Mental Dental – Patient Management

Ethics & Professional Liability

Principles of Ethics	
Autonomy - Self governance	-Respect Pt's right to self-determination and privacy - Treat the Pt according to the Pt's desires within the bounds of acceptable treatment - Safeguard the confidentiality of patient records **Informed Consent** - Dentist must share information w/ and obtain consent from the patient - Must inform patient about the nature of the procedure, benefits, risks, alternative options (including no treatment) - Fees are not included - If informed consent is not given = Assault or Battery **Minors** - 1-7 = Infant, not responsible for actions - 8-14 = Competent, but not responsible - 15-17 -> Responsible for actions - <18 years old can give implied consent, or assent, but not actual consent - *Exception*: If emancipated (freed from care and control of parents) or emergency - Married - Pregnant - Parent - Military **Patient Records** - Original charts/X-Rays are owned and kept by the dentist - Patients have the right to copies of their charts/x-rays - Keep as long as possible (Legally 7 years after patient is out of your practice though) **Risk Management** - Constantly weigh the risks and benefits of your patients - Documentation is the most essential component! Documents must be: - Specific - Objective - Complete - Timely - Written by yourself, for your own Tx - Never delete or change records -> Make addendums and strikethroughs - Don't write anything you don't want to read out loud in court
Nonmaleficence - Do no harm	- Practitioners must keep skills and knowledge up-to date w/ CE - Know your limits and refer difficult cases to a specialist
Beneficence - Do good	- Professionals have a duty to act for the benefit of others - Provide service to the patient and public at large - **Promote patient welfare** - Same ethical standard exists no matter what the financial arrangement is
Justice - Fairness	- Be **Fair** in their dealings with patient, colleagues, and society - Deal w/ patients justly and deliver dental care w/o prejudice - **Never slander** another dental professional
Veracity - Truthfulness	- Be **Honest and trustworthy** in dealing w/ public - Respect the position of trust inherent in the dentist-patient relationship - Must not represent care being rendered, fees charged, or any form of advertising in a false or misleading way

Legal Terms

Statute of Limitations	= Laws that set the maximum time after an event within which legal proceedings may be initiated - *Occurrence Rule*: SOL starts to run after the injury or malpractice ***Occurred***

	- *Discovery Rule*: SOL starts to run after the injury or malpractice is ***Discovered***
Witnesses	**Expert Testimony** = expert with an expertise in dentstry and can testify to the existing *Standard of Care* and how it was breached **Fact Witness** = Someone who was there
Good Samaritan Act	**=** Offers ***legal protection*** to health professionals and others who provide reasonable assistance to individuals who are: - Injured - Ill - In peril - Incapacitated

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Communication & Interpersonal Skills

Active Listening	- Prepare to listen by setting time aside, free from distraction - Paraphrase! - Lean Forward and maintain good eye contact - Face the patient - Ask questions, nod and smile
Rapport	= Mutual sense of trust and openness. Be human - Ask about patient's interests - Disclose some personal information as appropriate
Empathy	= Ability to understand and share the feelings of another - Reflection and showing understanding, acknowledging their concerns and being open-minded - **DON'T** share personal experiences and reroute the focus on yourself
Nonverbal Communication	= Continuous, automatic, and informative - First, and most common reaction of discomfort = **Eye and Eyebrow movement**
Verbal Communication	- Be simple, specific, and direct - Don't just advise -> Help them make an informed decision - Don't falsely reassure and say "Everything will be fine, don't worry" -> Easy for us to say! - Make expectations clear ***Clinical Interviewing:*** - Ask open ended Q's -> Allows the patient to explain what is important to them - Closed Questions -> Elicit more specific information - Leading questions -> Directs the patient to respond a certain way… ***BAD*** - Probing -> Gather additional information - Laundry List -> Ask patient to respond from a list of choices
Treatment Planning	= Present Tx in descending order of desirability - Only present options that are consistent with your standard of care - Ask patient what their understanding is of Tx options to verify their understanding (Teach-back method)

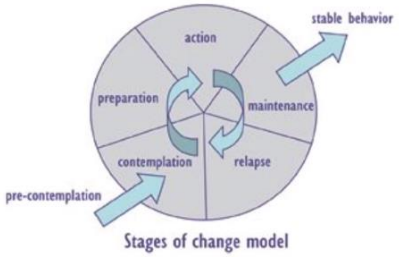
Health Behavior Change

= Complex interplay of a persons thoughts, feelings, and behaviors

ABC Model of Behaviour Change	
Antecedent	= Factor that facilitates behavior - Ie: Food stuck between your teeth
Behavior	= The behavior itself - Ie: Flossing your teeth to get the food out
Consequences	= Consequences of the behavior - Ie: Relief

Stages of Change

1. *Precontemplation*
   - Not considering behavior change
2. *Contemplation*
   - Begins to consider behavior change
3. *Preparation*
   - Preparing to take steps to change, often expresses a desire to change
4. *Action*
   - Engaged in taking action towards behavior change (often requires support)
5. *Maintenance*
   - Attempts to maintain a changed behavior



Stages of change model

Social Cognitive Theory = motivation to change is influenced by several factors	
1. Self-Efficacy	= Cognitive perception that **YOU** can execute behaviors necessary for a given situation - Positive affirmation, telling yourself you can do something (achievable goals)
2. Behavioral Modeling	= Learn proper behavior from models around you
3. Social Reinforcement	= Positive social consequences

Health Belief Model = Motivation to change behavior is influenced by several factors:	
1. Perceived Susceptibility	= for a given disease or problem - If some people are not prone to cavities, why are they?
2. Perceived Costs and Benefits	= Severity of consequences
3. Cues to Action	= Prompts to engage (or not) a certain behavior based on social cues

Types of Behavioral Learning

Classical Conditioning - Based on Stimuli	Ie: Pavlov's Dogs - Condition a neutral stimulus using an unconditioned stimulus
Operant Conditioning - Based on Consequences	***Positive Reinforcement*** - Do a good thing and get rewarded (Prize for kids after appointment) ***Negative Reinforcement*** - Do a good thing and remove a bad stimulus (Appointment will be done faster) ***Positive Punishment*** - Do a bad thing and get punished (don't brush your teeth…so you have to clean your room) ***Negative Punishment*** - Do a bad thing and remove a good stimulus (behave poorly…so take your phone away)
Observational Learning - Based on Modeling	= Acquisition of a skill by observing someone else doing it - Ask anxious or uncooperative child to observe his or her cooperative sibling

Behavioral Strategies

- Change the antecedent (Place floss on the nightstand as a reminder to floss)
- Altering consequences (reward yourself with videogames after you floss)
- ***Shaping*** -> Set small attainable goals and reward yourself after each step
- ***Premack Principle*** -> Making a behavior that has a higher probably of being performed contingent on a behavior with a lower probability of being performed
- Ability to change depends on lucus of control (Internal and External motivation)

Motivational Interviewing

= Person-centered counseling style to assist the resolution *from ambivalence to change*

O – Open questions

A - Affirmations

R – Reflective Listening

S – Summarizing

4 Stages:

1. *Engaging* = Forming a relationship
2. *Focusing* = Exploring motivation, goals, and values
3. *Evoking* = Eliciting their own motivations
4. *Planning* = Exploring how one might move toward change
    a. **Sustain talk** -> Not ready to change
    b. **Change talk** -> favors change
    c. **Commitment talk** -> Ready to change

Anxiety and Pain Control

Definitions:

- **Stress** = Perceived threat to one's well-being
- **Anxiety** = Subjective experience involving cognitive, emotional, behavioral and psychological factors
    - These patients are more likely to **sit still and not say much**
    - Require more interpersonal distance to be comfortable

Stress Management	***#1 Trust!*** -> Give patients a sense of control - Tell Patient what to expect beforehand - Develop hand signals, "Raise your hand to have a break" - Time Structuring, Counting down injections ***Comfort*** -> Acknowledge the patients experience - Be empathetic and tactful in your initial response ***Coping*** -> Cognitive-Behavioral interventions
Coping Strategies	- *Diaphragmatic breathing* (Deep breathing triggers physiologic relaxation response) - *Progressive Muscle Relaxation* (Tensing and relaxing certain muscle groups, focusing on the difference between tension and relaxation) - *Guided Imagery* (Imagine pleasant scenes) - *Hypnosis* (Attentional focus) - *Rehearsals* (allow patient to practice using a coping strategy like deep breathing) - *Systematic Desensitization/Graded Exposure* (Exposing patient to items from an agreed upon hierarchy of slowly ↑ feared stimuli, allow them to pair a relaxation response) - *Distraction* (Music, TV) -> Least effective for a hypervigilant anxious patient - *Tell-Show-Do* (instructional method) - *Habituation* (Decrease in response that occurs as a result of repeated or prolonged exposure to a conditioned stimulus) - *Rational Response/Reframing/Cognitive Coping* (Develop an adaptive thought or statement as a means of coping)
Cognitive Appraisal of a Threat - How we assess a threat	**Controllability** - How controllable the situation seems to be **Familiarity** - How familiar the situation is **Predictability** - How predictable the situation is **Imminence** - If the situation seems to be approaching near

Child Behavior Management

1. Create a child-oriented environment
    a. Toys and books in the waiting area
    b. Hang posters
    c. Ask about interests
    d. Have a silent parent in the room
2. Ask them to be a helper
3. Tell-show-do
4. Ask about fears
5. Count!

Dental Pain

= Complex phenomenon involving cognition and emotion

- Anxious patients are more likely to report pain and discomfort

Behavioral Pain Management	- Start with the simplest and least invasive procedure first - Give patient choices when possible and appropriate - Use hand signals and respond immediately to signs of discomfort
Pharmacologic Pain Management	**Rx**: - *Mild*: Ibuprofen or Acetaminophen - *Moderate*: Ibuprofen + Acetaminophen - *Severe*: Ibuprofen + Acetaminophen +/- Opioid ***Nitrous Oxide*** - Sedation before onset -> Tingling - Side Effect -> Nausea - *Contraindications*: COPD ***IV Sedation*** - Allows dose titration

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Epidemiology

Public Health	= Science and art of preventing disease, prolonging life, and promoting physical health and efficiency through organized community efforts Epidemiology = Study of the distribution and determinants of disease

DMFT	Irreversible Measure
Gingival Index	Reversible Measures
Periodontal Index	
Simplified Oral Hygiene Index	

Dental Epidemiology Indexes	
DMFT	= Conventional method of defining dental caries in a population ***DMFT*** = Decayed, Missing and filled *permanent teeth* as a result of caries ***DMFS*** = Decayed, Missing and filled *surfaces* due to caries ***DEFT*** = Decayed, *extracted* and filled teeth due to caries ***dmfs*** = Decayed, missing, or filled *primary teeth* as a result of caries
Gingival Index	= Uses 4 surfaces on 6 indicator teeth - ***0*** = Normal gingiva - ***1*** = Mild inflammation - ***2*** = Moderate inflammation - ***3*** = Severe inflammation, ulcerated tissue w/ tendency toward spontaneous bleeding
Periodontal Index	= Lots of different indices - CPITN = Community Periodontal Index of Treatment Needs - 0 = Healthy - 1 = Bleeding on Probing - 2 = Calculus - 3 = Shallow pockets - 4 = Deep Pocket **Not super sweet, because it doesn't account for recession (so CAL is inaccurate)**
Simplified Oral Hygiene Index	= Quantifies the about of Debris (DI-S) and Calculus (CI-S) - Oral Hygiene ranked as: Good, Fair, Poor

Early Childhood Caries

- AKA Baby bottle tooth decay
- Defined as: 1+ dmfs between birth and 72months old (6 Years)
  - Mostly occurs from 3-5 yrs
  - Mostly involves maxillary incisors and molars
- 5% of the US infant and toddler population

Oral Cancer

- Tongue is the most common site for cancers in the oral cavity
- Cancer screening should be done at every appointment

Prevention of Oral Diseases

Stages of Prevention	
Primary Prevention	= Prevents disease *before* it occurs - Ex: Sealants, and F^- in water
Secondary Prevention	= Eliminates or ↓ disease after it occurs - Ex: Restorations
Tertiary Prevention	= Rehabilitates a patient after a disease has taken place - Ex: Prosthodontics

Prevention Tools/Strategies	

Fluoride	***Topical*** = Strengthens teeth present, making it more resistant
	- Best for smooth surfaces, and can help with root caries and ECC
	- Varnish is adhesive and maximizes F tooth contact w/ 5% fluoride
	- *Acidulated Phosphate Fluoride (APF)* has pH 3.0 and 1.23% fluoride -> Idea is that it slowly demineralizes the enamel so it can then remineralize it with F to make it stronger
	
	Systemic = Incorporated into teeth being developed to make them more resistant + Incorporated into saliva to also have a topical effect
	
	Community H_2O Fluoridation
	- Most cost effective and most practical preventive measure to prevent tooth decay
	- Prevalence of caries in US ↓↓ since its initiation
	- 1ppm (1mg F per L H_2O) is optimal
	- F = Odorless, colorless, tasteless when: ***0.7-1.2ppm (ideal)***
	- 210 million US people live in Fluoridated communities
	
	School H_2O Fluoridation
	- 4.5x concentration of community H_2O -> Kids only at school for part of the day, so need ↑ F
	- Fluoride mouth rinse is another good school program
	
	Salt Fluoridation
	- Used for developing countries that don't have safe public water
	- 200-350mg Fluoride per Kg of salt
	- NOT recommended to combine this with H_2O F (too much F)
	
	Fluoride Supplements
	- Rx only
	- Used for children at risk for caries who live in non-F area
	- ≤ 3 years -> Fluoride drops (easier to swallow)
	- > 3 years -> Fluoride tabs and lozenges
	- > 6 years -> Fluoride mouthrinse (0.2% NaF solution weekly, or 0.05% NaF daily)
	
	Fluoride Supplement Dosage
	- ***Rule of 6's*** = no supplemental systemic Fluoride if:
	  - Fluoride level in drinking H_2O is >0.6ppm
	  - Patient is < 6 months old
	  - Patient is > 16 years old
	
	Stannous Fluoride*
	- Adds benefit of antimicrobial action (with tin ion)
	- Has Astringent taste, and can cause yellow-brown tooth staining

	Fluoride Toxicity Rule of 5's - Toxic dose = 5mg/kg - Lethal Dose = 5g for adult
Sealants 	= Best for occlusal surfaces - Recommended for 1st and 2nd permanent molars for kids at risk for caries
Mouth Guards	= Made for athletes to prevent tooth trauma - Protruding upper incisors are especially vulnerable trauma (Class II Div 1)
Health Education	**Health Literacy** = Capacity at which individuals obtain, process and understand basic health information and services - Education along cannot function as a method to prevent disease
Toothbrushing	Dental plaque is the main cause of both caries and periodontal disease - Children <6 years should be monitored during brushing
Flossing	= Apparently flossing does not prevent tooth decay, but is helpful for gingival health
Diet	= Frequency of sugar consumption is more important than amount (Stephan curve) - Are they eating during the day or before bed? - How long are sticky foods in the mouth before being brushed out?

Evidence Based Dentistry

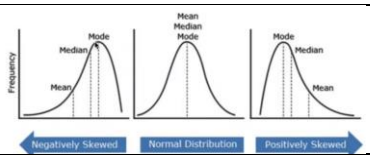
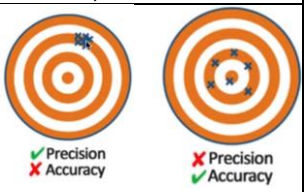
Hierarchy of Evidence

- Meta-analysis
- Systematic Review
- Randomized controlled, double blind studies
- Cohort Study
- Case Control Study
- Case Series
- Case Reports
- Ideas/Editorials/Opinions
- Animal research
- In Vitro research

Descriptive/Epidemiological Studies	= to quantify the disease status in a community - Prevalence = Proportion of a given population that is affected by that condition at a given time
Analytical/Observational Studies	= to determine the etiology of a disease *Cross-Sectional Study* - Survey/measurement taken to represent a snapshot in time - Measures: Prevalence - No follow up needed - Ex: Survey people who drink alcohol and see how many have oral cancer vs don't **Longitudinal Studies** *Case-Control study* - People with a condition (cases) are compared to people without it (controls) in the past (Retrospective study) - Risk of getting a disease with already known exposure factors - Measures: Odds Ratio *Prospective Cohort Study* - Cohort is followed through time to see who develops a disease - Measures: Incidence, and Relative Risk *Retrospective Cohort Study* - Look back after following the cohort and decide what disease you want to look for - What the possible risk factors were when you have the disease - Measures: Incidence, and Relative Risk
Experimental Studies	= To determine the effectiveness of a therapy

	Clinical Trial
	- Aim to isolate one factor and examine its contribution to a patient's health by holding all other factors as constant as possible
	  - Random sampling
	  - Random allocation
	  - Blinding (single or double blind)

Biostatistics

Frequency Distributions	Normal Distribution = Bell-shaped Skewed Distribution = tail to the right or left Bimodal Distribution = 2 peaks 
Measures of Central Tendency	Mean = Average value Median = Middle value Mode = most frequent measurement in a set of data
Measures of Dispersion	Range = max - min Variance = how spread out individual values are from the mean Standard deviation = square root of variance - Larger the standard deviation = more spread out the numbers are (larger variance)
Quality of a Diagnostic Test	*Reliability* - Precision - Are you getting consistent results from the tests? *Validity* - Accuracy - How close to the truth are the results? *Sensitivity* - Test is correctly identifying the disease - ↑ True Positive and ↓ False Positive - *"2 S's in Sensitivity and Disease"* *Specificity* - Test is correctly identifying people who DON'T have the disease (Healthy) - ↑ True Negative and ↓ False Negative 
Inferential Statistics	*Statistical Significance (p-value)* - Probability that 2 variables are un-related - p <0.05 = reject the null hypothesis -> Statistically significant - p >0.05 = accept the null hypothesis -> Not statistically significant *Null Hypothesis (H_0)* - A hypothesis which the researcher tries to disprove, reject, or nullify

	H_0 is false	**H_0 is true**
Reject H_0 (p <0.05)	TP – Correct!	FP – Type I error (α)
Accept H_0 (p > 0.05)	FN – Type II error (β)	TN - Correct

Correlation Analysis	*Correlation coefficient (r)* - Statistical measure that represents the strengths of relationship between 2 quantitative variables - Always between -1 - +1 - 0 means no linear relationship
Inferential Statistics	*Chi-squared test (X^2)* - Measures the association between 2 categorical values (Men and Women liking Cats or Dogs) *T-test* - Measures the statistical difference between *2 means*, - Small sample size *Z-Test* - Measures the statistical difference between *2 means* - Large sample size with a known variable *ANOVA (Analysis of variance)* - Used to test differences between 2+ Means

Operational Variable	*Qualitative* = Descriptive (Chi-Squared Test)
	- Nominal -> Names or Labels
	  - Eye color, hair color etc
	- Ordinal -> Ranking
	  - Mild, Moderate, Severe Crowding

	Quantitative = Numerical (T-test, Z-test, ANOVA) - Ordinal -> Ranking (represented by numbers) - Interval -> range of values - Ratio -> Range of values with clear definition of 0 *Independent variable* = Explanatory, predictor *Dependent variable* = Outcome, predicted *Confounding variable* = Covariate, minimized by randomizing

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Infection Control

Routes of Transmission	Direct contact = Via person Indirect contact = via fomite (instrument, clothing, furniture) Droplets or aerosols = via air Parenteral contact = via needle stick injury (IV, IM, Subcutaneous)

Hepatitis	
Hep A	Transmission: - Fecal-oral
Hep B	= DNA Virus Transmission - Contaminated blood 30% risk of transmission after percutaneous injury - Vaccine is available and should be offered to all employees - Post exposure prophylaxis includes vaccine and additional immunoglobulin
Hep C	= RNA Virus Transmission - Contaminated blood 1.5% risk of transmission after percutaneous injury - No vaccine is available - Postexposure prophylaxis is now available (but $$$$)
Hep D	Transmission - Direct contact, prior infection w/ HBV
Hep E	Transmission - Fecal-oral
Contaminated **B**lood FE**c**A**l**-oral **D**irect	

Other important infections	
HIV	= RNA Virus 0.3% Risk of transmission after percutaneous injury - Diagnosed when antibodies to HIV are detected in blood by ELISA test - No vaccine is available - Post exposure prophylaxis is a course of antivirals
Tuberculosis (TB)	Transmission: - Inhalation of infected droplet nuclei Diagnosed by: symptoms, sputum culture, chest X-ray, or +'ve tuberculin skin test - Pt w/ active TB should not be seen for elective dental care - Health care workers should have tuberculin skin test **Once per year**

PPE

Gloves	Whenever touching something that is contaminated with body fluids Changed between patients of course

	Utility gloves -> not for surgery, used for washing instruments
Masks	Changed per patient
Protective eye wear	Protect from splatter splash, and projectiles - Dentist is most at risk for eye injury
Gowns	Change daily

Sterilization

= Destruction of all life forms including bacteria, viruses and **spores**

Glutaraldehyde	= cold solution used for heat-sensitive items - Requires long soak time
Pressure Sterilization (Autoclave)	= **121ºC at 15 PSI for 20 mins** - Moist heat destroys bacteria by **denaturation** of proteins - Biologic monitors (Test strips with spores to test efficacy) -> Weekly monitoring - Process Indicators (Temperature and pressure) -> With each load
Dry Heat Sterilization	= **160ºC for 60 minutes** - Only glass or metal objects can be sterilized by this method b/c of high temps - Destroys bacteria by **coagulation** of proteins - Best preservation of cutting edges
Ethylene Oxide	= Low temps, but can **penetrate** materials to sterilize pre-packaged items (PSP plates for ex) - Needs lengthy Aeration process

Disinfection

- Used on inanimate objects…**spores are not** destroyed but **Mycobacterium tuberculosis** is
- Let sit on surface for 10 minutes and then wipe

Antisepsis

- Used on living tissue to ↓ bacterial load

Alcohol	= Most common - Denatures proteins
Chlorhexidine	= Has substantivity (continuous long lasting effect)
Detergents	= Helps loosen and remove microbes from surface
Quaternary ammonium compounds (Quats)	= Disrupts cell membrane and is lethal to many microbes - **Doesn't kill endospores, TB or non-enveloped viruses**

Spaulding Classification System

Critical	Contacts sterile tissue or vascular system - Requires sterilization - Ex: Needles
Semi-critical	Contacts mucosa - Minimum of high-level disinfection, but sterilization if the material is heat stable - Ex: Mouth mirror
Non-Critical	Contacts skin - Requires disinfection - Ex: Blood pressure cuffs

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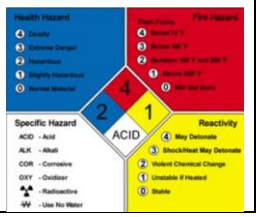
Materials and Equipment Safety

Mercury	*Inhalation of mercury vapors is the biggest risk* - If a spill occurs -> Special vacuum system + Sulfur powder *Acute Mercury Toxicity* - Muscle Weakness (Hypotonia) - Loss of hair (alopecia) - Weight loss/GI disorders - Exhaustion
Airborne Particles	*Splatter* = Visible ≥ 50um, - Falls within 3ft of patients' mouth - Can carry blood-born pathogens (HIV, Hep B, C)

	Aerosols = Invisible, <50 um - Remain floating in the air for hours - Can only carry respiratory infections (TB)
Noise Control	= Hearing loss develops slowly over time and by repeated exposures of ≥ 90dB
Water Lines	EPA requires ≤ 500 CFU of heterotrophic bacteria per mL of water - Not recommended to flush lines at the beginning of clinic -> Makes no difference - Anti-retraction valves prevent retraction of fluid from a patient into the handpiece and water spray (Could pass onto the next patient)
Material Safety Data Sheet (MSDS)	= Manual made by **the manufacturer** that details the hazard of particular chemicals, how to deal with spills etc National Fire Protection Association color and number (0-> 4 = least to most dangerous) - **Blue** = Health hazard - **Red** = Fire hazard - **Yellow** = reactive chemical - White = Requires PPE 

Insurance Terms & Healthcare Systems

Insurance Terms	
Beneficiary	= Person w/ the insurance plan
Benefactor	= The Insurance company
Benefits	= What insurance pays for dental services covered under the contract
Premium	= Monthly amount you pay to have insurance
Copayment	= Predetermined rate you pay at the time of care
Deductible	= What you need to pay before insurance starts kicking in
Co-Insurance	= Percentage of charge that you pay
Out-of-pocket-maximum	= The most you have to pay before insurance covers 100% of the bill
Third-Party Payer	= When a "third" party negotiates payments between **providers** (dentist) and **patients** for services - **Usual, customary, and reasonable (UCR)** = Reasonable fee based on geographic location - **Table of allowances** = Maximum amount a plan will pay for each procedure but *allows* dentists to charge more in they want - **Fee Schedule** = List of fees the dentist has agreed upon for dental services and the insurance will cover in full
Payment Plans (how dentist gets paid)	**Fee-for-Service** - Dentist is payed per procedure - Leading payer for dental treatment **Capitation Plan (HMO)** - Per capita = dentist is paid flat fee for each patient seen (not procedures) - Cap on how dentist is paid - Value of service > Payment -> Dentist's loss - Payment > value of service -> Dentist's gain **Sliding Scale Fee** - Cost of treatment is adjusted based on patient income and ability to pay **Balance billing** - Dentist charges the remaining *balance* between the total fee and what the insurance company covered - Balance after deductible + Co-pay + Insurance coverage **Prospective reimbursement (FQHC)** - Dentist is paid predetermined fixed amount *before* treatment is provided
Fraud Terms	
Unbundling (Dentist)	= Separating of a dental procedure into component parts
Bundling (Insurance Company)	= Combining of distinct dental procedures - Opposite of unbundling -> done by the insurance company
Upcoding (Dentist)	= Reporting a more complex or higher cost procedure than was actually performed
Downcoding (Insurance Company)	= Code changed to a less complex or lower cost procedure than was reported
Overbilling (Dentist)	= Charging more than legally or ethically acceptable - Dentist doesn't charge the co-pay to the patient, but still bills the insurance company the full fee

Healthcare Systems

Health Maintenance Organization (HMO)	= Insurance option that limits coverage to care provided through specific providers who are under contract - Doctors are paid on **Capitation Plan**
Preferred Provider Organization (PPO)	= Panel of providers who agree to accept less than usual fees in exchange for a higher volume of patients - Subscribers to this plan have a financial incentive to use providers from this panel
Dental Managed Care	
Open panel plans	= Participating dentist can see any patient in addition to people in the organization system
Closed panel plans	= Participating dentist is contracted and can **only** see patients who are members of the managed care organization (HMO)