Canadian Practice Standards and Guidelines for Nurses Practicing in Medical Aesthetics.

Canadian Society of Aesthetic Specialty Nurses

CSASN Mission: To provide the highest practice standards to protect the public and ensure patient safety, through current evidence-based education.

Revised 2024

Table of Contents

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Introduction

What are Practice Standards and Guidelines?

The provincial nursing colleges produce practice standards and guidelines to support nurses in providing safe, effective and ethical nursing care. Practice standards outline the expectations for nurses that contribute to public protection. They inform nurses of their accountabilities and the public of what to expect of nurses. The standards apply to all nurses regardless of their role, job description or area of practice.

This document outlines the ethical and clinical standards that all Canadian medical aesthetic nurses should adhere to, keeping ethical and patient safety at the forefront of their practice. This document will address all the essential parts of an aesthetic non-surgical clinical practice including patient safety, informed consent, education and training, documentation, scope of practice, medical directives, procedures, complications and facility recommendations.

The nursing college / association practice standards and guidelines for medical aesthetic nurses are consistent with the legislation that is proposed both Federally and Provincially across Canada.

Drafting practice standards is a key function of a self-regulating profession. It is recognized that the anti-aging cosmetic medicine trend is on the rise and requires regulation to ensure these procedures are restricted to those individuals who are professionally trained and must provide proof that their skills are being maintained. All practice standards and guidelines apply broadly to the nursing profession and are delivered to nurses within their respective colleges / associations.

The following document focuses on the professional standards and competencies that the aesthetic nurse injector should be expected to demonstrate while providing aesthetic injection procedures. The medical aesthetic nurse has the responsibility to practice only in facilities that follow the recommendations outlined in this document.

For the remainder of this document the term **medical aesthetic nurse (MA nurse)** refers to a registered nurse, registered practical nurse, licensed practical nurse and nurse practitioner who has undergone medical aesthetic training to perform dermal fillers, volume enhancers, biostimulators, lipolysis, and neuromodulators procedures. The term **patient** refers to a person who has chosen to undergo a medical aesthetic procedure(s). The term **authorizer with ordering authority (AOA)** is a licensed practitioner who has undergone medical aesthetic training for the administration of dermal fillers, biostimulators, lipolysis, and neuromodulators and is supervising the medical aesthetic nurse's practice.

Each medical aesthetic provider must adhere to their provincial college professional guidelines and scope of practice.

1. Ethics in Medical Aesthetic Nursing

The CNA describes a code of ethical responsibility in nursing care using 7 primary values "promoting the values of patients well-being, respecting patient choice, assuring privacy and confidentiality, respecting the sanctity and quality of life, maintaining commitments, respecting truthfulness and ensuring fairness in the use of resources... acting with integrity, honesty and professionalism in all dealings with the patients and other health care team members." (CNA 2017)

CSASN recommends that the MA Nurse in a clinical practice adheres to these ethics;

- Follows the ethical standards of the Canadian Nurses Association (1)
- Follows the Confidentiality and Privacy- Personal Health Information standard of the Canadian Nurses Association and provincial nursing college / associations (2)
- Practice under the direction of an AOA as per the Regulated Health Professionals Act (RHPA) (3)
- Follows the RHPA Scope of Practice guidelines that are mandated by their provincial college. (3)
- Self-directed education to remain and stay current in all aspects of the field of medical aesthetics.
- Uses only Health Canada approved products, procedures and devices. (5)

i) Privacy and Confidentiality

MA Nurse recognizes the importance of privacy and confidentiality and safeguards personal, family, community information obtained in the context of a professional relationship. Nurses have an ethical responsibility to safeguard information obtained in the context of the nurse-patient relationship.

Principles of confidentiality

- Nurses know the legislation that is mandated by their provincial colleges and Health Canada.
- Nurses share relevant personal and health information with the health care team. Nurses explain to patients that this information will be shared and identify to them who is on the health care team
- Nurses respect patient rights to access their own health records
- Nurses safeguard personal and health information learned in the context of the nurse-patient relationship and disclose this information (outside of the healthcare team) only with patient consent or when there is a specific ethical or legal obligation to do so.
- Nurses have an ethical obligation to disclose in situations that involve a substantial risk of significant harm to the health or safety of the patient or others. This process involves consulting with the medical director.
- Nurses comply with any legal obligation to disclose confidential information that is imposed by provincial legislation.
- In all cases where disclosure of confidential information is necessary, nurses restrict the amount of information disclosed and the number of people informed to the minimum necessary to fulfill the legal and ethical obligations.
- There are legal requirements regarding the retention and destruction of health records. MA's must refer to provincial regulatory guidelines. (1,2, 3)

Procedure to Maintain Confidentiality

- All staff to sign a confidentiality agreement upon employment
- Store patient records safely and securely. Take special care when transporting patient records to ensure they are not lost, stolen or accessed by unauthorized persons.
- Keep patient information confidential when transmitting information through fax; avoid using patient names if possible; check fax number and mark "Confidential" before sending). Ensure there is a policy in place regarding a secure transmittal system.
- Electronic documentation carries a higher risk of breach of confidentiality. Policies and procedures, as well as specific technologies, are required to protect the confidentiality of the patient's health record and system security.
- If computerized charting is used, follow the organization's policies to ensure the privacy and security of the information (e.g., use passwords as directed; log off when leaving the computer).
- Ensure that patient information displayed on a computer monitor remains confidential (e.g., use a screen saver; locate the monitor in a secure area).(2,4)

ii) Email Communication

CSASN guidelines for protecting patient confidentiality when using e-mail to transmit patient information are as follows:

- obtain written consent from the patient when transferring health information by email, text or through social media outlets (4)
- transmit email using special security software (e.g., encryption, user verification or secure point-to-point connections)
- include a confidentiality warning indicating that the information being sent is confidential and that the message is only to be read by the intended recipient and must not be copied or forwarded to anyone else
- never forward an email received about a patient without the patient's written consent
- maintain confidentiality of all information, including that reproduced in hard copy
- locate printers in secured areas away from public access
- establish a policy and protocol for a secure and confidential email systems (2)
- **Keep a copy in the patient's chart**

iii) Regulations of Health Products Advertising in Canada

MA nurses must adhere to all the Health Canada food and drugs act and regulations. Definition of Advertising "Advertisement includes any representation by means whatever for the purpose of promoting directly or indirectly the sale or disposal of any food, drug, cosmetic or device". (Food and Drug Act- 1985) (5)

This legislation governs the sale of any health product and the associated advertising including websites or other forms of sales.

Food and Drugs Act

- **Section9(1):** Prohibitshealthproductadvertisingwhichisfalse,misleadingordeceptive,oris likely to create an erroneous impression regarding its character, value, quantity, composition, merit or safety. Examples of possible section 9(1) contraventions: messages which emphasize only product benefits without including safety information; and messages discussing off-label use of a product.
- **Section20(1):** Prohibitsfalse,misleadingordeceptiveadvertisingofmedicaldevices.
- **Section3(1):** Prohibitsconsumer-directedadsforhealthproducts(includingmedicaldevices) which make claims to treat, prevent or cure any of the serious diseases listed in Schedule A to the Act (although Schedule A prevention claims are now permitted by regulation for over-the-counter drugs and natural health products). (5)

Food and Drug Regulations

- **SectionC.01.044:** Prohibits consumer-directed prescription drug advertising beyond the drug's name, price and quantity. This means, for example, that when a prescription drug is advertised by name to consumers, no reference can be made to its therapeutic use and/or benefits.
- **SectionC.08.002(1):** Prohibits the advertising of new drugs which have not been authorized for sale by Health Canada. (5)

Health Canada requires all health professionals to follow the FDA and the regulatory requirements for advertising health products. The policy documents provide guidance of the restrictions in advertising to the public. (6)

iv) Canadian Code of Advertising Standards

The Canadian Code of Advertising Standards (Code), which has been developed to promote the professional practice of advertising, was first published in 1963. Since that time, it has been reviewed and revised periodically to keep it contemporary. The Code sets and maintains standards of honesty, truth, accuracy, fairness and propriety in advertising. The Code is administered by Advertising Standards Canada (ASC), an industry body committed to creating and maintaining community confidence in advertising. All professionals advertising in medical aesthetics must follow The Advertising Standards ofCanadadocumentJuly2019. (7)
Any advertising for medical aesthetic injections should be for the sole purpose of conveying factual information to the public without intention to sell. Advertising should not be used for the purpose of conveying additional information that may unduly influence a patient's decision to proceed with the treatment.

It is the MA nurse's responsibility to follow the advertising guidelines through their provincial regulatory colleges.

Accuracy and Clarity
• Advertisements must not contain inaccurate, deceptive or otherwise misleading claims, statements, illustrations or representations, either direct or implied, with regard to any identifiable product or service. • Advertisements must not omit relevant information in a manner that, in the result, is deceptive. • All pertinent details of an advertised offer must be clearly and understandably stated. • Disclaimers and asterisked or footnoted information must not contradict more prominent aspects of the message and should be located and presented in such a manner as to be clearly legible and/or audible. • All advertising claims and representations must be supported by competent and reliable • The advertiser must be clearly identified in the advertisement
Disguised Advertising Techniques
• No advertisement shall be presented in a format or style that conceals the fact that it is an advertisement
Price Claims
• No advertisement shall include deceptive price claims or discounts as to worth or value. “Regular Price'', “Suggested Retail Price” are deceptive terms when used by an advertiser to indicate a savings, unless they represent prices at which, in the marketplace where the advertisement appears, the advertiser actually sold a substantial volume of the advertised product or service within a reasonable period of time (such as six months) immediately before or after making the representation in the advertisement; or offered the product or service for sale in good faith for a substantial period of time (such as six months) immediately before or after making the representation in the advertisement. • Where price discounts are offered, qualifying statements such as “up to”, “XX off”, etc., must be in easily readable type, in close proximity to the prices quoted and, where practical, legitimate regular prices must be included.
Bait and Switch
• Advertisements must not misrepresent the consumer’s opportunity to purchase the goods and services at the terms presented. If supply of the sale item is limited, or the seller can fulfill only limited demand, this must be clearly stated in the advertisement.
Guarantees
• No advertisement shall offer a guarantee or warranty, unless the guarantee or warranty is fully explained as to conditions and limits and the name of the guarantor or warrantor is provided, or it is indicated where such information may be obtained.

Comparative Advertising
• Advertisements must not, unfairly, discredit, disparage or attack one or more products, services, advertisements, companies or entities, or exaggerate the nature or importance of competitive differences.
Testimonials
• Testimonials, endorsements or representations of opinion or preference, must reflect the genuine, reasonably current opinion of the individual(s), group or organization making such representations, and must be based upon adequate information about or experience with the product or service being advertised, and must not otherwise be deceptive.
Professional or Scientific Claims
• Advertisements must not distort the true meaning of statements made by professionals or scientific authorities. Advertising claims must not imply that they have a scientific basis that they do not truly possess. Any scientific, professional or authoritative claims or statements must be applicable to the Canadian context, unless otherwise clearly stated.
Imitation
• No advertiser shall imitate the copy, slogans or illustrations of another advertiser in such a manner as to mislead the consumer.
Safety
• Advertisements must not without reason, justifiable on educational or social grounds, display a disregard for safety by depicting situations that might reasonably be interpreted as encouraging unsafe or dangerous practices, or acts.
Unacceptable Depictions and Portrayals
• Advertisements shall not condone any form of personal discrimination, exhibit unlawful behavior; demean one or more identifiable persons, groups of persons, firms, organizations, industrial or commercial activities, professions, entities, products or services, or attempt to bring it or them into public contempt or ridicule. • Prices quoted in advertisements in Canadian media, other than in Canadian funds, must be so identified.

Canadian Code of Advertising Standards 2020 (9)

v) Canadian Anti-Spam Legislation (CASL)

Canadian Anti-Spam Legislation helps to protect Canadians while ensuring that businesses can continue to compete in the global marketplace.
This law prohibits the:

- sending of commercial electronic messages (CEM) without the recipient's implied or express consent (permission), including emails, social media messages, instant messages via any platform, and SMS text messages;

- alteration of transmission data in an electronic message which results in the message being delivered to a different destination without express consent;
- installation of computer programs without the express consent of the owner of the computer system or its agent, such as an authorized employee;
- use of false or misleading representations online in the promotion of products or services;
- collection of personal information through accessing a computer system in violation of federal law (4) (e.g. the Criminal Code of Canada); and collection of electronic addresses by the use of computer programs or the use of such addresses, without permission (address harvesting). (9)
- CEM is any message that encourages participation in a commercial activity. This includes
- advertisements and information about promotions, offers, business opportunities, events, etc;
- You must be able to prove consent (4,8).

2) Accountability

Collaboration of the medical aesthetic team requires effective and efficient communication between all team members so that specific roles can be identified. The AOA and MA nurse each practice within their own professional scope of practice. They work collaboratively as a team to provide care and collectively share responsibility for the outcomes. In an effort to minimize the potential risks it is imperative that the collaborative health care professionals understand their roles and responsibilities as it relates to their scope of practice (8)

i) Regulated Health Professions Act

The scope of practice model is set out in the Regulated Health Professions Act (2023) and consists of two elements:

- Scope of practice statement
- Controlled acts

Nursing's Scope of Practice Statement

Each MA nurse must understand their provincial scope of practice statement and adhere to any specific regulations for the area of medical aesthetics. Those nurses able to practice in medical aesthetics will do so under their scope of practice which includes the controlled acts that fall in this area of practice. (3)

Controlled Acts

Controlled acts are acts that are considered to be potentially harmful if performed by unqualified persons. Controlled acts may only be performed through a direct order or a medical directive from an AOA.

Nursing is authorized to perform five of the fourteen controlled acts.

- Performing a prescribed procedure below the dermis or a mucous membrane.
- Administering a substance by injection or inhalation.

- Putting an instrument, hand or finger beyond a body orifice or beyond an artificial opening the body.
- Dispensing a drug
- Treating my means of psychotherapy technique. (9)

ii) Self-Regulation

Nursing is a profession that is self-regulated by provincial and territorial colleges. Nurses are accountable for their actions and are always expected to act in the best interest of the public. Nurses must strictly adhere to the regulations, practice standards and guidelines, as well as the code of ethics set forth by the nursing colleges. Regulation is a responsibility shared between regulatory bodies and the individual. (10)

iii) Medical Directives and/or Patient Specific Orders

There are two ways to communicate the delegation, direction, or prescription of a controlled act. Either a direct order or a directive is created (written or electronic preferred, verbal is acceptable if documented appropriately), and then the procedure or treatment involving the controlled act could be performed by the nurse; or by designation which does not apply in most, if not all, aesthetic circumstances (11). Delegating or accepting delegation of these controlled acts is subject to applicable college regulations and your respective college should be referred to for details(11).

CSASN recommends when nurses perform a dermal filler, biostimulator, lipolysis, PRP, or neurotoxin injection, the order must be provided, and is most commonly in the form of a directive - implemented for a number of patients when specific conditions are met and when specific circumstances exist.
The RHPA states that a directive is always written (can include electronic chart notes) and includes the following:

- the name and description of the procedure(s)/ treatment(s)/intervention(s) being ordered, including the dose, route, and timing of the intervention
- specific patient clinical conditions and situational circumstances that must be met before the
- procedure(s) can be implemented.
- clear identification of the contraindications for implementing the directive
- the name and signature of the AOA approving and taking responsibility for the directive. (11)

Given that Nurses (excluding Nurse Practitioners) cannot communicate a diagnosis in the chart or to a patient. The AOA must provide the underlying diagnosis on which the treatment is prescribed which is completed during the initial assessment of the patient considering a non-surgical aesthetic treatment. (8) The AOA must review the medical history to determine if there are any contraindications that would prevent the patient from having the injectable treatment/procedure. The MA nurse is then able to provide the ordered treatment recurrently under the medical directive. Depending on your college scope of practice, the AOA may need to be available to assess a patient on-site. Refer to your provincial college guidelines for further direction.

iv) Collaborative Relationship Between the MA and AOA

There must be an established therapeutic and collaborative relationship between the MA nurse, AOA and the patient. An AOA is mandatory in a medical aesthetics clinic where regulated health professionals are working within their scope of practice and require an order for a controlled act. The MA nurse and the AOA must be members in good standing with the provincial nursing or physician college in the province they are licensed in. The medical aesthetic literature recommends that health professionals attend non industry competency or courses specific to medical aesthetic procedures to provide unbiased training. To ensure ongoing competence, there must be documentation of continuing education by attending workshops, presentations, conferences or reading CE CME approved journal articles to maintain their skills to ensure patient safety (12)

Qualifications of the MA as recommended by CSASN:

- A new MA nurse should have access to a preceptor or mentor for the first 6 months.
- The MA nurse should be injecting a minimum of 8 hours per week to maintain skill levels.
- The MA nurse should collaborate with an AOA who is trained in medical aesthetics.
- The MA nurse AOA must be educated to recognize and treat complications.
- The MA nurse should maintain 50 hours annually of continuing education.

Qualifications for the AOA as recommended by CSASN

- The AOA's are recommended to maintain current evidence-based practice according to their provincial college.
- It is recommended that the AOA be readily accessible to the MA nurse should a concern arise. Should the AOA not be available, it is required that an alternative AOA be assigned.
- The AOA must not provide supervision for a medical aesthetic procedure or treatment area that he/she is not competent in performing.
- The AOA must observe the medical aesthetic procedure and complete an annual skills review to ensure that the MA nurse continues to practice in a safe and ethical manner.
- The AOA scope of practice may include being available to assess the patient on-site - Refer to your college for specific regulations.

3) ContinuedCompetenceProgram

According to the CNA, continued competency is essential to professional nursing practice as it contributes to the quality of patient outcomes. It also expands the nurse's knowledge, skill and judgement to practice safe and ethical nursing care.10 The recommended course outline is intended to provide guidance to MA nurses to reassure the public on the issues of education, competency, quality of care and safety in the medical aesthetics. Completion of a qualified hands on mentoring course will provide MA nurses with the professional skills to perform aesthetic injections. MA nurses are strongly advised to understand the rules, regulations and guidelines to set up an ethical practice and successful medical aesthetic business. Nurses must provide annual documentation of continued educational learning specific to aesthetic injection treatments.

Facial Anatomy and Assessment Skills	
Participants should have a minimum 2 years of nursing. Successful completion of a facial anatomy course is a prerequisite to basic training.	• detailed facial anatomy to include skeletal, muscular, vascular, tendons, ligaments, fat compartments, spaces and nerves • identifying boney and surface landmarks • identifying structures to avoid preventing complications • assessment (including objective tools) of aging, musculature changes, and volume depletion
Basic and Advanced Aesthetic Injection Didactic Course	
The nurse must have the knowledge, skill and judgement to perform this controlled act. MA nurse must have experience in treating 100 patients, before enrolling in an advanced course	• concept of aging; ethnic and gender differences • medical history, physical and psychological assessment • treatment goals, expectations, alternatives and a developed plan • indications, contraindications and adverse events • assessment, management, and treatment of adverse reactions and injection related complications • aseptic practices • proper dosing / storage of products
Hands on Mentoring	
Clinical observation of treatment being rendered by others is insufficient for the requirements of this Standard.	• hands on mentoring and continuing preceptorship with an expert clinical injector • injection techniques and product choices
Business Ethics and Professional Standards	
MA nurses must understand the rules, regulations and guidelines to set up an ethical practice and successful medical aesthetic business.	• provincial practice standards, regulations and guidelines • documentation

4)Health Records (CNA Code of Ethics) (1)

Managing information and maintaining accurate documentation in accordance with federal and provincial legislation is a responsibility of the MA nurse. The CNA Code of Ethics and the national legislation on documentation and information administration should guide nurses in how they manage their health records.:

- confidentiality of patient information
- accurate record of services provided, including all steps of the nursing process
- expected and actual outcomes of nursing services
- documentation of patient consent and/or agreed upon business contract, and
- appropriate storage, retention and authorized release of patient information

i) Documentation

Documentation of patient care/service can be produced in written or electronic format. The documentation method selected within a practice setting must reflect patient care needs and the context of practice. Nurses are responsible and accountable for documenting patient assessments, interventions carried out, and the impact of the interventions on patient outcomes.

Nurses who provide telephone or virtual care are required to document the interaction. Standardized protocols that guide the information obtained from the caller and the advice given are useful in both providing and documenting telephone nursing care.

Minimum documentation includes the following:

- date and time of the incoming call (including voice mail messages);
- date and time of returning the call;
- name, telephone number, reason for the call, assessment of the patient's needs, signs and symptoms described, specific protocol or decision tree used to manage the call (where applicable), advice or information given, any referrals made, agreement on next steps for the patient and the required follow-up.

To facilitate interprofessional collaboration nurses communicate with their health care team about the status of patients, nursing interventions that are carried out and the results of these interventions. Documentation of this information increases the likelihood that the patient will receive consistent and informed care or service. Documentation that is both accurate and complete will lower the risk of misunderstanding in the communication and minimize subsequent mistakes.

Documentation encourages ethical nursing care by assessing patient progress and determining which interventions are effective and which are ineffective. Nurses can use outcome information to reflect on their practice and make needed changes based on evidence. Within the nurse-patient relationship, documentation demonstrates that the nurse has applied nursing knowledge, skills and judgment according to professional standards. An adverse event would be documented according to the clinic's policy and procedure guidelines. In a court of law, the patient's health record serves as the legal record of the care or service provided.

The MA nurse maintains standards of nursing practice and professional conduct by:

- Documenting all relevant data in a timely manner.
- Indicate accountability and responsibility by adding their signature and appropriate title to each entry they make in a patient record.
- Use documentation to share knowledge about patients with the health care team
- Keep care plan clear, current, and relevant
- Safeguard the security of printed or electronically displayed or stored information.

ii) Informed Consent

A consent is required for any treatment performed on a patient. The consent must involve a written document and a verbal dialogue, which allows sufficient time for the patient to have concerns and issues addressed. (13)

The consent must be informed which includes an explanation of the procedure to be undertaken, and must include a discussion of alternative procedures, disclosure of adverse events (ie. bruising, erythema, edema) and severe adverse events (ie. blindness, necrosis and stroke) as well as off label use of the product. Consent discussions with the patient should always be documented by the health-care professionals involved in providing the cosmetic service. (14)

A consent must include specific legal criteria to be valid. The patient must be mentally able to consent and must also have been provided the appropriate information to be considered sufficiently informed. This would include; significant details about the treatment and its results. Also, all risks of the procedure must be explained. The CNPS has documented that cosmetic procedures require this detailed legal communication. A nurse can observe a patient signing a consent form. This observation does not mean that risks and alternatives were explained to the patient. (15)

iii) Maintenance of Medical Records

Medical records can be electronic and/or paper charts. Paper records must be maintained in a secure setting, respecting patient privacy. Each province will have legislation outlining specific requirements regarding storage and destruction. Refer to your provincial college guidelines for additional information.

Nurses who are employees of a clinic, their employer is the custodian of the charts unless there is no other health professional on site to assume responsibility should the nurse leave the clinic. The patient charts must remain in the possession of a health professional to assume continuity of care. Nurses in independent practice are often considered the legal custodians of the health information and must ensure that the manner in which they collect, and store patients. (Public Health Information follows applicable privacy legislation.) (2)

According to CNPS Electronic Records in Independent Practice, Public health record safety is the responsibility of the deemed custodian regardless of form,; paper or electronic. Encryption and password security are necessary for all software-based files as a mechanism of ensuring that privacy standards are met. (16) A MA nurse in independent practice, must ensure that electronic record-keeping follows their regulatory body's standards and all relevant federal and provincial legislation. In privacy laws, the specific requirements dealing with the storage and security of PHi vary between jurisdictions.

The health information custodian is responsible for the collection, use, modification, disclosure, retention and disposal of patients' personal health information in a manner that is consistent with their jurisdiction regulations. If you are a health information custodian, then your employees are considered to be your agents. Therefore, you must establish policies that are consistent with your jurisdiction's requirements, educate your employees about these policies and put procedures in place to monitor their compliance with the policies. According to most provincial laws, the College has the authority to inspect nurses' records and practice premises. These laws are specific to the jurisdiction to which you reside.

5) Clinical Environment

The clinical environment for a medical aesthetics practice is guided by both the professional regulatory bodies and the legislation in place to ensure a safe clinical experience for the public.

i) Facility Recommendations

The clinical space where medical aesthetic procedures are performed must meet documented requirements to ensure patient confidentiality, safety and ethics. (9, 12)

There must be an evaluation mechanism in place, so deficiencies are identified, and corrections noted to ensure patient safety. This would include an assurance committee that would be staff providing patient care (17).

First, and foremost, there must be a Policy and Procedure Manual that guides the MA's clinic practice which includes a medical directive / order for every procedure being offered in the clinic, environment control protocols and emergency protocols.

The procedure room(s) must have adequate space, lighting, appropriate temperature controls and CSA approved equipment. To allow for proper cleaning the procedure countertops must be made of non-porous material with no cracks or seams. The room must not have carpet on the floor or linens / fabric on the beds or chairs. A regular cleaning schedule must be established to keep the facility neat, clean and free of waste material. This procedure would include a daily and weekly cleaning regimen. The rooms should be disinfected in-between patients and would include the frequently touched areas such as door handles, countertop, sink, prep table, and the examination table.
Terminal cleaning at the end of the day would include collecting and disposing of all garbage and vacuuming and wet mopping the floors and disinfecting low touch areas such as cupboard doors. Floors should not be dry mopped. A monthly cleaning schedule would include refrigerator, baseboards, walls, windows, display cabinets and their contents. (18, 19). The clinic must have bleach available in case there is a large blood spill that needs immediate attention.

Medications must be stored and maintained properly to ensure product sterility and efficacy.
A minimum of two refrigerators are recommended. Never place food and medication in the same refrigerator. A thermometer or other monitoring device to display the internal temperature of the medication refrigerator must be utilized. This will ensure that the medications and injectable products have not been exposed to a temperature outside the allowable range.

The temperature range should be between 2 °C (35 °F) and 8 °C (46 °F), and the freezer at a temperature less than −15 °C (5 °F). Refrigerators should have scheduled cleaning and disinfecting with a hospital-grade disinfectant. (18,19)

ii) Infection Prevention

Medical aesthetic procedures are aseptic techniques, and therefore strict guidelines must be followed to decrease the risk of infection and adverse events. CSASN recommends that the facility where the MA nurses are providing medical aesthetic procedures follow Routine Practice in Preventing the Transmission of Infection in Health Care documents (20)

Universal precautions must be utilized for all patient contact. The facility must have the proper personal protective equipment specific to each individual service provided. The most important method to control the prevention of infection in proper hand washing protocol. Practitioners must wash their hands before and after contact with patients, before an aseptic procedure and after fluid exposure. All employees must be trained in proper hand washing protocols.

Hand washing sinks must be convenient and accessible. They should be available in any space that a treatment is provided, or where food, medication or patient care items are prepared. The sink must not be used by more than one premise (i.e., hand washing sinks in a public washroom in a mall or patient bathroom). To prevent the risk of supplies becoming damp and susceptible to mold, no clean or sterile instruments or supplies should be stored under the sink.

Acceptable standards for disposal of sharps, general and biomedical waste must be utilized. There must be a separate clean and dirty storage area. The clinic must arrange a biohazard pick up through a biohazard company or according to office policy. (20)

Medications must be regularly inspected for expiration dates and package integrity and properly stored according to the appropriate medical aesthetic product. Single dose vials are to be used for one patient only and the vial must be entered with a new needle and new syringe. Multidose vials must be entered with a new needle and new syringe, rubber stopper must be disinfected with alcohol prior to each entry. The vial is dated when first opened and discarded within 28 days or according to the manufacturer's recommendations. It is cautioned that the vials are not to be stored or accessed in the immediate areas where direct patient contact occurs. (18,19,20)

6) Treatment / Procedure Protocol

i) Neuromodulators

Correct treatment site selection, proper material usage and injection technique are equally important for the successful administration of the neuromodulator product. (21) The result and duration of the correction is extremely technique sensitive. Refer to the product monograph for the product being administered.

- The initial consultation, review of medical history, and consent is completed. On subsequent appointments, changes in health status and medications are reviewed. Also, review and sign a new consent.
- Remove any make-up from the face with a mild cleanser.

- Define the areas to be treated. Confirm and prioritize the treatment area by having the patient pointing out areas of concern with the assistance of a mirror.
- Baseline photos should be taken which requires the patient's consent.
- Prepare comfort measures as necessary. If topical anesthesia is to be used, follow the protocol for its application.
- Position the patient for ease of injecting for the indication to be treated.
- Cleanse the skin with an antiseptic solution to decrease the risk of infection from a percutaneous
- injury.
- Inject the product into the proper plane as indicated for that area of correction.
- Inject slowly and precisely
- After the treatment gently cleanse the area. Apply gentle pressure if bleeding.
- Record the appropriate information from the treatment session on the patient's treatment record. Information recorded should include type of product used, lot numbers, expiry date, treatment area, dosage, dilution and local anesthesia if used.
- Post care instructions reviewed and copy given to the patient.
- Schedule the patient for a follow up appointment in 2-4 weeks.
- Adverse events would be followed according to the clinic policy and procedure. (17, 18, 19, 21)

ii) Dermal Fillers, Biostimulators

Correct treatment site selection, proper material usage and injection technique are equally important for the successful administration of the product. The result and duration of the correction is extremely technique sensitive. (21) Refer to the product monograph of the product being administered.

- The initial consultation, review of medical history, and consent is completed. On subsequent appointments, changes in health status and medications must be reviewed. A new consent form must be signed for each procedure, each time the patient undergoes a medical aesthetic procedure.
- Remove any make-up from the face with a mild cleanser.
- Define the areas to be treated.
- Baseline photos to be taken which also requires the patient's consent.
- Prepare comfort measures as necessary. If topical anesthesia is used, follow the protocol for its application.
- Position the patient for ease of injecting for the indication to be treated.
- Cleanse the skin with an antiseptic solution (ie. chlorhexidine) to decrease the risk of infection from a percutaneous injury.
- Prepare medication or medical device as per drug monograph and/or best practice guidelines
- Inject the product into the proper plane as indicated for that area of correction.
- Aspirate with a primed or unprimed needle in areas considered high risk or when performing a bolus injection onto the periosteum.

- When not performing stationary boluses, it is recommended to use microbolus technique and constant micro movements with the needle or cannula.
- Inject slowly and precisely following the office policy manual instructions.
- The treated area may be massaged according to manufacturer's instructions.
- Gently cleanse the treatment area.
- Record the appropriate information from the treatment session on the patient treatment record. Information recorded should include type of product used, number and size of syringes used, syringe lot numbers, expiry date, treatment area, needle or cannula size used, local anesthesia, any safety steps taken and observed, pre-treatment assessment notes and post-treatment assessment notes.
- Informed discharge instructions reviewed and discussed, and provider contact information given to patients including potential side effects.
- Patients must also be given implant information including type of implant, lot number, and expiry.
- Schedule the patient for a follow up appointment.
- Adverse events would be followed according to the clinic policy and procedure (17,18,21)

ii) Deoxycholic Acid - Lipolysis

Correct treatment site selection, proper material usage and injection technique are equally important for the successful administration of the product. The result and duration of the correction is extremely technique sensitive. (22) Refer to product monograph/pharmacy recommendation of product being administered.

- The initial consultation is evaluating the patient as a candidate for the treatment. Review of medical history, and consent is completed. Should repeat treatment be required review; changes in health status and medications must be reviewed. A new consent form must be signed.
- Remove any make-up from the face with a mild cleanser.
- Define the submental area to be treated using the recommended boundary lines and a grid format for 1cm square format.
- Baseline photos to be taken which requires the patient's consent.
- Prepare comfort measures as necessary. If topical or injected anesthesia is used, follow the protocol for its application.
- Position the patient for ease of injecting for the indication to be treated.
- Cleanse the skin with an antiseptic solution to decrease the risk of infection from a percutaneous injection.
- Inject into the recommended dose of medication into the subcutaneous fat layer. Inject slowly and precisely. Cease injecting medication prior to retracting the needle. Avoid vulnerable anatomic structures; Not to be injected into or in close proximity (1-1.5 cm) to salivary glands, lymph nodes, nerves and muscles.
- Gently cleanse the treatment area and apply firm pressure on any areas of pin prick bleeding
- Ice on submental area for comfort as needed
- Record the appropriate information from the treatment session on the patient treatment record. Information recorded should include type of product used, number and size of syringes used, medication dose, treatment area and local anesthesia if used.

CSASN guideline recommendations for Lipolysis treatment.

- The initial consultation is evaluating the patient as a candidate for the treatment. Review of medical history, and consent is completed. Should repeat treatment be required review; changes in health status and medications must be reviewed. A new consent form must be signed.
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- Prepare comfort measures as necessary. If topical or injected anesthesia is used, follow the protocol for its application.
- Position the patient for ease of injecting for the indication to be treated.
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- Gently cleanse the treatment area and apply firm pressure on any areas of pin prick bleeding
- Ice on submental area for comfort as needed
- Record the appropriate information from the treatment session on the patient treatment record. Information recorded should include type of product used, number and size of syringes used, medication dose, treatment area and local anesthesia if used.
- Post care instructions reviewed. Monitor for complications; mandibular nerve paresis (e.g., asymmetric smile), difficulty swallowing, or if any existing symptom worsens.
- Schedule the patient for a follow up appointment. Two weeks to assess swelling/progress, and again at 4-6 weeks
- Adverse events would be followed according to the clinic policy and procedure (10,15,20)

7) Patient Safety

The CNA's position on patient safety is the reduction and avoidance of unsafe acts within the health-care system as well as through the use of best practices which have shown to lead to optimal patient outcomes without patient complications. However, for nursing it must mean more than that. It means being under the care of a professional health-care provider who, with the person's informed consent, assists the patient to achieve an optimal level of health while ensuring that all necessary actions are taken to prevent or minimize harm. Patient safety is fundamental to nursing care and to health care more generally, across all settings and sectors. It is not merely a mandate; it is a moral and ethical imperative in caring for others (22) MA nurses must work within the provincial and territorial scope of practice and practice guidelines to ensure patient safety. (9)

Emergency medications and supplies must be readily available in case an emergency situation should arise. This includes but is not limited to epinephrine (ampoule or epipen), antihistamine, aspirin, hyaluronidase, blood pressure cuff and stethoscope. It is recommended that the clinic have a portable oxygen tank and access to an AED. The MA nurse must have current CPR certification.

Implementing facial ultrasound imaging into your practice can help monitor the anatomy of the face in real time during the application of dermal fillers. Ultrasound imaging can aid in the visualization of the course of the arteries, supporting the prevention of inadvertent intravascular injections of filler, ultimately increasing the safety outcome of filler injections. (41) Becoming familiar with the basic principles of ultrasound and choosing the proper ultrasound device, is essential for successful utilization of the procedure. (41).

i) Adverse Events (AE)

Appropriate patient selection is vital when performing medical aesthetics. A full and comprehensive medical history is completed to ensure patient safety and best practice standards. Consent forms for each medical procedure must be explained to the patient and signed before each treatment. (4,10)

Patients have the right to know when an adverse event has occurred as a result of the treatment and to have appropriate treatment to address the effects of this event as far as possible. When such an event results in injury, there must be open and honest communication with the patient or the family as soon as possible. Clear clinic policies on the reporting of adverse events to the patient and family must be implemented to support good clinical practice and to improve patient safety overall in the system. (23)

Adverse events may occur following a medical aesthetic procedure. Each clinic should have a protocol in place for managing adverse events. If an AE occurs, documentation is critical including photography, patient communication, and frequency of follow up care. Advice from outside consultants may be required to provide the patient with the proper care to treat the AE. MA nurses must refer to the manufacturer's package insert to determine classification of adverse events.

The CSASN recommended policy with reporting requirements for AE's includes but is not limited to;

- All AEs must be reported to AOA as soon as possible after discovery of the event.
- Report the AE to the manufacturer within 24 hours. If the manufacturer does not have a reporting policy, then a report must be sent to Health Canada. (24)
- Adverse event specific to medical devices can be reported to Med-Effect (Health Canada)(24)
- An Adverse Event Report form must be completed and submitted to the AOA.
- Documentation of the follow up treatments is not complete until the AE is resolved.

- AOA must review all adverse events reports occurring over a 12-month period.
- A critical review of clinical protocols should be reviewed regarding all aspects of care in reflection of the complication. Practitioners must consider any relevant corrective actions and quality improvement initiatives that may need to be taken to prevent future AE's. (25)

ii) Complication Guides – Dermal Fillers

Areas of Caution
The areas of caution for increased adverse events are the periorbital and the perioral regions. There are several reasons that the periorbital area is difficult to treat. The fragile skin in the area combined with superficial layered fat tissue, significant protruding bone, lymph system through the area and the vasculature both superficial and deep. (26) It is recommended that this area only be treated by an experienced practitioner only.

Perioral region presents another challenging area and nodules are known to occur due to issues of proximity to the oral flora/bacteria and mucosa thinness as well as increased muscle movement resulting in movement and compression of the product, (26)

Although these areas can be considered more complex, all treatment areas have their own variables that make education and understanding of the dermal filler issues important for the medical aesthetic nurse to have knowledge of the potential risks related to anatomy, pharmacology of product and delivery technique.
CSASN recommends the following evidence-based approach to managing dermal filler complications for the MA nurse in collaboration with the AOA.

Albeit rare, the recent pandemic of COVID-19 infection and administration of the vaccine, has seen a prevalence of delayed complications, such as inflammatory reactions.(42) Typically, these cases are managed with oral corticosteroids and high-dose antihistamines, reducing swelling. Marked improvement of swelling can negate the need of hyaluronidase, however, dissolving of dermal filler could be required. (43)

a) Malar Edema

Presentation
Persistent swelling due to compromised lymphatic drainage within the confines of the orbicularis retaining ligament. Symptoms may begin days to several days post treatment and persist for years

Treatment
- Hyaluronic acid-based filler- Keep head in an elevated position at night. Cold compresses, gentle massage inferolaterally from the eye to improve lymphatic drainage.
- Multiple injections of hyaluronidase until resolution of lymphatic obstruction. Dissolving of the HA filler can be guided with facial ultrasound imaging, providing a more concise technique. (40)
- Particulate filler (CaHA) - Keep head in an elevated position at night. Cold compresses, gentle massage to improve lymphatic drainage.
- Lack of improvement; prednisone 50 mg OD for maximum 7 days. Intralesional steroids (28)
- Continued lack of resolution, consider inflammatory causes

Prevention

Incidence may be reduced by performing a full medical history while not treating patients with any pre-existing conditions, or medications that may be contraindicated. Patients presenting with lower eyelid festoons, history of malar edema or have allergies that cause recurrent eye swelling would not be suitable for this treatment. Understanding the rheological properties of hyaluronic acid fillers will allow for proper filler selection for this delicate treatment area. A low viscosity HA, small aliquots and injection at the supra periosteal level, 1 cm below the orbital rim will reduce the risk of malar edema. (27,29)

b) Angioedema

Presentation

Reactions can be severe and last for several weeks and present as erythema, pain, and itching. T-lymphocytes mediated edema- Delayed hypersensitivity can present as facial edema, 24 hours after dermal filler treatment or begin several days to weeks after treatment. (29)

Treatment

- Mild Acute: Ice or cold compress/ anti-inflammatory enzyme (Bromelain)/Observation.
- Moderate acute: I.) Streptokinase/streptodornase (10,000/2500 U): 2 pills /8h, for 3-6 days. Nonsteroidal anti-inflammatory drugs (NSAIDs): Cox 1: Ibuprofen 400-600 mg/8h. Cox 2: Celecoxib 200-400 mg/24h. CAUTION- use the lowest dose and for the shortest time, select the NSAID according to the drug profile and patient risk factors, use gastroprotective agents for minimizing the gastrointestinal harm associated with NSAIDS.
- Severe Acute: i.) Prednisone:1 mg/kg/day + pantoprazole 40mg. Approximately for 3 days. ii.) Deflazacort: 1-1.5 mg/kg/day + pantoprazole 40mg. Approximately 3 days.
- Immediate: Difficulty breathing - Suspect Anaphylactic Reaction- Epinephrine 1000 mg/ml, 0.3 mg IM, call 911
- Chronic: (Persistent for more than 6 weeks)-Antihistamines, oral corticosteroids and/ or immunosuppressant.23
- Delayed hypersensitivity edema- typically does not respond to antihistamines and requires a loading dose of steroids: Prednisone 40mg/day for 1 week with tapering of 5mg every few days until symptoms are controlled. Removal of the hyaluronic acid filler with hyaluronidase may be necessary. Dissolving of the Hyalrounic acid filler can be guided with facial ultrasound imaging, providing a more concise technique. (40) If there are no other treatment options, a short course of diuretics may be prescribed Furosemide 20–40mg a day for 7 days. (32)

Prevention

Incidence may be reduced by careful patient history. Do not treat patients with known allergy to avian or bacterial products. (28)

c) Infection

Presentation
Acute infection can have a rapid onset of 2-7 days after exposure. Erythema, oedema, pain and heat, are typical presentations that are initially localized, however, if left untreated it can spread and blister over the infected site.
Severe infections can present with systemic symptoms, such a fever and may be possible to palpate crepitus due to fluid or gas collections under the skin. Allergic reactions are rare, however, it is important to distinguish a rash post procedure to an infection.
Types of Acute Infections include: Cellulitis, Abscess, Osteomyelitis (47)

Treatment of Infections

- Informing the patient of the risk and symptoms of infection is advised. Review medical history.
- Immediately informing your AOA in accordance with professional standards and good medical practice, with consent of the patient.
- Cellulitis- Flucloxacillin 500mg QDS PO 7-14 days (Penicillin allergy (rash): Cefalexin 500mg BD PO
- Abscesses- Flucloxacillin 500mg QDS PO + Metronidazole 400mg TDS PO. (Penicillin allergy (resh): Cefalexin 500mg BD PO + Metronidazole 400mg TDS PO). If there is a small subcutaneous abscess, it can be managed in the clinic with aspiration of pus with a 23g needle using aseptic technique.
- Osteomyelitis- Referral to Orthopaedic or Max-Fax surgeon should be promptly made. (47)

Prevention
Strict compliance with infection and control measures should not be compromised. All make-up on the patient should be removed with facial wash. Commonly used antiseptic preparations include: Alcohol, Chlorhexidine generally combined with alcohol and Hypochlorous acid. The solution should be allowed to fully air dry. (47)

d) Non-Inflammatory Nodule

Presentation
A non-inflammatory nodule is typically a painless, non-sore visible or palpable bump beneath the surface of the skin as a result of an increased volume of filler or its placement into the inappropriate plane. Filler placed too superficially may result in a visible lump or tyndall effect. Injections placed into the muscle in a dynamic area may lead to mechanical aggregation of the filler. A nodule may appear immediately after treatment or be slightly delayed due to migration of the filler material. (27)

Treatment for Hyaluronic Acid Products

- Observation: do not treat if the inflammation is improving.
- Massage: to distribute the filler product
- Consider drainage or needle aspiration for a superficial, well-defined lump by puncturing the skin with a large gauge needle (22-18G) and send for culture to establish or confirm diagnosis
- Treat with antibiotics for inflammation (see inflammatory recommendations) (46).

- Hyaluronidase (be aware of possible allergic reactions): 150U/mL- Approximately 30 units of hyaluronidase can effectively dissolve 0.1cc of various HA- based fillers; recognizing limitation related to degree of cross-linking and post injection considerations (27,46)
- Intralesional fluorinated corticosteroid may be used if resistant to hyaluronidase (4 week intervals)
- Without treatment, most HA related granulomas resolve within a year (46)

Treatment for Non- Hyaluronic Acid Products (PLLA, CaHA, PMMA)

- Vigorous massage: to redistribute the filler material.
- Disrupt nodule with injection of lidocaine or saline.
- Extrusion may help to force products out of skin.
- If not resolved (possible fibrotic implant nodule); treat persistent nodule with intralesional steroid with triamcinolone- 0.3ml of 10mg/ml + 0.2ml 2% lidocaine +0.5ml physiologic saline. 0.1ml (lips/ tear trough) up to 0.5ml (cheeks) per nodule. Once every 4 weeks. (27)
- If there is a lack of improvement; treat persistent nodules with intralesional steroids + 5FU- 0.5ml 50mg/ml 5-FU +0.3ml 10 mg/ml triamcinolone +0.2ml 2% lidocaine. 0.1ml (lips/ tear trough) up to 0.5ml (cheeks) per nodule. Once every 4 weeks.
- A last resort would be surgical excision (27)

Prevention

Incidents can be reduced by avoiding poor injection techniques and understanding the rheological properties of hyaluronic acid fillers. Avoid superficial placement of filler and select the appropriate filler for the tissue site. Take care to massage the area after injection to ensure even distribution and smoothness and avoid intramuscular injection.

e) Inflammatory Nodule / Biofilm

Presentation for Fluctuant (early onset)

Fluctuant (early onset)- Usually present within 2 weeks post procedure and present as biofilm, tender and sore, redness. Infective nodules are more likely to be localized and asymmetrical (46).

Treatment Fluctuant Abscess

- I&D, aspiration, culture
- In severe inflammation, consider punch biopsy for histopathology & extended culture (46) Antibiotics: 1st lines choices include: Clarithromycin 500mg BID x 14 days or Doxycycline 100mg BID x 14 days; 2nd line Ciprofloxin 750 mg BID x 14 days
- Intralesional Hyaluronidase to break up the matrix (biofilm) can work concurrently with antibiotic treatment as this time if needed.
- Lack of improvement consider intralesional steroids triamcinolone acetonide 0.3 ml and 0.1ml if cheek or tongue of 10 mg/ml +lidocaine 2%+saline 0.5ml. Once every 4 weeks, repeat the dose if needed.
- Reassess and lack of improvement surgical excision of nodule. (29)

Presentation for Non-Fluctuant Nodule (late onset)

Nodules may occur months to years after the injection. Nodular flare ups tend to occur simultaneously at all sites where product was placed. The nodules can present with edema and erythema with congestion of the capillary beds. Most common PLLA and particulate fillers. Though a direct cause of non-infectious, late-onset inflammatory nodules is unknown, systemic inflammatory events such as influenza, product factors, immunologic factors have been observed clinically as potential triggers. HA filler related granulomas tend to be cystic and typically affect multiple or all implantation sites (30,46)

Treatment Non-Fluctuant Abscess

- Biopsy to establish or confirm diagnosis
- Treat with antibiotics as above
- If no improvement, reculture and change antibiotics.
- If still no improvement, consider a diagnosis of biofilm (hyaluronidase, 5-FU, excision) or infectious lesion (Prevent contact with lesion, topical wound care, surgical excision

PLLA, PMMA, or CaHA - most common causes of nodules

- First-line attempt at resolution is mechanical disruption with a needle
- Some nodules will improve with the use of steroid (triamcinolone)/5-FU combination (50/50 mixture) with or without the use of lidocaine. Treatment can be every 3-4 weeks depending on the nodule response.
- Should there be no change in the outcome then the use of excision or collagenase could be used as well as heat or laser treatment could be considered (30)

Prevention

Sterility is of the utmost importance, incidence can be reduced by cleansing the face prior to the injection using a povidone-iodine, chlorhexidine, or benzalkonium chloride preparation is the most effective way to prevent biofilms. Hypochlorous acid also demonstrates high efficacy against a range of bacterial pathogens including those identified in biofilms (46). Minimizing the number of injection puncture sites and avoiding large bolus injections (greater than 0.2cc per site), injecting slowly, also minimizes risk. Appropriate injection depth is dependent on the filler theology and manufacturers recommendations should be folllowed.

Patient selection is key and reviewing the patient's previous medical history is critical. Examples contraindications to proceeding to a treatment would include; Any active infection, of the ear, nose, throat or dental abscess; autoimmune conditions, confirmed hypersensitivity to HA filler, immunotherapy medications; or a history of periodontal disease. Other current or recent infections such as skin infections or systemic infection (UTI) would be indicators that the filler treatment should be postponed. It is recommended to wait 2 weeks after full treatment with antibiotics and no further signs of infection. Another cautious history is a hypersensitivity to filler components (lidocaine), active autoimmune conditions. (27, 31)

f) Vascular Occlusion (VO)

Presentation
Local pain (may present with or without), immediate or delayed discoloration, blanching during or post injection. May be momentary/immediate blanching or livedo/reticulation (marbling) within minutes to hours. Blister phase approximately 72 hours days after first signs of necrosis and ulceration phase days to weeks post. Eventual healing by secondary intention. (25) It is important to note that VO can be immediately obvious or may present hours or days after injection,

Assessment & Diagnosis
Persistent paleness. Capillary refill sluggish or absent. Possible pain. No blood if skin pricked. Affected area may be distal to the injected area. Diagnose the compromise of blood supply. Capillary refill assessment is key in diagnosis and should be compared to healthy tissue as well as along the arterial tract.

Treatment

- Stop injecting, massage, apply warm compresses
- Explain situation, treatment options, and obtain informed consent
- Remain calm. Call for assistance if needed
- Assess capillary refill time in affected and unaffected areas to compare and determine if venous (brisk) or arterial (sluggish) occlusion has occurred, consider video of area
- Disinfect the area and mark out the area of ischemia
- Initiate hyaluronidase protocol: 1500u/mL (consider reconstituting with lidocaine 1% or 2% if not already reconstituted to promote vasodilation). Infiltrate area with 1mL of high concentration hyaluronidase with needle or cannula if appropriate, be prepared to use more than 1 mL and treat to effect.
- Continue to apply heat & vigorous massage.
- If capillary refill remains sluggish, repeat hyaluronidase protocol. This may be repeated 3-4 times.
- Consider ASA therapy 300mg immediately and 75mg daily until resolved
- Other considerations may include wound care, antibiotics, Acyclovir if history of herpes, hyperbaric therapy and referral to plastic surgeon for surgical debridement. (33)
- Nitroglycerin paste and sildenafil/tadalafil are no longer recommended (46)
- Continue to follow up with patient regularly

Prevention
Incidence may be reduced by having an in-depth knowledge of facial anatomy.
Inject slowly with the least amount of pressure.
If using a cannula, ensure it is 25G or larger
Avoiding large bolus injections, small, inject slowly
Use a larger needle or cannula when possible.
Very high risk areas: Glabella, Nose, & Forehead
High risk areas: Temples, NLF's, tear troughs, periorbital, medial cheek
Moderate risk areas: Aspirate, but understand it may be unreliable
Use micro movements or micro boluses

Look at signs for vascular occlusion while injecting, always assessing the skin and areas of the face, checking the glabella, and observing the patient for pain
Risk factors include previous surgeries and multiple treatments, scars.
Consider the use of ultrasound

g) Retinal Occlusion

Presentation
Ocular pain, immediate blurring or loss of vision during injection. Primary complaint - decreased vision in one eye, pain. Secondary complaint – nausea, vomiting, dizziness (34,35,36)

Treatment

- Stop Procedure
- Call for help from other staff members, call 911, contact the Medical Director, contact Ophthalmologist or the nearest emergency eye care centre.
- Document time and vital signs
- Assess visual acuity (light perception, hand motion, counting fingers)
- Take a picture of face (asymmetry/ptosis/skin changes)
- Digital pressure for 5 seconds, release for 10 seconds. Repeat for 5 minutes. Complete up to 3 cycles. Semi Fowler position.
- Breath in a paper bag for 10 minutes every half an hour.
- Aspirin 300mg stat, then 75 mg daily
- Timolol 0.5% one drop
- Glycerol trinitrate sublingual GTN to increase vasodilation

Supraorbital Injection of Hyaluronidase

- Cleanse area
- Palpate anatomical supratrochlear and supraorbital notches
- Use a 31g butterfly needle to try to cannulate the arteries via retrograde push hyaluronidase.
- Inject hyaluronidase 150 units to each notch. start with the supraorbital (anatomically closer to the central rental artery) 300 units. wait a few mins. warm compress and ocular massage.
- Repeat dose. total 600 units. (1ml =150 units). (36)
- Assess skin changes-red, blanching, grey mottled other areas of face and if warranted treat with hyaluronidase 500iu/area
- Bring hyaluronidase to the ophthalmologist or emergency department
- Retrobulbar injection technique for retinal occlusion is an advanced technique which should only be performed by specialists trained in the area. It is not within the scope of the nurse.

Prevention

Incidence may be reduced by having an in-depth knowledge of the facial vascular anatomy. Recent literature has indicated the highest risk areas for retinal occlusion include glabellar region, nose, forehead and nasolabial folds. (35) Caution must be used when treating these areas. Blunt tipped cannulas, injecting slowly with minimal pressure can reduce intra-arterial injection. When performing a needle point injection on the periosteum, avoid delivery of large bolus and aspirate with a primed or unprimed needle. Also consider past history, facial surgeries, scars, previous product (36)

iii) Complication Guide for Botulinum Toxin A

a) Eyelid Ptosis

Presentation

Patient typically returns within 3 to 7 days post treatment complaining of weakness, heaviness, drooping or inability to open the eyelid. The symptoms of an eyelid ptosis vary from subtle to severe and can lead to restriction of vision. Ptosis can present as unilateral or bilateral. Caused by diffusion of the neuromodulator into the levator muscle of the upper eyelid, or diffusion of the neuromodulator along tributaries of the superior ophthalmic vein (37, 38)

Treatment

- Iopidine* (Apraclonidine) eye drops. Stimulates contraction of the Mueller's muscle. Apraclonidine 0.5%- use cautiously in patients with hypertension, narrow angle glaucoma, cardiac arrhythmia. Use 1-2 drops on the affected eye. If no correction in 30 minutes, administer 1-2 more drops and then maintenance therapy 3x a day up to 3 weeks. There is a risk of contact conjunctivitis with Iopidine. (37)

Prevention

Incidence may be reduced by obtaining full patient medical history, paying attention to risk factors such as age, pre-existing heavy or lid ptosis and medical conditions. The proper injection technique includes keeping injection sites superficial and 1-2 cm above the orbital rim. Stay medial to the mid-pupillary line and within the orbicularis retaining ligament. Needle should be pointing away superiorly from the orbit. Avoid touching the treated area for 4 hours post treatment. (37,38)

b) Brow Ptosis

Presentation

Lowered position of brow position, Hooding of eyelid, “heavy feeling”.

Treatment

- Inject glabellar complex if not injected originally in an attempt to elevate glabellar region.
- Injection into the lateral portion (tail) of the brow.
- Over exaggerate frontalis muscle to encourage return of muscle activity.

Prevention

Incidence may be reduced by proper patient selection such as avoiding patients with a pre-existing brow ptosis or patients with a functioning frontalis. Utilizing proper injection techniques such as keeping injection sites 1-2 cm above the orbital rim, staying high up on the forehead and low on the dose. Injecting intradermal rather than intramuscular when treating the forehead, may also lower incidence of ptosis. Inject the glabellar at the same time as the forehead (avoid treating the frontalis muscle in isolation), particularly in patients over 50 years. Inject with caution in individuals who have had previous frontal facial surgery.

After the treatment the patient should be instructed to avoid wearing a tight-fitting hat that may push brow downward for 24 hours, as well as avoiding facial massage according to the office protocol

iv) Complication Guide for Deoxycholic Acid

a) Vascular incident

Presentation

Sudden pain and blanching at the injection site with resulting impeded vascular discoloration, few days post can have violaceous nodule with central eschar and weeks after can present with a pink hypertrophic scar (31, 32)

Treatment

- Application of warm compress immediately
- Consider prednisone +/- ASA treatment if the changes persist longer than 12 hours.
- Wound care, dressing, petroleum jelly or topical antibiotic.
- Pink hypertrophic scar can be injected with 0.2ml (20mg/ml) of intralesional triamcinolone followed by the treatment of laser therapy.

Prevention

Choose candidates that have moderate to severe submental fat on assessment
Extensive knowledge of facial vasculature anatomy
Avoid known areas of vascularity in the submental region
Timely identification of any vascular changes at the time of injection and immediate intervention

b) Tissue Necrosis

Presentation

During injection, or immediately after, onset of tissue discoloration with the potential for later tissue degradation as the result of superficial injection of deoxycholic acid. (22)

Treatment

- Depending on the depth of tissue involvement, the majority are self-healing, keeping the area clean and dry and application of an antibiotic cream or gel for 5 to 7 days. If appears to be a vascular compromise, wound care, thin dressing, oral steroids for hypertrophic pink scar if develops, intralesional triamcinolone 0.2ml (20mg/ml), followed by laser therapy.

Prevention

Follow best practice guidelines for deoxycholic injection

Keep injection sites 1 cm apart as per guidelines

Keep injection to the subdermal junction and cease injecting on needle withdrawal

Timely identification of any vascular changes at the time of injection and immediate intervention (22, 39)

c) Mandibular Nerve Damage

Presentation

Post injection development of nerve pain or significant numbness in the area of the mandible. Temporary changes to the perioral, could be noted.(45)

Treatment

- The nerve should self-resolve without treatment. It is usually only self-limiting sensory deprivation. If it persists past 3-6 months the patient may wish to seek further medical assessment.

Prevention

Choose patients with moderate to significant submental fat. Avoid the mandibular region for the injection of the submental area

Mark the area of the mandibular nerve region to ensure injections are not in the marked area

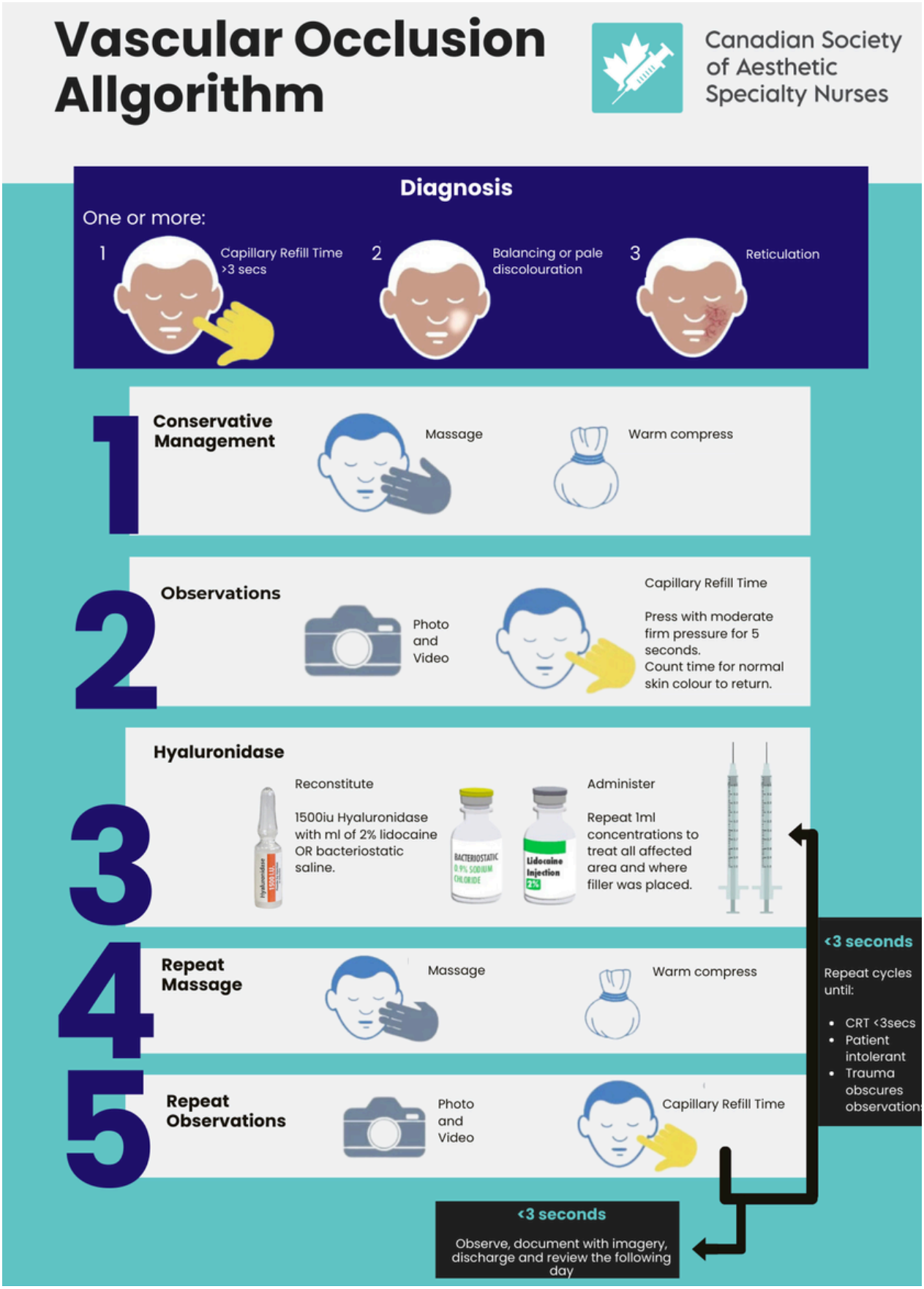
Do not adjust the angle of the needle toward the mandibular area during injection in the submental area

If performing off label treatment, lift the tissue away from the mandible during injection(39)

8) Practice and Business Liability

It is imperative that all health professionals carry adequate liability protection. Nurses can obtain coverage through the Canadian Nurses Protective Society (CNPS) or other provincial providers. It is recommended that aesthetic nurse injectors assess their own individual insurance needs. If the MA nurse is in an independent practice, then business insurance is necessary.

A lawyer should be consulted to ensure all aspects of the practice is covered adequately. (16)


Vascular Occlusion Allgorithm
Canadian Society of Aesthetic Specialty Nurses
Diagnosis
One or more:
1
Capillary Refill Time >3 secs
2
Balancing or pale discolouration
3
Reticulation
1
Conservative Management
Massage
Warm compress
2
Observations
Photo and Video
Capillary Refill Time
Press with moderate firm pressure for 5 seconds.
Count time for normal skin colour to return.
3
Hyaluronidase
Reconstitute
1500iu Hyaluronidase with ml of 2% lidocaine OR bacteriostatic saline.
Administer
Repeat 1ml concentrations to treat all affected area and where filler was placed.
4
Repeat Massage
Massage
Warm compress
5
Repeat Observations
Photo and Video
Capillary Refill Time
<3 seconds
Repeat cycles until:
CRT <3secs
Patient intolerant
Trauma obscures observation
<3 seconds
Observe, document with imagery, discharge and review the following day

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