



Bharat Serum And
Vaccines Limited

TO UNDERSTAND PRESCRIPTION PATTERN OF ANTIFUNGALS IN ICU SETUP

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Background

Anti-Fungals are defined as medicinal agents used to treat or prevent topical fungal infection like ringworm, Athlete's Foot or systemic fungal infections like mycosis, candidiasis, cryptococcal meningitis etc. Invasive Fungal Infections is well documented complication of many conditions and procedures that result immunosuppression, including transplantation, HIV infection, and treatment of malignancy

Objectives

1. To study the incidence of Antifungals in Intensive Care Units
2. To identify the most prescribed Antifungal in Invasive Fungal Infections with respect to Prophylactic Treatment, Empirical Therapy and Treatment of confirmed infection
3. To identify the most prescribed Antifungal in Febrile Neutropenia patients
4. To determine the current unmet medical need in case of Invasive Fungal Infection

Methodology

Study Design: Descriptive (Cross-sectional)

Study Area: Delhi-NCR

Sample Size: Respondents-62

Hospitals-30

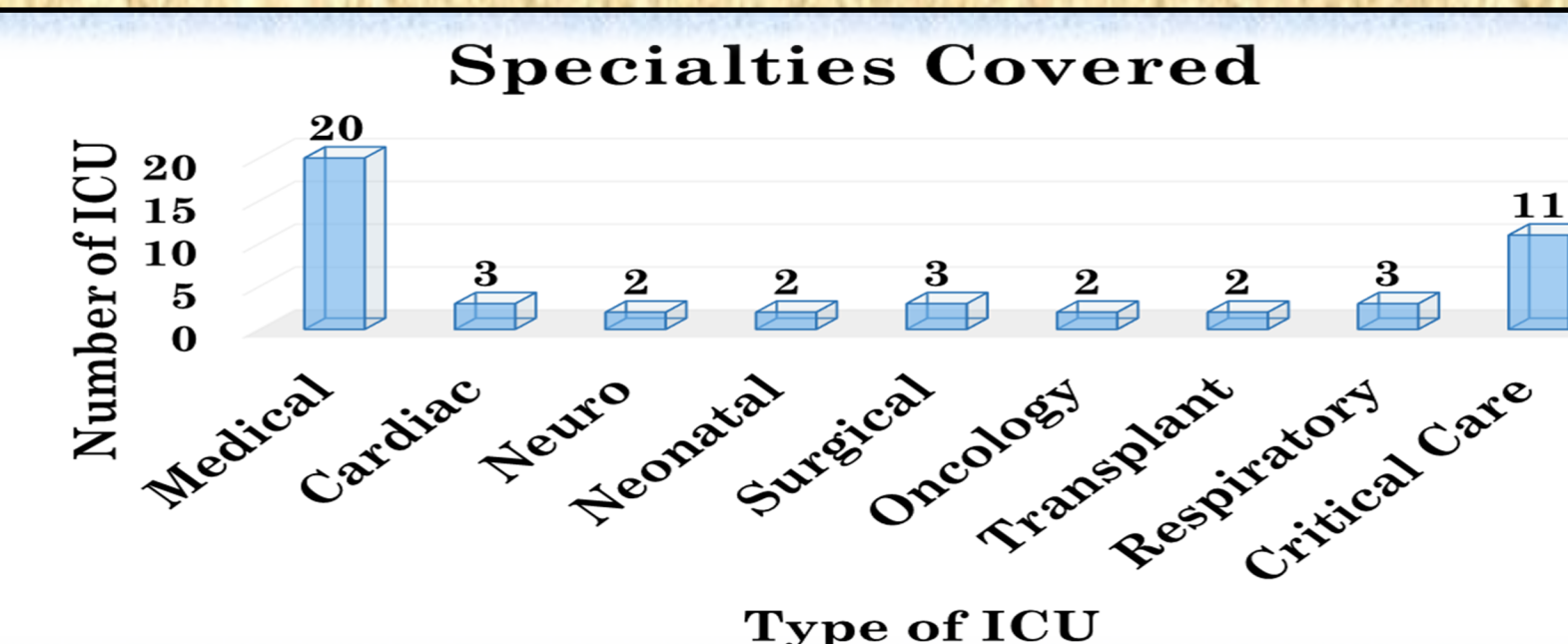
Duration: 1st April 2015 — 31st May 2015

Respondents: Intensivists
HOD Critical Care
HOD Internal Medicine
Senior Consultants (Critical Care)
Consultants (Critical Care)

Sampling Technique: Convenience

Data Collection: Technique: Face to Face and Self Administered

Tool: Structured Questionnaire



Market scenario of Antifungals in Intensive Care Units

Total	Immunocompromised	Anti-Fungal
40	35	16

Table 1: Average number of patients (per week)

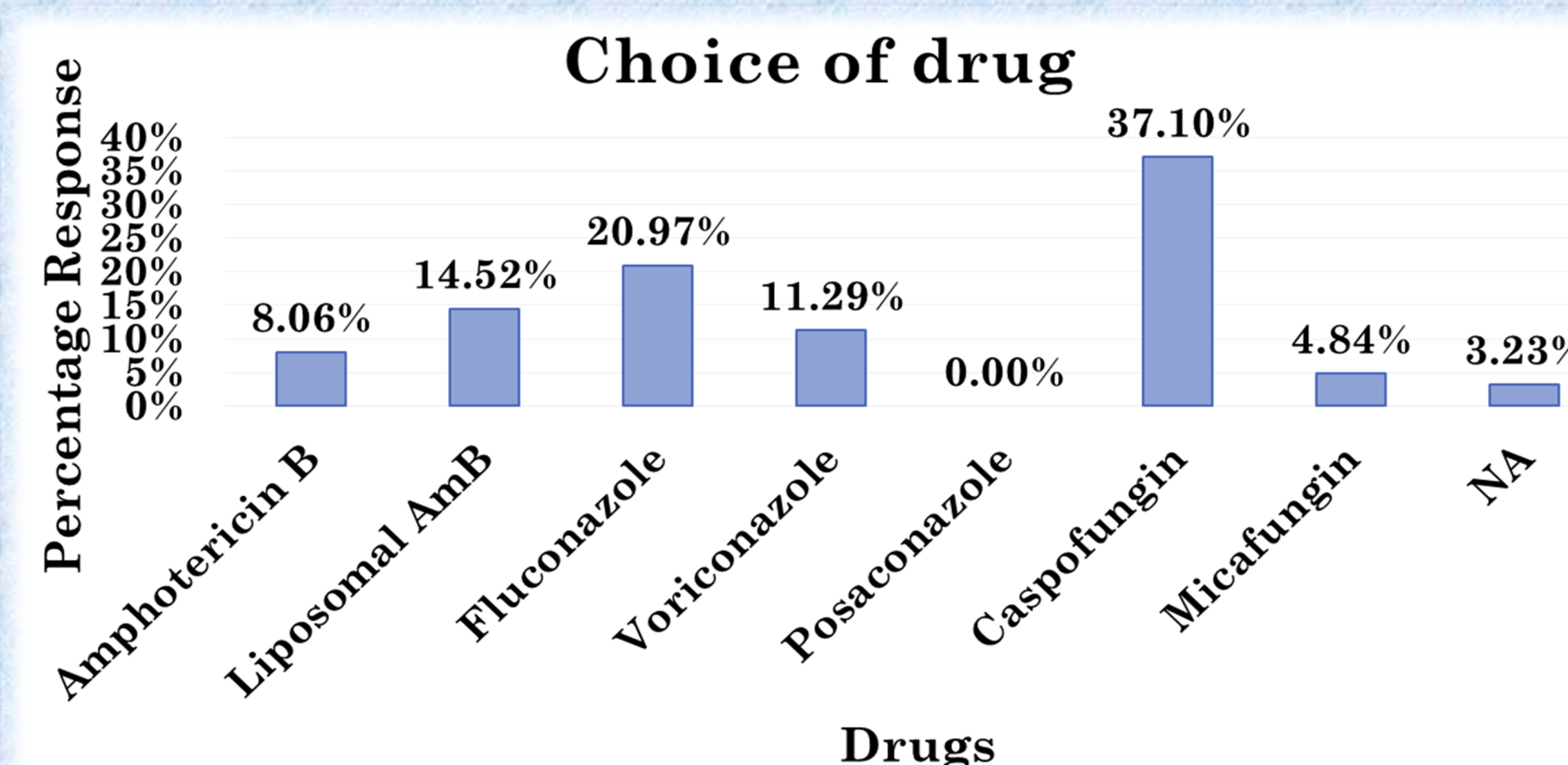
Candida	Aspergillus	Mucorales
82%	17%	1%

Table 2: Percentage of patients for different infections (per week)

Patients Requiring Anti-fungal Therapy
Surgery
Hospitalized
Drug Related
Transplant
Cancer
AIDS

Choice of drug for Febrile Neutropenia patients

Patients	Response of Intensivists
0-5	90.32%
6-10	6.45%
NA	3.23%

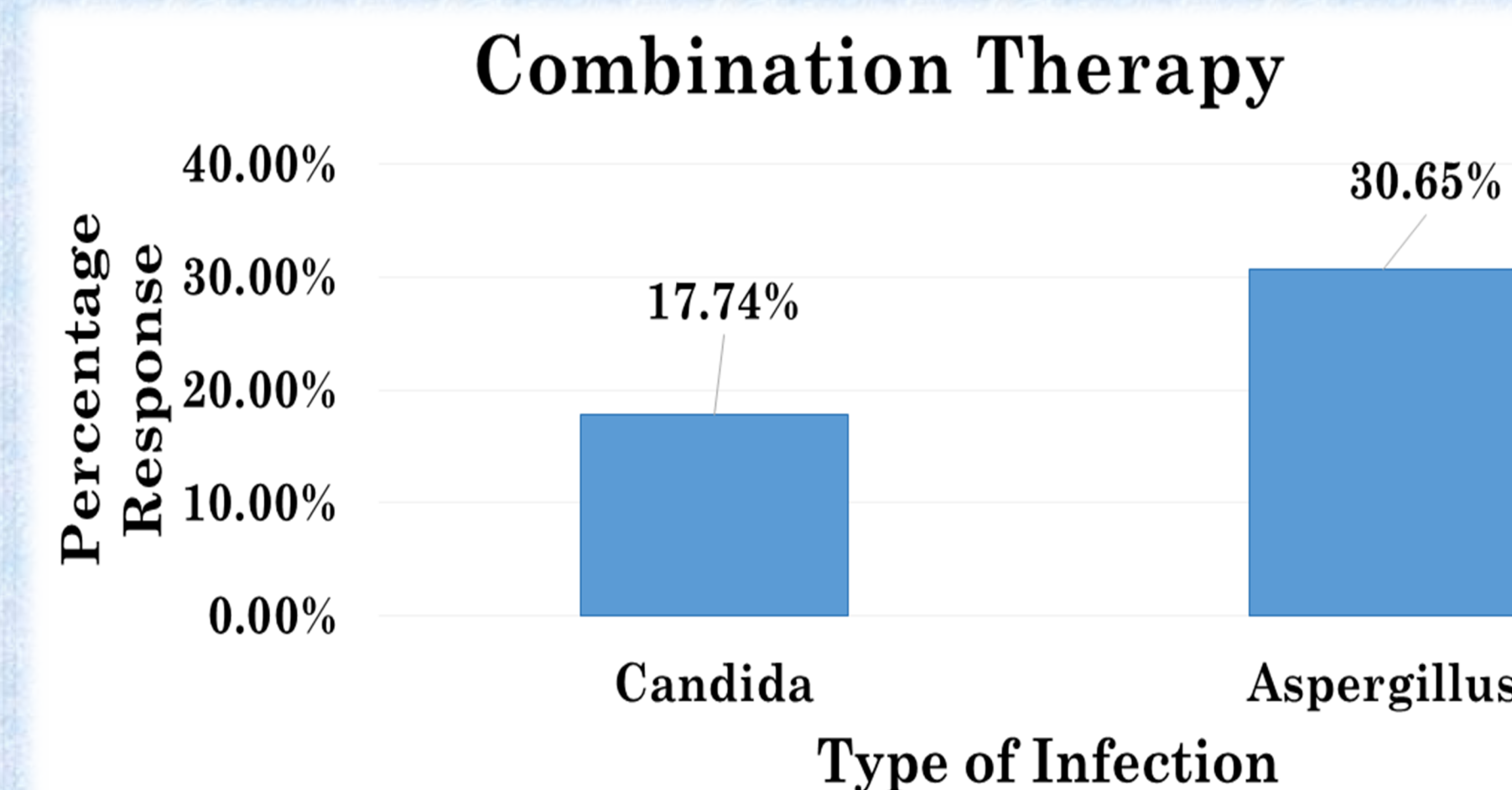
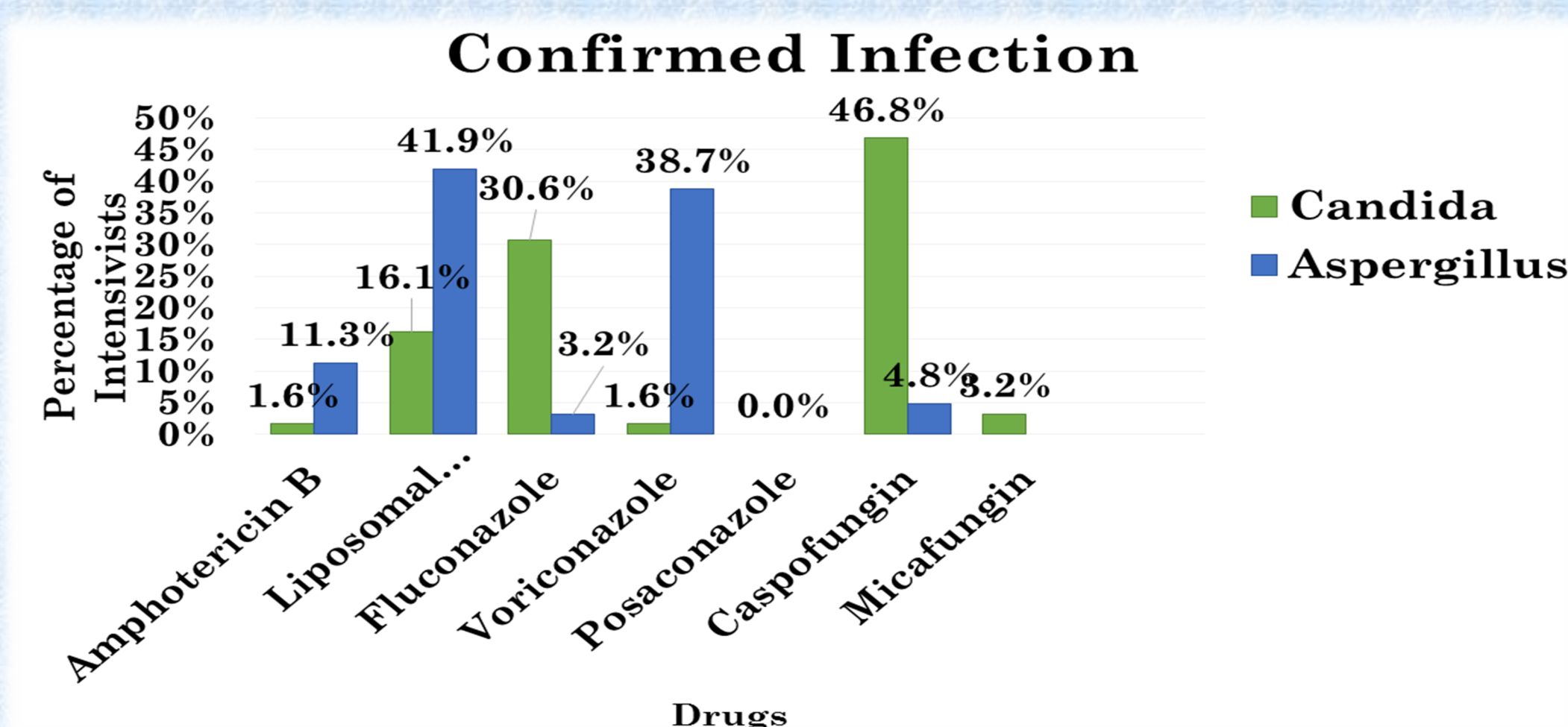
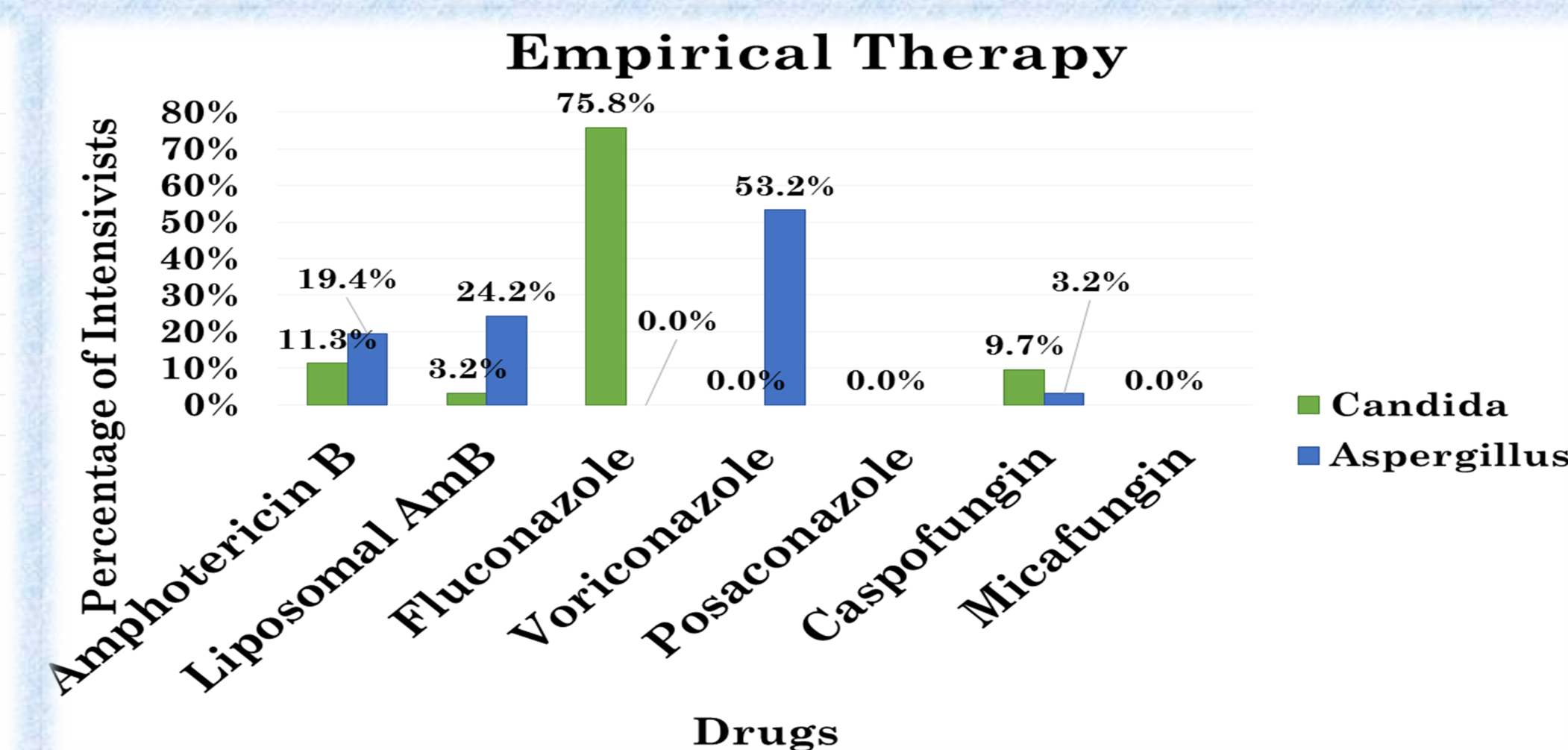
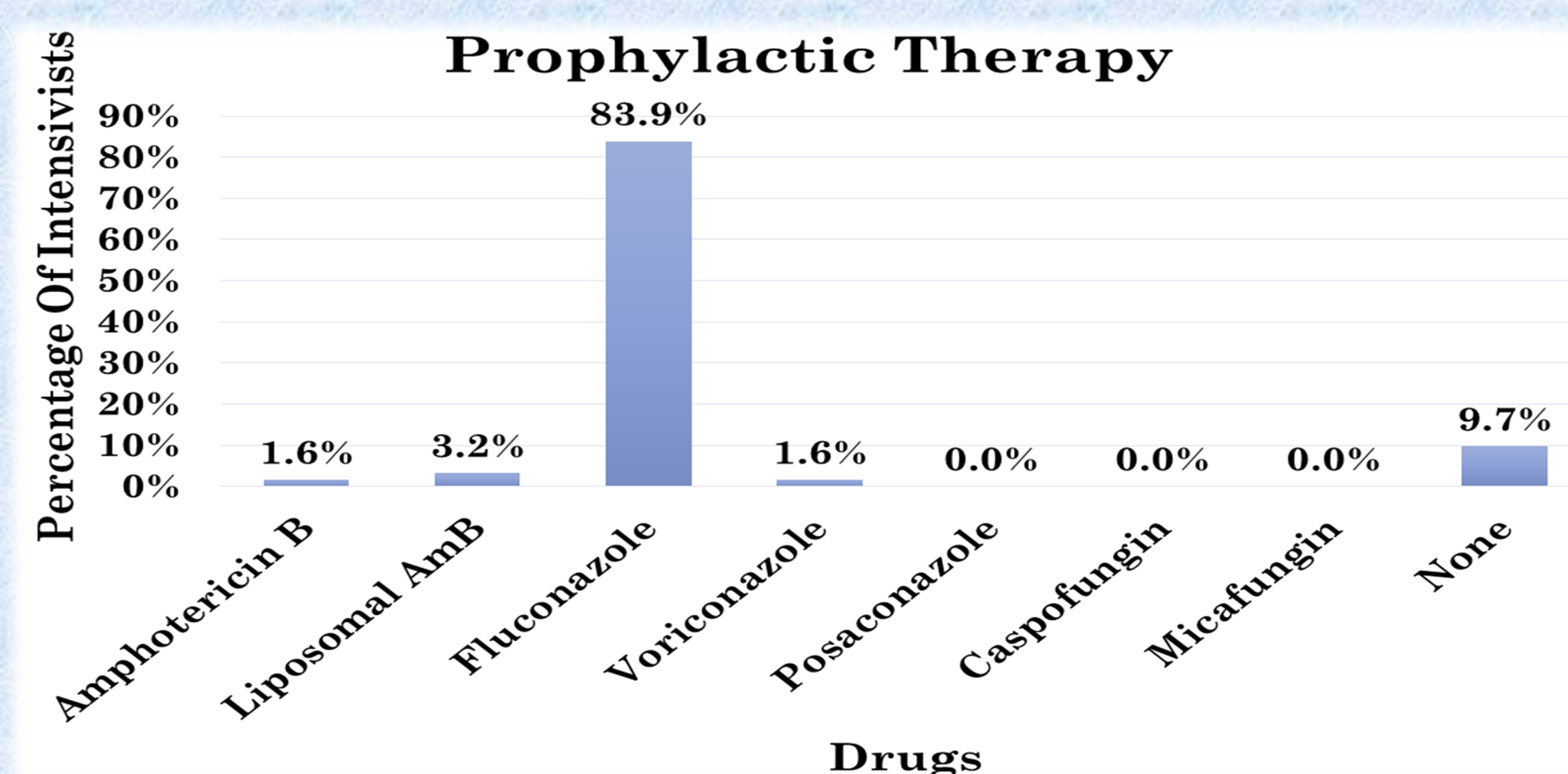


Current unmet medical need in case of Invasive Fungal Infection

- ψ There is a need for newer, quicker and reliable diagnostic tests.
- ψ Better Anti-Fungals available in the market are expensive.
- ψ No ideal Antifungal.
- ψ Antifungal should cover both Candida and Aspergillus species

Findings

Most prescribed Anti-Fungal in Invasive Fungal Infection



Observations

- ψ Prescribing Anti-Fungals depends on Sensitivity Test, Type of Species causing infection and Site of infection;
- ψ Quite a difference was observed in Private and Government Hospitals, in Private Hospitals all Anti-Fungals are being prescribed whereas in Government Hospitals main stress is given on Fluconazole due to affordability and least side effects;
- ψ Number of patients with Fungal Infections are increasing providing an opportunity to discover newer and better Anti-Fungals;
- ψ Non-Albicans is becoming a major species causing Candida Infection;
- ψ Number of patients requiring Anti-Fungal Therapy in Cardiac Critical Care/Apex Coronary Care are very few (2-3/month);
- ψ Many fungal species are becoming resistant towards Anti-Fungals;
- ψ Posaconazole was not the choice of any intensivists., usage is rare;
- ψ Diagnostic Tests need attention;

Way Ahead

- ψ Amphotericin B and its types have a great scope in Anti-Fungal market provided they are used wisely i.e. proper dose and duration. Its cost is one of the major reasons for its low popularity. In view of some intensivists, if a formulation of Amphotericin B better than its Liposomal form and low cost is discovered, it can easily be a market leader.
- ψ As India falls in Low-middle income group countries, with a fairly large population not being financially strong, Fluconazole is here to stay due to its low cost. Calculations (as per MRP) shows that FORCAN (Cipla), favorite Fluconazole of intensivists and consultants has an average sales of around **68Lac** in Delhi-NCR per month. Therefore, in my opinion Fluconazole is one molecule where BSV can venture into.
- ψ Also improving our existing Amphotericin B preparations i.e. R&D is another area where we can venture into.
- ψ Echinocandins, mainly Caspofungin is another molecule which provides us an opportunity to capture the Anti-Fungal market.