**WORK BASED LEARNING DEVELOPMENT OF A MICRO SUCTION/AURAL CARE**

**Introduction**

The focus of this document is to make available a document that will be used as a reference for Ear, Nose, and Throat (ENT) care micro-suction to ensure knowledge, skills & capability of new practitioners. The rationale is to ensure that the new practitioners gain the necessary competence for the future and the changes that may occur in the next few years. An audit framework will be made available to monitor and ensure strict adherence to the standards and the quality of care that is being offered. Aural care Nurse Specialist, for instance, needs to have skill in the use and operation of a high powered microscope that is used for the operation. Other skills necessary in this line include; Binocular vision and fine motor skills. Under normal circumstances, Wax and epithelium should naturally flow by itself out of the ear canal but this is not always the case for some patients hence the need for vacuum waxing.

Besides some sections of patients especially those who previously had ear operation, cannot stand their ears being irritated with water hence they visit the health centers to have their ears checked. NICE Summaries (2016) argues that there have been little changes in the manner in which treatment of ear wax is done. Micro-suction is a very painless experience but it can turn to be painful is an infection is present also the process is noisy hence not recommended for children. Equally the procedure requires that the patients maintain their heads still but this would prove to be a challenge for patients like those having Parkinson’s diseases, dementia and Alzheimer.

**New Aural Care Practitioners**

Micro-suction in most cases requires additional team members’ majority of who are an audiologist. Normally the patients are given a referral to see an N.P under a new appointment as such in order to save time for both the patient and the audiologist, it is important they be trained in this skill(Bailey, Johnson, and Newlands, 2006). The audiologist is more knowledgeable as far as the inner, middle and outer parts of the ear are concerned better than N.P, it is under these circumstances that they need to be competent so that they can properly supervise and ultimately accomplish their proficiency levels (Belloc, 1967). According to the H.T.A. (2010), some standards need to be adhered to when treatment of wax is being undertaken; ear syringes whose pistons are made of metal have been forbidden  this is due to the fact that they emit a lot of pressure that leads to a lot of pain, nausea, would potentially perforate the tympanic membrane and infections. The reasoning behind the improvement of the current competency lies in the sense that the health staff needs to have future options since there is increased improvement in N.P knowledge to constant advancement in the academic qualities(BHPR: Audit and clinical evaluation, 2016). The UK Care Act (2014), and The Mental Capacity Act 2007 gives an outline of the principles that guide the continuity of care for vulnerable groups as follows;

1. Unless proven otherwise, a person is assumed to have the capacity.
2. A person is not to be assumed to be in a position not to make their own decision unless all practical steps have proved futile.
3. Making of unwise decision is not a proof of inability to make a decision.
4. Any act of decision performed on behalf of a person lacking the capacity to do so has to be done in his/her best interest.
5. Before the act is done, care must be taken to ensure that the person’s freedom and rights are not restricted as result

                                                                                            Source; (Capper, 2011).

When performing micro-suction, it is imperative that the N/P seeks consent and besides having good communication skills, being emphatic and patient. Having technical knowledge is also a key component of the skills required of the N/P, for instance, the N/P should be in a position to change the high-powered light bulbs although it looks simple to do so, the procedure is intricate and slightly complex (CARPENTER, 2013). The N/P should be able to master the mobility of the microscope arm as it is difficult to master. Additionally, the N/P should be able to do the optical alignment of the microscope. The microscope arm has several adjustable screws that enable adjustments in order to fit individual needs in order to avoid damaging one's posture (Duncan, 2008) Besides the arm is heavy and the microscope, in general, is expensive equipment whose care and handling should be done with a lot of diligence in order to avoid damaging the equipment.

**Patient needs**

The micro-suction clinics discharge few patients, as such there needs to be a proper and appropriate assessment of the different stages of patient care needs (Erdman, 2012). At the referral etiology initial stages, patients require regular and close monitoring in order to avoid recurrence of the infection or simply to keep the problem under control (Glazebrook and Buchanan, 2011). In this regard, therefore, a decision has to be arrived at as regards to regular follow-ups against the capacity of the clinic. Due to the microscope and the professional who do micro-suction, the procedure has led to some people describing the procedure as ‘gold standard’ of ear cleaning (Hawkins, 2013). On the same note, the procedure is devoid of complex procedures that can irritate the patient although the vagus nerve can sometimes be irritated forcing the patient to cough but the irritation goes on for a few minutes(Hay, Levin and Deterding, 2009).  However, with an experienced and proper skill of the N/P, the irritation would most likely not occur.

**The procedure**

When carrying out the procedure, it crucial that the only thing to touch is the wax besides any debris that might be in the ear(Hull, 2001). Although this is difficult to achieve, paramount use of the direct vision of the microscope will greatly make it possible to achieve. Suction is normally done by maximum through a pipe originating from the treatment room. Attached to the suction tube is a metal called Zollner sucker through a long tube whose other end is attached to a non-reversible bad that is disposable(Jessen, 2015). The procedure begins by insertion of a funnel shapes disc called aural speculum into the ear to enable clear view since the disc does open the canal slightly. Averagely the ear canal is about 2.5 cms long but when the ear is subjected to certain surgical operations such as mastoid cavities, and then large cavities that are unable to clean themselves are left behind (Lesser and Robinson, 2009). The irritation of the vagus nerve that results in coughing may be avoided by ensuring no instrument is connected to the skin of the outer and inner ear canal.

On average the process of cleaning both ears should between 10 -30 minutes, if there is a possibility of the procedure taking longer, then it is advisable that the patient is given a reappointment in order to avoid subjecting the patient to further pain (LI, SHEN and LEE, 2014). Ensuring the patient does not suffer any further pain is important since the therapeutic bond between the patient and the N/P in order for the patient to come back again. Micro-suction has its significant features which include; quickness of the procedure, does not require pre-treatment preparations, a high-powered microscope with binoculars allows for direct vision, the procedure is water free hence there is a great reduction in ear infections and finally, the procedure allows for cleaning for deformed or narrow ears.

On the flipside, the procedure requires the patient to lie on a couch which may prof to be difficult for patients who are having arthritis on the neck(Ma and Clayton, 2015). Additionally, the patients are required to constantly be moving their heads so as to allow for access to all curvatures of the external auditory canal. Equally the procedure is not completely risk-free hence in some instances, the tympanic membrane or the ear canal may be subjected to damage or trauma(Pirie, 2012). The British Tinnitus Association has reported the possibility of patients momentarily losing their hearing for a few seconds due to the loud noise, some even ending up suffering from Tinnitus. Additionally, micro-suction results in the removal of the ambient temperature of the ear leading to patients feeling somehow dizzy and faintness as a result of a phenomenon known as ‘caloric’ effect which only lasts for a few minutes.

**Aural care competency**

The aural care competency encompasses assessment, investigation, and treatment of patients whose intervention requires hospital care (Scarinci et al., 2013). Generally how well the staff is competent is closely linked to the how they use the equipment and their place in ENT department.

Proficiency level 1; this proficiency level is meant for audiologists and new nursing staff who require limited awareness in order to complete certain humble tasks such eliminating visible foreign objects as well as soft wax.

Proficiency level 2;  it is intended for nursing staff and junior N/P  who possess a basic understanding and have detailed knowledge so that they can be in a position to manage everyday caseloads. Here the staffs have the capability to work independently and be able to recognize limitations besides successfully demonstrating their competency by helping others in their roles.

Proficiency level 3;   this level of proficiency is envisioned for expert N/Ps and other specialists who can manage cases across the board. This level is able to teach and coach colleagues and junior doctors. This level is important in that through it new applications are created and its presence is strategic at the workplace. Additionally, under this level, new care plans are devised and enable advisory to members of a team that is multidisciplinary.  Equally, works with the pharmacy to come up with guided documents for patients and offers consultation to the surgery team for correctness or in situations that are beyond their ability.                                                                                                              Source; (Smart, 2016)

Audit tool: currently this skill is subjected an audit trail that involves patient feedback, the rate of infections and plaudits. Junior doctors need at some need to allocate some in their schedule to work  alongside N/Ps to enable to be in a position to appreciate the delicate nature of the work that is usually carried by them, this because usually they carry out this procedure using general anesthetics which leaves the patient with pain and trauma (Tye-Murray, 2015). In situations where a patient has been left with trauma and pain, it is the responsibility of the N/P to advocate on behalf of the patient. With the advent of new devices that are anchored to the bone, specialized treatment and advice are required in order to avoid possible infection that may occur two months after being operated(Valente, 2008). Under these conditions, the senior N/P gets to be allocated such patients who work in conjunction with the audiologist to ensure effective and safe work.

**The table below shows the practice and service development competencies**

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| Level  | Competence  | Performance criteria  | Knowledge and understanding  |
| 1 | Audiologists and new nursing staff who require limited awareness in order to complete certain humble tasks such eliminating visible foreign objects as well as sift wax. | Consistent adherence to all pertinent policy, values, and strategies for care delivery. Energetically challenging members of the care team where guidelines, ethics and care delivery tactics are ignored. Being able to raise concerns with other senior members.  | Limited awareness. All related policies, standards, and care delivery strategies used within own area of practice.Aural treatment regimens applicable to adults in their care. |
| 2 | Capability to work independently and be able to recognize limitations besides successfully demonstrating their competency by helping others in their roles. Manage everyday caseloads. | Policies and standards used within the clinical area are up to date and relevant to current practice. Minutes of meetings show a clear record of constructively identifying issues with policies, standards, protocols and care delivery strategies that drive practice. Makes constructive suggestions to inform and review the development of policies. Assists in the development of policies/standards. | Possess a basic understanding and have detailed knowledge.Policy development. Standards development. Care delivery strategies. Aural treatment regimens and research applicable to aural care nursing and adults with ear conditions. |
| 3 | Can manage cases across the board. Able to teach and coach. Creation of new applications. New care plans are devised and enable advisory to members of a team that is multidisciplinary.  Works with the pharmacy to come up with guided documents for patients and offers consultation to the surgery team for correctness or in situations that are beyond their ability.  | All policies and standards used in service delivery are current and valid.Accurate and comprehensive documentation pertinent to innovations implemented and evaluated within the practice setting.  | Expert N/Ps and other specialists.Policy development. Standards development. Partnership working. Research/innovations in aural care and its applicability to adults.Evaluation processes. Critical analysis. Audit processes. All available information and processes applicable to the innovations adopted within the practice setting. |

                                                                                                                    Source; (Abrams, 2001)

**Audit of competency**

Audit of clinical procedures and practice is shown quality improvement, it provides an opportunity for employees to evaluate their practice and thereafter make adjustments which would see them improve their service delivery (Anon, 2017). The clinical audit provides an occasion for identification of good clinical practices. It is through clinical audits that patient experiences are guided for the better and relaying of information as regards competency levels. Additionally, through the audit, identification of shortcomings is made possible and conceivable explanations offered (Earhealth.co.nz, 2017). It improves the level of teamwork and communications get enhanced within the clinical workplace. The ability to undertake a task with a set specific knowledge, skill and behavior is what defines competency.

Assessment of clinical audit is better undertaken by emphatic with the patient and then putting oneself in the shoes of the patient and imagine the feeling the patient goes through as such being compassionate, careful, and patient and ability to communicate well is essential(Martin and Clark, n.d.). The majority of ENT are patients are deaf; as such it is important to maintain eye contact and look at the facial expression of the patient while ensuring you are not shouting in order to make sure you are on the same page with the patient (Paterson, 2016). Evidence-based standards should form part and parcel of the audit, although it is difficult to pinpoint what areas would require an audit. However, a well -defined and structured audit should be able to cover all quality issues in a given practice area. In the end, an audit should be able to make improvements for the good of the patient, address issues on the quality of care as well as address any uncertain in certain areas.

All clinicians ought to be in a position to audit their work, it is incumbent upon N/Ps to take findings from audit reports and apply them in day to day running of the clinics(Russell and Cohn, 2012). The audit committee ensures that there is value for money in the audit whereas the management’s team ensures that components are in place and secure on the identification of changes in the service quality(Prevalence of Micro-Organisms Isolated from Ear Swab, 2016). The responsibility of the line managers is to ensure the staff working under them are fully aware of the audit frameworks and the processes that will make the audit successful(Shortening antibiotic treatment worsens outcomes in children with ear infection, 2017. Continuous education and professional development are critical to ensuring all the staffs have the knowledge and the grasp of the best practices regardless of the technique employed in the audit.

Additionally, there is need to properly brief all stakeholders in order to accommodate their views. Donabedian (1966) proposed a classification which comprises of structure, process, and outcome that can be applied to given areas of practice. The structure outlines the setting alongside the resources, process deals with the methods and practices of care that specific and relevant to a certain clinic and finally the outcome has everything to do with the patients’ health status after healthcare. One important tool to indicate the need for audit and inspection lies in consumer feedback which in this case becomes the patient. The audit team has a responsibility to ensure that audit is carried out and not research whereas a research disseminates new knowledge, an audit gives answers to questions. Equally an audit is compared against principles while on the other hand research is grounded on suppositions.

**Conclusions**

Little literature is available regarding micro-suction competencies, what is available are guidelines and courses but specific competencies are not available. The new competency will not only support and guide new practitioners who carrying out this skill but will also offer and opportunity successful practice of this highly skilled procedure. The expectation is that going forward; ENT members and audiologists will be involved in such a challenging work so that they can professionally develop themselves. The procedure is ‘quick fix’ especially for patients who have been on the waiting for up 12 weeks in order to get a referral appointment thus it gives the patients the incredibly satisfying experience.

Aural care Nurse Specialist, for instance, needs to have skill in the use and operation of a high powered microscope that is used for the operation. Other skills necessary in this line include; Binocular vision and fine motor skills. Under normal circumstances, Wax and epithelium should naturally flow by itself out of the ear canal but this is not always the case for some patients hence the need for vacuum waxing. The aural care competency encompasses assessment, investigation, and treatment of patients whose intervention requires hospital care. Generally how well the staff is competent is closely linked to the how they use the equipment and their place in ENT department.

**References**

Bailey, B., Johnson, J. and Newlands, S. (2006). *Head & neck surgery, otolaryngology*. Philadelphia, PA [etc.]: Lippincott Williams & Wilkins.

Belloc, H. (1967). *On*. Freeport, N.Y.: Books for Libraries Press.

BHPR: Audit and clinical evaluation. (2016). *Rheumatology*.

Capper, J. (2011). Replacing rose-tinted spectacles with a high-powered microscope: The historical versus modern carbon footprint of animal agriculture. *Animal Frontiers*, 1(1), pp.26-32.

CARPENTER, E. (2013). SUCTION TREATMENT IN ACUTE INFECTIONS OF THE EAR. *The Laryngoscope*, 31(11), pp.868???874.

Duncan, J. (2008). Telepractice Aural Habilitation for School-Age Children. *Perspectives on Aural Rehabilitation and Its Instrumentation*, 15(1), p.5.

Erdman, S. (2012). Audio logic Rehabilitation Competency Document Nears Completion. *Perspectives on Aural Rehabilitation and Its Instrumentation*, 8(1), p.8.

Glazebrook, S. and Buchanan, J. (2011). Clinical governance and external audit. *Journal of Quality in Clinical Practice*, 21(1-2), pp.30-33.

Hawkins, D. (2013). Perspectives on Hearing Aids and Aural Rehabilitation. *Perspectives on Aural Rehabilitation and Its Instrumentation*, 20(2), p.44.

Hay, W., Levin, M., and Deterding, R. (2009). *Current Diagnosis and Treatment*. New York, USA: McGraw-Hill Professional Publishing.

Hull, R. (2001). *Aural rehabilitation*. Australia: Singular Thomson Learning.

Jessen, D. (2015). Aural Rehabilitation in Private Practice. *Perspectives on Aural Rehabilitation and Its Instrumentation*, 22(2), p.15.

Lesser, T. and Robinson, J. (2009). *Aural care ;protocols & guidelines*. Hampshire: Options Medical Limited.

LI, J., SHEN, J. and LEE, C. (2014). A micro-porous wall model for micro-blowing/suction flow system.*Scientia Sinica Physica, Mechanica & Astronomica*, 44(2), p.221.

Ma, Y. and Clayton, R. (2015). Flat slab deformation caused by interplate suction force. *Geophysical Research Letters*, 42(17), pp.7064-7072.

Pirie, A. (2012). Pediatric Palliative Care Communication. *Clinical Nurse Specialist*, 26(4), pp.212-215.

Scarinci, N., Meyer, C., Ekberg, K. and Hickson, L. (2013). Using a Family-Centered Care Approach in Audiologic Rehabilitation for Adults with Hearing Impairment. *Perspectives on Aural Rehabilitation and Its Instrumentation*, 20(3), p.83.

Smart, S. (2016). Clinical Knowledge Summaries — supporting better prescribing. *Prescriber*, 19(1), pp.30-32.

Tye-Murray, N. (2015). *Foundations of aural rehabilitation*. Stamford, CT: Cengage Learning.

Valente, M. (2008). *Audiology*. New York, NY [u.a.]: Thieme.

Abrams, H. (2001). Audiology Treatment. *Ear and Hearing*, 22(2), p.171.

Anon, (2017). [online] Available at: http://www.healthline.com › Reference Library [Accessed 28 Feb. 2017].

Aung, T. (2012). 10-minute consultation: Removal of ear wax. *BMJ*, 325(7354), pp.27-27.

Earhealth.co.nz. (2017). *Ear Wax Removal by Microsuction*. [online] Available at: http://www.earhealth.co.nz/microsuction [Accessed 28 Feb. 2017].

Martin, F. and Clark, J. (n.d.). *Introduction to audiology*.

Paterson, S. (2016). Topical ear treatment - options, indications, and limitations of current therapy. *Journal of Small Animal Practice*, 57(12), pp.668-678.

Prevalence of Micro-Organisms Isolated from Ear Swab. (2016). *International Journal of Science and Research (IJSR)*, 5(3), pp.2118-2120.

Promoting tinnitus awareness. (2012). *British Journal of Healthcare Assistants*, 5(2), pp.98-98.

Russell, J. and Cohn, R. (2012). *Audiology*. U.S.: Lennox Corp.

Shortening antibiotic treatment worsens outcomes in children with an ear infection. (2017). *Clinical Pharmacist*.