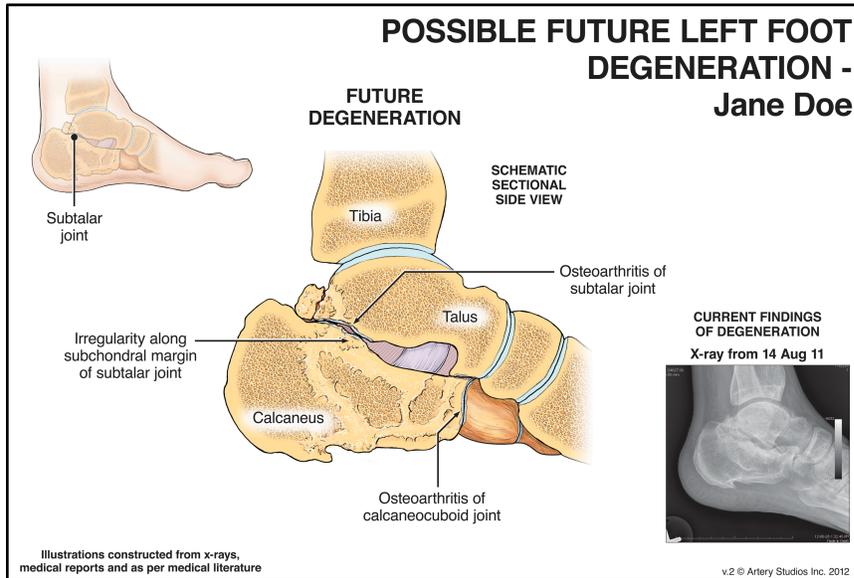


Figure 24: Future degenerative changes, such as the advancement of osteoarthritis, may be demonstrated (large central illustration), supported by current radiological (lower right) and clinical findings.

THE PROFESSION OF MEDICAL ILLUSTRATION

Medical illustrators have a unique combination of specialized education and experience in medicine and visual communication. Most have Master's degrees from one of only four medical illustration programs of study in North America – all offered within departments at medical schools. Courses of study include: human anatomy, embryology, neuroanatomy, pathology and histology (see Figure 25). Many medical illustrators are certified by the Association of Medical Illustrators – which requires formal academic training, as well as ongoing professional development to acquire and maintain certification.

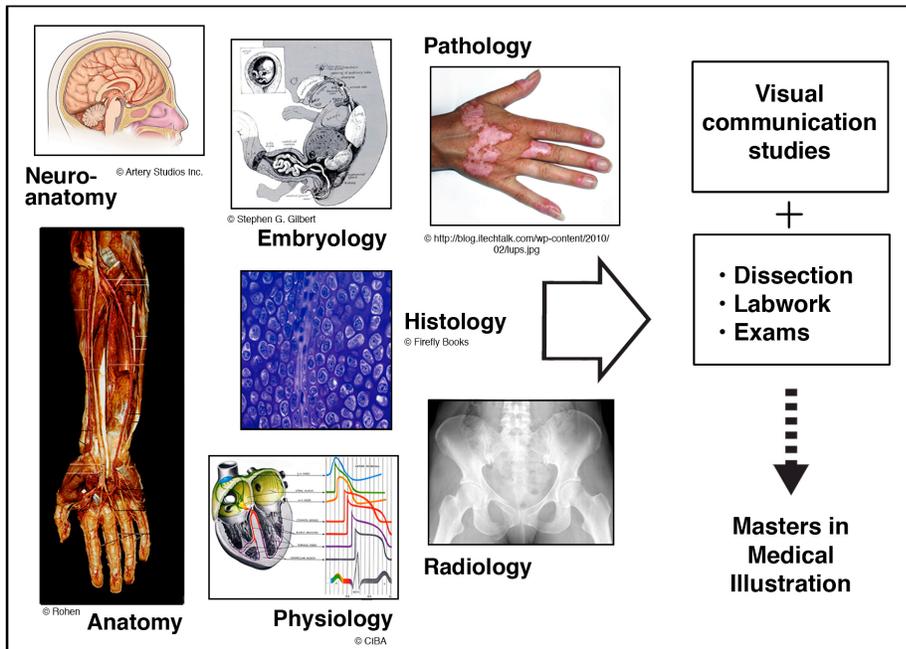


Figure 25: Some of the courses studied by medical illustrators in faculties of medicine in the few specialized programs offered in North America, leading to a Master's in medical illustration.

Medical-legal illustrators specialize in communicating issues associated with accident and medical malpractice claims for legal proceedings. The visuals they create summarize the trauma, anatomical, surgical and injury complication issues in a PI case (see Figure 26). As discussed, information presented in this way is especially persuasive - it involves the viewer and is remembered (Oatley 1998).

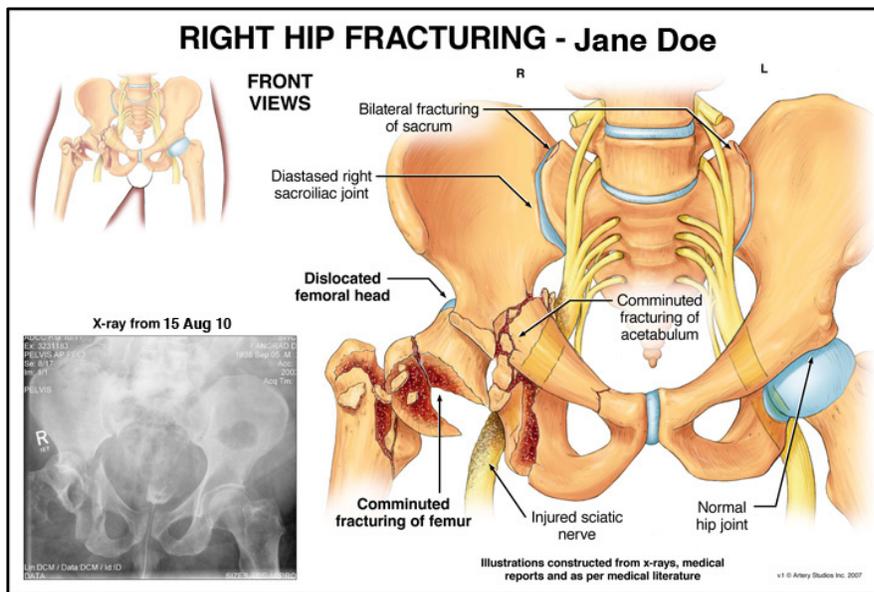


Figure 26: Example of a medical illustration exhibit, which simplifies complex CT scan information into a more readily understood visual presentation.

Research conducted by interviewing practicing personal injury litigators (Mader et al 2005) found that lawyers expressed a need for these types of visuals to: to maximize understanding; be credible and admissible; and be personalized to the case. Medical-legal visuals must be simple, focused, and serve to clarify the issues (Turbak et al 1994).

USE INNOVATIVE VISUALS AT MEDIATION

Although most cases settle before trial, plaintiff lawyers must treat a case as though it will end up in court (McLeish 2004). Many plaintiff lawyers wish to have visuals prepared in time for use at mediation or other settlement meetings. Use of customized images at this stage of file development demonstrates a thoroughly prepared case – one that is ready to proceed to trial if necessary – and provides a psychological edge during mediation (Mader 1995, Oliver 1994).

The types of demonstrative evidence used in these settings must be carefully considered – plaintiff lawyers should focus their demonstrative aids on the main facts and use them to educate the opposing side about complex issues of the case (Wheatley 2004).

At mediation, plaintiff counsel must explain the medical concepts without the assistance of the medical experts – therefore, the use of case-specific visuals can be particularly helpful with this communication challenge. PowerPoint™ presentations may be used, with visuals incorporated into them (Mader 2003). When using visuals at mediation, plaintiff lawyers develop a very good idea of how a jury will react to the images, should the case end up proceeding to trial (Oatley and McLeish 2004), and can, in turn, communicate this to other mediation participants. At the same time, defense counsel will assess the credibility of the case, the client, and the plaintiff lawyer, in order to conclude what impression will likely be made on a judge or jury (Wheatley 2004). The use of effective visuals at mediation can have a profound impact on the attempted settlement of cases.

When presenting a case at mediation, the medical issues must be confidently communicated and the germane issues emphasized, to ensure the mediator or judge has a clear understanding of the

severity and significance of the medical facts. Similar to a doctor communicating medicine to a patient, usually non-medically-trained participants are deciding the merits of the case. Mediators may have little or no knowledge about the medical matter before them, and words that are heard (or read) may cause a unique mental picture to be formed in the mind of the mediator, that relates in no way to the *actual* medical facts. The use of medical illustrations and or other visuals ensures a clear and equal understanding of all issues at this critical litigation proceeding.

USE INNOVATIVE VISUALS AT TRIAL

Visuals may be referred to in trial opening provided it has been determined that defense will not be objecting to the use of them:

Use demonstrative evidence early and often – from the opening address to the first witness and every witness thereafter. Repetition is pivotal to persuasion. Demonstrative evidence is pivotal to persuasion. The repetitive use of demonstrative evidence will have a synergistic effect and will significantly increase your chances of success. (Vigmond 2007)

The visuals must be formally admitted as evidence through the testimony of the medical expert on the case. During testimony, he or she will support their use and assure the court that the visuals are accurate, relevant, and useful to explain the issues of the case.

Most visuals produced by medical illustrators are considered illustrative evidence, rather than substantive evidence. Much has been written on admissibility issues of demonstrative evidence (see Legate 2006, Oatley 1999, Oatley and McLeish 2004). Evidence is categorized as either substantive evidence, which has probative value, or illustrative evidence, which supports other substantive evidence (Legate 2006).

If the evidence is merely illustrative of otherwise proven substantive evidence, the test for admissibility should be more relaxed. For such evidence, providing the evidence is not unfair or misleading, and providing it is relevant and helpful to the trier of fact, it should be admissible if it accurately illustrates otherwise admissible substantive evidence. (Oatley 1999)

The intention of customized demonstrative evidence is to assist in appreciating, recalling and understanding the issues and evidence in action – the intention is not to mislead (Legate 2006).

OUTCOMES OF USING VISUALS IN LITIGATION PROCEEDINGS

Lawyers report that integrating customized visuals adds impact to their arguments and that use of them contributes to faster resolution of files with fairer awards for their clients. “The use of demonstrative evidence is critical in a presentation of evidence in respect to damages – both pecuniary and non-pecuniary” (Vigmond 2007). Most experienced medical experts are well accustomed to using illustrations – indeed, many expect to use them, to help communicate to a jury:

Their technical and often boring but important testimony is lost on the juror who cannot follow or is uninterested in following the evidence of the expert. While the trial judge is allowed in our system of justice to take copious notes, the jury is expected to sit and only listen. Without some sort of aid to assist in the comprehension of technical evidence, the juror is at risk of making wrong decisions. It is for that reason many experts have been allowed by modern judiciary to use visual aids to demonstrate and illustrate their testimony. (Legate 2006)

Visuals can further assist in the testimony of medical experts by helping control the presentation of their evidence, by guiding and assisting them, and by focusing the jury’s attention on their critical evidence being presented (Cooper 1999). Further, the images may stimulate feelings and affect the listener emotionally, thereby enhancing a persuasive argument or the testimony of an expert (Babcock and Bloom 2001).

Judges report they may have difficulty understanding oral testimony, and appreciate the use of visual presentations; expert witnesses may need to explain complex issues, which are better communicated with visual images (Ferguson 2004).

Finally, reliable demonstrative evidence can shorten the litigation process. It can focus expert testimony, help dispel non-issues, and shorten the length of time required for experts to be on the stand (Legate 2006). Figure 27 summarizes the outcomes of effective use of innovative demonstrative evidence.

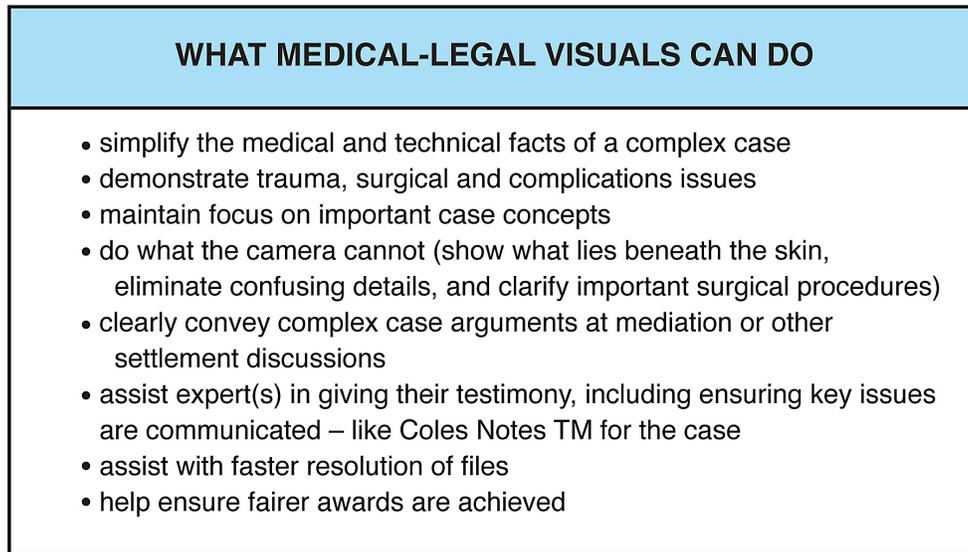


Figure 27: Summary of the effects of a visual approach to communicating cases.

CONCLUSION: INNOVATIVE VISUALS REVEAL THE ENTIRE ICEBERG

In Janine Smith’s case, the utilization of innovative demonstrative evidence facilitated the communication of the medical issues associated with her head, shoulder, hip and ankle trauma, the related degeneration and the possible future outcomes. It allowed for the complete storytelling of the history of the accident and how her physical and mental status was undermined. And the jury got it. This kind of customized, case-specific demonstrative evidence is critical to the effective communication of all the underlying medical issues and can play a significant role in complex case litigation. These visuals are essential to fostering a clearer understanding of important injury, surgical and pathology issues, and have become the accepted norm in our visually based society.

We have come so far, that more than one lawyer has expressed the view that the failure to use demonstrative evidence in any complicated case approaches negligence. (Legate 2006)

A visual approach to communicating personal injury files makes case presentations memorable, demonstrates confidence in knowing the medicine, assists in development of the entire legal team, and facilitates medical expert testimony. Innovative customized visuals are of great benefit in revealing all information under the surface and countering any misperceptions arrived at by external appearances.

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With thanks to team members at Artery Studios Inc.

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