ENT On-call Equipment Bag: Updated for COVID-19

Miljyot Singh Sangha1 · Radhika Kumta1 · Kiran Jumani1

Abstract Otorhinolaryngology, or Ear Nose and throat (ENT), is a specialty requiring specific equipment for the management and treatment of patients. While most hospitals provide a 24/7 ENT procedure room, there is also a need for a mobile equipment bag with objects and instruments not readily available outside of the ENT department. We look to introduce a novel ENT equipment bag and checklist which has been updated to include a list of required equipment in the setting of the current COVID-19 pandemic. For the ENT equipment bag we use a high visibility multi-compartment bag. In addition to this, the bag contains four folders, labelled “Ear”, “Nose”, “Throat” and “Drugs”. The necessary ENT equipment is divided and included within these folders. The bag also contains a copy of the “ENT bag checklist”. This is a list, designed by the Whipps Cross ENT team, which specifies the required ENT equipment, including PPE in light of the current COVID-19 pandemic. The bag is stocked once a week using this list. Using this new system we developed a portable, practical and easy to use ENT on call equipment bag that included all of the relevant PPE to manage COVID-19 patients. We also implemented a new method of bag stocking to ensure that the bag is adequately stocked. In conclusion, we present a COVID-19 updated ENT bag and checklist. We hope this will help act as a reference for other ENT teams to compare and implement during the current COVID-19 pandemic.

Keywords COVID-19 · SARS-CoV-2 · ENT · Otorhinolaryngology · Equipment

Introduction

Otorhinolaryngology, or the Ear Nose and throat discipline (ENT), is a niche specialty requiring specific equipment for management and treatment of patients. There has always been the need for a treatment or procedure room with provision for a microscope, a flexible nasal endoscope, microscopic instruments and auxiliary equipment. While most hospitals provide a 24/7 ENT procedure room, there is also a need for a mobile equipment bag with objects and instruments not readily available outside of the ENT department.

It is important to ensure that junior doctors, who are the first responders to any ENT patient, feel safe, confident and well equipped when called to the wards, A&E or other hospital sites. In these unfamiliar environments ENT equipment is often unavailable. A national survey into night emergency cover in ENT for England showed that 42% of respondents did not feel comfortable managing common ENT emergencies as the first doctor on call [1], with another study showing that 25% of ENT treatment rooms in England were not adequately stocked [2]. Having an adequately stocked bag could help mitigate both of these issues.

Building upon previous work [3], we look to introduce a novel ENT equipment bag and checklist which has been updated to include a list of required equipment in the setting of the current COVID-19 pandemic.
Material and Methods

For this equipment bag we use a high visibility multi-compartment bag, its distinct appearance helps in preventing it from being lost or misplaced easily. In addition to this, the bag has been further divided into 4 compartments (Fig. 1).

This includes the “main compartment” and compartments “1”, “2” and “3”. The main compartment contains a further four folders containing equipment (Ear, Nose, Nasal packs and Drugs folders) and a headlight (Fig. 2). The entire equipment included in the bag is shown in Fig. 3 and includes: (a) headlight, (b) otoscope, (c) aural speculum, (d) cophenylcaine spray, (e) xylocaine spray and nozzle, (f) naseptin cream, (g) merocel nasal tampon,
(g) rapid rhino nasal pack, (i) nasopore, (j) nasal clip, (k) nasal thudicum, (l) silver nitrate cauter, (m) syringe, (n) gauze, (o) white needle, (p) scissors, (q) tongue depressor, (r) alcohol wipe, (s) optilube, (t) FFP3 mask, (u) Tilly’s forcep, (v) St Barts wax hook, (w) crocodile forcep, (x) Jobson Horne probe, (y) scalpel, (z) goggles. In addition to these instruments an umbilical clamp, foleys catheter/Brighton’s balloon and a 512 Hz tuning fork could be considered though not included here.

In addition to this the bag also includes several copies of the newly developed ENT bag checklist (Fig. 4). A stock check using the checklist is completed by the on call SHO every Monday before the morning handover. The outstanding equipment is then stocked by the day team. This ensures that there is adequate stocking of the bag.

Discussion

We aimed to design a checklist and ENT bag that was equipped to deal with the main ENT procedures (ear examination, quinsy drainage, epistaxis control etc.).

There were several different considerations when designing this bag and checklist. We feel that the portability and ease of carrying the bag is important, especially when moving quickly from place to place. We also tried to ensure that the bag was not overly cluttered with more equipment than necessary as this would make it difficult to use at speed and may lead to stocking the bag becoming laborious and time consuming.

We have designed for the ENT bag to be restocked once a week. We have found this to be sufficient as the equipment used mainly out of hours (nasal packs and tongue depressors) can be included in large quantities as they do not take up much room or weight.

Finally, in light of the current COVID-19 pandemic and uncertainty surrounding the ongoing precautions that may be needed over the next months to years, it is important to prioritise safety of ENT doctors by providing adequate PPE whilst working. This is especially important as many ENT procedures completed day-to-day are aerosol generating procedures [4]. This checklist would help ensure the safety of both the doctors and patients during a busy ENT on call.
In conclusion we present the current COVID-19 updated ENT bag and checklist for use by the on call ENT team at Whipps Cross. This will aid other ENT teams by allowing them to compare and implement these changes in to their team during the current COVID-19 pandemic.

![ENT bag checklist]

| Main compartment | YES | NO |
|------------------|-----|----|
| 1. Headlight (charged?) | | |

| Main compartment – Ear folder | YES | NO |
|-------------------------------|-----|----|
| 1. Adult speculum x 10 | | |
| 2. Paediatric speculum x 10 | | |
| 3. Otoscope (charged?) | | |

| Main compartment – Nose folder | YES | NO |
|-------------------------------|-----|----|
| 1. Cautery sticks pack x 1 | | |
| 2. Jobson horné x 2 | | |
| 3. Nasal bolster x 1 | | |
| 4. Nasal thudicum x 3 (mixed sizes) | | |
| 5. Nasal clip | | |

| Main compartment – Nasal packs folder | YES | NO |
|---------------------------------------|-----|----|
| 1. Rapid rhino (mixed sizes) x 5 | | |
| 2. Merocel x 5 | | |
| 3. Nasopore x 1 | | |

| Main compartment – Drugs folder | YES | NO |
|---------------------------------|-----|----|
| 1. Lidocaine spray (blue box) x 3 | | |
| 2. Xylocaine spray x 1 | | |
| 3. White nozzle x 5 | | |
| 4. Naseptin x 1 | | |

| Compartment 1 | YES | NO |
|---------------|-----|----|
| 1. Tilly’s forceps x 2 | | |
| 2. Scalpel x 2 | | |
| 3. Crocodile forceps x 2 | | |
| 4. Wax hook x 2 | | |
| 5. FFP3 mask | | |
| 6. Goggles | | |
| 7. ENT bag checklist sheet x 3 | | |

| Compartment 2 | YES | NO |
|---------------|-----|----|
| 1. Alcohol wipe x 5 | | |
| 2. Lubricant gel x 5 | | |
| 3. Syringes x 3 | | |
| 4. White needle x 3 | | |

| Compartment 3 | YES | NO |
|---------------|-----|----|
| 1. Tongue depressor x 20 | | |
| 2. Scissors | | |
Authors’ Contributions MS: Substantial contribution to the design of the manuscript, literature search, preparing the main paper and final approval. RK: Contribution to design of manuscript. Both authors read and approved the final manuscript. Both authors have approved the manuscript before submission, including the names and order of authors.

Declaration

Conflict of interest The authors declares that they have no conflict of interest.

References

1. Biswas D, Rafferty A, Jassar P (2009) Night emergency cover for ENT in England: a national survey. J Laryngol Otol 123(8): 899–902. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed9&NEWS=N&AN=2009606148

2. Moorthy R, Magarey M, Joshi A, Jayaraj SM, Clarke PM (2005) A study of out-of-hours facilities in otolaryngology: current provision and problems. J Laryngol Otol 119(3):202–206

3. Duvvi S, Mudugal A, Kumar B (2012) How we do it: a portable ENT tool kit. Internet J Otorhinolaryngol 6(1)

4. Mick P, Murphy R (2020) Aerosol-generating otolaryngology procedures and the need for enhanced PPE during the COVID-19 pandemic: a literature review. J Otolaryngol Head Neck Surg 49(1). Available from: https://journalotohns.biomedcentral.com/articles/https://doi.org/10.1186/s40463-020-00424-7%0A http://europepmc.org/search?query=(DOI:https://doi.org/10.1186/s40463-020-00424-7)%0A http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mnh&AN=32393346%0A http://gateway.com

Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.