

## Research Article

# An Audit of Referrals to the Minor Operating Theater of the Patient Presenting in Otolaryngology OPD with Ear Discharge

Fatima Yasin<sup>1</sup>, Nukhbat Ullah Awan<sup>2</sup>, Shahzaib Ahmad<sup>1</sup>, Qasim Mehmood<sup>1\*</sup> and Talha Haq Nawaz<sup>3</sup>

<sup>1</sup>King Edward Medical University, Pakistan

<sup>2</sup>Mayo Hospital, Pakistan

<sup>3</sup>Ysbyty Gwynedd, UK

## Abstract

**Aim and objective:** To determine the frequency/percentage of patients presenting in the ENT OPD of a hospital [blinded for review] with an ear problem that requires suctioning.

**Introduction:** Despite a larger frequency of OPD patients requiring treatment, why is it not done in OPD should be addressed. Because there is no suction equipment in the ENT OPD, these patients who require suctioning are referred to ENT Emergency Room. This is a source of undue inconvenience for patients. This not only poses a risk to patient safety, but it also has major financial consequences, as well as a negative impact on patient satisfaction, which is a key indicator of treatment quality.

**Methods:** This is a closed-loop audit cycle beginning with the recognition of the problem and assessing the magnitude of the problem. Based on the burden of referrals to the MOT, the auditors proposed the changes in practice under hospital OPD guidelines enacted by Pakistan Otolaryngology Association.

**Results:** A significant percentage of 52.5 is requiring ear suction in the first audit cycle. The percentage of patients that had to be referred to ENT OT decreased from 52.5% in the previous audit to a significantly low value of 9.5% in this audit. The role of this clinic is in decreasing the burden of referrals, reducing patients' misery of going to the ER for suctioning and improving patient satisfaction.

**Conclusion:** Our study discerns the fact that the implementation of some simple protocols will lead to immense change. The resultant reduction in clinical activity will lead to a reduction in the workload of the doctors too.

**Keywords:** Audit; Ear discharge; Otolaryngology; Minor operation theatre; Suctioning

## Introduction

The ENT Outpatient Desk (ENT OPD) is a basic and well-established service given by the otolaryngology department. Patients with ear disorders account for the majority of cases seen in the ENT OPD [1]. Earache, hearing loss, ear discharge, ear fullness, ear itch, and ear bleeding are the most frequent ear problems. Bilateral ear wax is the most common complaint [2]. The pandemic has shaped the dealing with the patients, but still minor procedures should be done in OPD and surgeries in the operating room [3]. Ear suctioning should ideally be performed in the OPD to remove ear discharge, wax, or fungal debris, clean the ear canal, view the middle ear cleft, and allow antibiotic drops to reach the infected area and act more effectively. Suctioning is often required to clean the ear canal for establishing a diagnosis or treatment since it is faster, permits direct visualization,

and does not expose the ear to moisture [4]. Therefore, ear suctioning is an important part of patient management in ENT OPD. Ear wax removal should be conducted in primary care, according to the National Institute for Health and Care Excellence (NICE) guidance from 2018 [5]. As a result, this is a fundamental OPD procedure. Many studies have suggested that micro suction should be performed in the outpatient department, with adequate funding, to aid in the international transition away from a hospital-centric model and toward primary care services [4,6].

Micro suction toilet of debris from the ear canal is a commonly performed procedure within the ENT outpatient clinic as seen in [5,7]. However, in many clinical settings, it is not done in the outpatient department. A tertiary care hospital should take the lead in providing high-quality care to its patients. However, despite a larger frequency of OPD patients requiring treatment, why is it not done in OPD should be addressed. Because there is no suction equipment in the ENT OPD, these patients who require suctioning are referred to ENT Emergency Room. This is a source of undue inconvenience for patients. This not only poses a risk to patient safety, but it also has major financial consequences, as well as a negative impact on patient satisfaction, which is a key indicator of treatment quality. Patients' schedules are harmed by long wait times [8]. Lengthy outpatient waiting causes a delay in treatment and suboptimal outcomes for newly referred patients [9]. For newly referred patients, long outpatient wait times result in therapy delays and poor outcomes. Furthermore, referrals for microsuction have accounted for a major amount of the ENT burden

**Citation:** Yasin F, Awan NU, Ahmad S, Mehmood Q, Nawaz TH. An Audit of Referrals to the Minor Operating Theater of the Patient Presenting in Otolaryngology OPD with Ear Discharge. *Ann Clin Case Stud.* 2023; 5(1): 1068.

**Copyright:** © 2023 Fatima Yasin

**Publisher Name:** Medtext Publications LLC

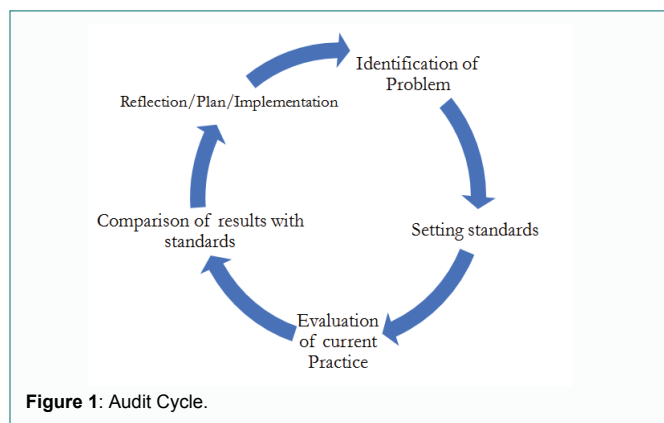
**Manuscript compiled:** Jan 20<sup>th</sup>, 2023

**\*Corresponding author:** Qasim Mehmood, King Edward Medical University, Lahore, Pakistan, E-mail: qasimmehmood1051@gmail.com

in tertiary care. Patients also encounter concerns such as access, which is especially problematic for patients with mobility issues who rely on caretakers, family, or hospital transportation to get to and from appointments [10].

## Audit Cycle

This is a closed-loop audit cycle beginning with the recognition of the problem and assessing the magnitude of the problem. The primary outcomes were the number of referrals to the Minor Operation Theater (MOT) from ENT OPD of the [blinded] hospital of the cases presenting with ear problems that require only suctioning and moping for the management of ear discharge. The data of the initial audit were collected from ENT OPD from Dec 01, 2021, to Dec 30, 2021, and it included 300 patients. We recorded patient's age, presenting complaints that required suctioning, diagnosis, and reasons for referral. Based on the burden of referrals to the MOT, the auditors proposed the changes in practice following hospital OPD guidelines enacted by Pakistan Otolaryngology Association. Local guidelines were constructed and the modifications were implemented for 1 month (January 01, 2022-January 30, 2022). Re-audit was performed on the collected data during the period and analyzed in IBM SPSS version 25. Re-audit included 300 patients and assessed whether there was any necessity for referral during the implementation of constructed guidelines. The audit cycle is illustrated in Figure 1.



## Summary of Data from Initial Audit Cycle

During the first cycle of the audit, data was collected from the patients that presented to the ENT OPD in Dec 2021. Only the patients that had an exclusive ear problem were chosen.

A total of 354 patients were involved. It was found that 59.3% of these patients were males and 40.7% were females. The most common and predominant presenting ear complaints were ear discharge (27.1%), pain in the ear (20.3%), Ear fullness (17.6%), ear itch (15.3%), and hearing loss (13.6%). In addition, other less common complaints included tinnitus (2.8%), vertigo (1.7%), foreign body impaction in the ear (1.2%), and bleeding (0.6%) from the ear.

On establishing the diagnosis, it was found that wax Impaction was the most common ear problem encountered (26.6%), followed by CSOM (24.9%), otomycosis (11.9%), Hearing loss (7.9%), and then Acute Otitis Media, Otitis Externa and Eustachian tube dysfunction (each 5.6%). The details of the established diagnosis are in Table 1.

Of all these patients that reported an ear problem, 52.5% (186 out of 354) needed ear suctioning. And of those that needed ear suctioning, 44.1% had wax impaction, 35.5% had CSOM that required

**Table 1:** Established diagnosis with their percentages.

Diagnosis	Percentage
Wax	26.6
CSOM	24.9
Otomycosis	11.9
Hearing Loss	7.9
OE	5.6
AOM	5.6
Eustachian Tube Dysfunction	5.6
Ear Dryness	3.4
Glue Ear	2.8
Tinnitus	1.7
Foreign Body	1.1
BPPV	1.1
Vertigo	1.1
Trauma	0.6

suction for clearing pus from the canal, 12.9% had otomycosis requiring suctioning of the fungal debris and another 4.3% had acute otitis media that required discharge suctioning. Suctioning was also required for a few cases with ear bleeds and foreign bodies in the ear.

So, it was found that more than half of the patients with ear problems require suction; wax, discharge from the ear, and fungal debris in the ear are the 3 most common reasons. It was recommended that since a significant percentage of 52.5 is requiring ear suction, it should be started in the OPD department so that the unnecessary referral to the ENT MOT would be reduced.

## Summary of Data from Subsequent Re-Audit

Following the initial audit cycle, it was found that more than half of the patients (52.5%) with an ear problem were requiring suctioning for which they had to be referred to the ENT MOT.

Therefore, the suctioning machine was made available in the ENT OPD, and suction was started for the patients presenting to the ENT OPD. A subsequent reaudit was carried out in January 2022 to see the effects of the change that had been implemented. During January, data was collected from 338 patients (58.9% males and 41.1% females).

The most common problems for which suctioning were done were ear wax, ear discharge, and otomycosis. The details of presenting complaint are in Table 2. The data showed that the suctioning was done for 54.4% (184 out of 338) of the patients that came to the ENT OPD. The established diagnosis based on suctioning in OPD is mentioned in Table 3.

As most of the patients that were previously referred from the ENT OPD to the ENT MOT were those that required suctioning of the ear, the percentage of patients that had to be referred to ENT OT decreased from 54.5% in the previous audit to a significantly low value of 9.5% in this audit. The percentage of patients who still require referral to the OT is 9.5% as seen in Figure 2. The diagnosis requiring suctioning in OT is mentioned in Table 4.

The 9.5% of patients (32 out of 338) that had to be referred to the ENT MOT included patients that required Examination of the ear under the microscope for CSOM, required the removal of foreign body, and needed steroid injections in the keloid of ear lobule. Removal of the foreign body has been a major cause of referral in a Saudi Arabian study too along with the lack of specialty in the clinic [11].

## Role of Urgent Referral Clinic

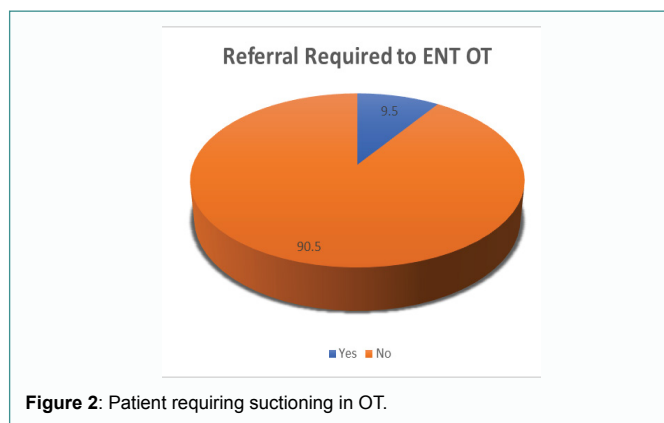
To the best of our knowledge, the guidelines for the outpatient

**Table 2:** Presenting complaints.

Presenting Complaint	Percentages
Discharge	27.2
Pain	19.8
Ear Fullness	17.5
Itching	14.5
Hearing Loss	12.1
Tinnitus	2.7
Vertigo	2.1
Foreign Body	1.5
Itching plus pain	0.6
Swelling with discharge	0.6
Ear lob Keloid	0.6
Bleeding	0.6
Laceration of Earlobe	0.3

**Table 3:** Diagnosis for which suctioning was done in OPD.

Diagnosis on Suctioning	Percentages
Wax	43.5
CSOM	35.9
Oto- Mycosis	13
Acute otitis media	4.3
Foreign Body	1.1
Trauma	1.1
BPPV	1.1

**Figure 2:** Patient requiring suctioning in OT.**Table 4:** Diagnosis for which suctioning is required to be done in OT.

Diagnosis for which Referral was required	Percentages
CSOM	84.4
Foreign Body	9.4
Keloid	6.2

department for suctioning facilities in otolaryngology clinics are nonexistent locally as well as internationally. The benefit of suctioning facility in the outpatient clinic has yet not been established before. The role of this clinic is in decreasing the burden of referrals, reducing patients' misery of going to the ER for suctioning and improving patient satisfaction. This audit is aimed at providing the foundation to fill this void in the guidelines of Otolaryngology OPD services. This fundamental audit will help in establishing the necessity of suctioning facility in otolaryngology clinics that has been neglected in the past. This ideology can be extended to the primary and secondary care centers in developing countries and tropics where poor living conditions and lack of adequate personal hygiene precipitate an enormous number of out-patient burdens in ENT clinics. Primary healthcare can play a role in reducing referrals to tertiary care. So, they should have an improved local service as stated in [12] to reduce the workload of tertiary healthcare centers. The accessibility of primary healthcare makes it the prime cornerstone of the healthcare delivery system. So, this audit reinforces the mandate of suctioning facilities in

OPD clinics with adequate training of the professionals.

## Synopsis of the Main Findings

The referrals to the ENT operating room decreased to 9.5% after the implementation of the suctioning facility after the first audit cycle. 9.5% of the cases required further treatment and follow-up. The OT registration for suctioning and mopping decreased to 9.5%. This audit cycle effectively achieved the anticipated outcomes in appeasing referral load and follow-up. We recommend that the suctioning apparatus should be routine equipment in the out-patient clinics and the health professionals working in OPD must be trained to mop with suctioning when indicated.

## Clinical Applicability

ENT OPDs are usually serviced by junior doctors that are mostly less trained members of the team. This results in a longer duration of consultations with the patients. This also demands more precautionary measures it increases the workload by increasing the need for follow-up in such cases room [13]. Our study discerns the fact that the implementation of some simple protocols will lead to an immense change. These include the strict implementation of international guidelines for the management of such cases as well as promoting mass education to the general practitioners along with the emergency department staff so that they are well aware of the referral pathway [14]. The resultant reduction in clinical activity will lead to a reduction in the workload of the doctors too. In this way, we can reach a higher standard of health too. On the other side, the patients and the general masses will also benefit as it will result in the financial sustainability of the patients by reducing the cost of transportation [15]. So, our benefits are not mutually exclusive and will run in congruence with each other by simply implementing the guidelines and educating the masses along with the supervision of all. The pandemic has already taught us to accept the new normal in ENT OPDs. This requires a basic yet simple change in frameworks that is non-labor intensive to bring about these tremendous benefits to the healthcare system and masses [3].

## Conclusion

Our study has stated a 2-fold advantage. Firstly, that will be an overall tremendous decrease in the number of patients that will still need to be referred to a clinic or OT (primary outcome), because apt services will be present in OPD after this change. The volume reduction in congruence with international ENT guidelines will cause a noticeable decrease in loss of time that resulted from running from here to there, and a greater level of satisfaction among patients though permitting juniors to seek advice for complex cases will be encouraged to avoid as many complications as possible. Secondly, financial sustainability will bring a greater chance for a poor population like us.

## Recommendations

A regular audit helps to further improve patient satisfaction if the recommendations are properly executed [16]. This research can be a global shout-out to the policymakers to highlight the weightage of clinical governance in driving forward service provision within the outreaches of one's finite resources available in the National Health Service.

## Ethical Considerations

The protocol of the audit was presented to the ethical review committee of the hospital that is [blinded for review] and the ethical approval was taken from the committee.

## References

1. Zeeshan M, Zeb J, Saleem M, Zaman A, Khan A, Tahir M. ENT diseases presenting to a tertiary care hospital. *Endocrinol Metab Int J*. 2018;6(6):416-8.
2. Qayyum SF, Fayyaz S. Frequency of diseases presenting in ent opd at ayub teaching hospital Abbottabad. *Sanamed*. 2019;14(2):175-80.
3. Yeolekar A, Bhalerao S, Bhalerao M. The New Normal of ENT OPD: Adapting Safe Practices. *Indian J Otolaryngol Head Neck Surg*. 2022;74(Suppl 2):2714-20.
4. Hasson R, McDermott E, Hanley K, Carroll C, Collins C. Assessing patient satisfaction with a microsuction service in general practice: a comparative study. *BJGP open*. 2019;3(2):bjgpopen19X101649.
5. Ftouh S, Harrop-Griffiths K, Harker M, Munro KJ, Leverton T. Hearing loss in adults, assessment and management: summary of NICE guidance. *BMJ*. 2018;361:k2219.
6. Department of Health. Implementing care closer to home: convenient quality care for patients. 2007.
7. Sarode D, Asimakopoulos P, Sim DW, Syed MI. Aural microsuction. *BMJ*. 2017;357:j2908.
8. Tepratoom S. Process improvement in an ear-nose-throat outpatient department: a hospital case study.
9. Crowley J. Reducing the Waiting List for New Referrals to the ENT Outpatient Department (Doctoral dissertation, Royal College of Surgeons in Ireland). 2018.
10. Radford JC. Treatment of impacted ear wax: a case for increased community-based microsuction. *BJGP Open*. 2020;4(2):bjgpopen20X101064.
11. Algadi MA, Alshathri AA, Alsugair RS, Alyabis MA, Alsaleh SA, Aljerian NA. Trends and patterns in urgent pediatric otolaryngology inter-hospital referrals in Saudi Arabia. *Saudi Med J*. 2022;43(1):91-7.
12. Jacups SP, Kinchin I, Edwards L. Participatory Action Research Applied to an Ear, Nose, and Throat Specialty Service Redesign in Remote Australia: A Mixed-Methods Study of Key Stakeholder Perspectives. *Int J Environ Res Public Health*. 2021;18(1):167.
13. Mughal Z, Seigel J, Basu S. Senior triaging of ENT emergency clinic referrals alleviates pressures on the outpatient department. *Ann R Coll Surg Engl*. 2022;104(2):117-20.
14. Jacups SP, McConnon KM. Reducing ear, nose and throat (ENT) waitlists: Implications of a referral audit. *Health Policy*. 2019;123(3):333-7.
15. Ibrahim N, Virk J, George J, Elmiyeh B, Singh A. Improving efficiency and saving money in an otolaryngology urgent referral clinic. *World J Clin Cases*. 2015;3(6):495-8.
16. Pokhrel S, Gyawali BR. Satisfaction of patients visiting out-patient department of ENT and head & neck surgery at tertiary care center. *Nepalese J ENT Head & Neck Surg*. 2019;10(1):24-6.