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# A SURVEY ON CONFUSING BRAND NAME / GENERIC NAME DRUG IN PRESCRIPTION

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## ABSTRACT

The brand names of some products have phonetic or orthographic similarity. Such names may cause confusion during dispensing. If pharmacist dispenses confusing brand name/generic name drug containing totally different active ingredient, if may result in adverse events that causes harm to patient. Thus objective of study was to carry out survey of the personnel working in pharmacies to find out their awareness about confusing brand name/generic name drug products, the chances of errors that may occur during dispensing of Look alike/Sound alike drugs & suggest different means to avoid those errors. Major findings of the project are: 1) 70% of pharmacists are D. Pharm, 5% are B. Pharm and remaining 25% belong to other profession. 2) 75% of the pharmacists get confused due to spelling mistakes in the prescription whereas 25% do not get confused. 3) On confusion due to prescription 25% pharmacists send back the patient back to the doctor, 55% contact directly to the doctor, 10% assume themselves and remaining 10% take other measures. 4) 80% of pharmacists provide the non OTC drugs without prescription. 5) 35% of the pharmacists provide the drugs without prescription whereas 65% do not.

**KEYWORDS:** Survey, Retail Pharmacist, Brand name/Generic name, Prescription.

## INTRODUCTION

The names of some marketed health products appear similar to other products when written or spoken. This is known as a look-alike sound-alike (LA/SA) issue. LA/SA health products names similarities may contribute to medical errors when two products are confused and one is used instead of the other. The confusion may be related to similarities in the written names on a prescription or similarities in how the name is pronounced when ordered over the telephone. The confusion may also occur when a consumer (human drugs) or a farmer/pet owner. (Veterinary drugs) obtains an over-the-counter products whose products names is very similar to another products name.

The types of health products that are affected by this issue include

- Biologics and pharmaceutical drug products that are intended for use in either human or veterinary medicine;
- Natural health products that are intended for human use;
- Medical devices that are intended for use in either human or veterinary medicine.

The majority of documented health products names are human prescription drugs. Statistics show that name confusion accounts for one in every four medication errors and that one of the most frequent causes of dispensing errors.[1]

### Impact of the Confusing brand and Generic brand name on health products

Medication errors caused by Confusing brand and Generic brand health products name may result in adverse events that cause harm to the patient (human or animal), especially when two products have different uses. People and animals that are especially vulnerable include the young and the old, those with allergies, those taking other medications or those with concomitant medical conditions.

Some possible solutions to reduce the potential for confusion between the products include:

- Requiring the manufacturer to change the name of the proposed health products; and
- Increasing public awareness of documented LA/SA health product names.[2]

## OBJECTIVE

The objective of study was to carry out survey of the personnel working in retail pharmacies in urban and rural areas. 1) To find out how many personal are aware about confusing brand name/generic name drug drugs and what do they do when they come across such drugs. 2) To

find out the chances of errors that may occurs in dispensing confusing brand name/generic name drugs. 3) To suggest different means of avoiding these errors.

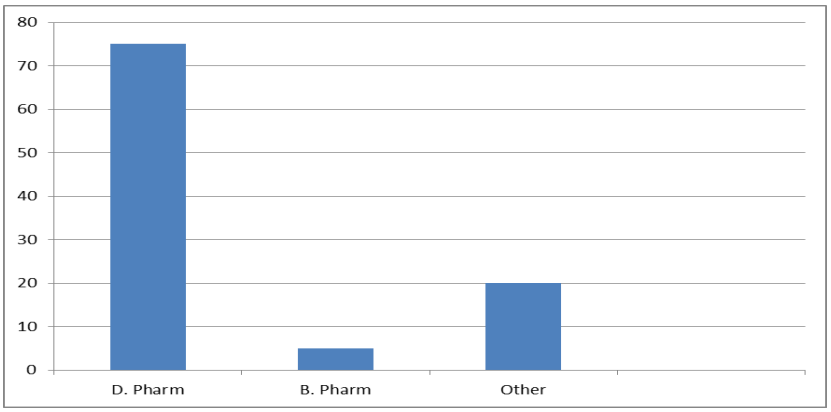
## METHOD

The questionnaire for survey was prepared & a survey was done in Shirpur and Boradi, Dist. Dhule in Maharashtra & was selected with respect to financial status of population in the area. The questionnaire was given to retail pharmacies in rural area and attempts were made to get unbiased information. The data was collected, sorted, statistically analyzed and organized properly. The conclusions were made. The questionnaire, which was used, is attached here to get clear idea of the methodology used.[3]

## RESULT

Q.1: What is your education?

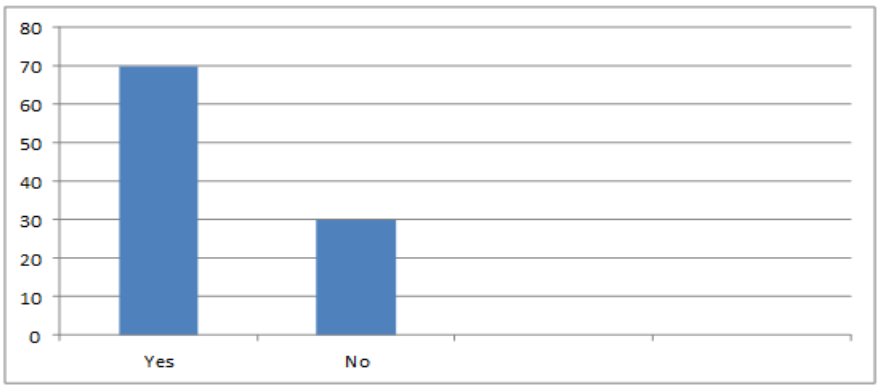
1) D.Pharm 2) B.Pharm 3) Other




**1. Chart: Education.**

Q.2: Do you get confused due to spelling mistakes occurring in the prescription prescribed by the doctor?

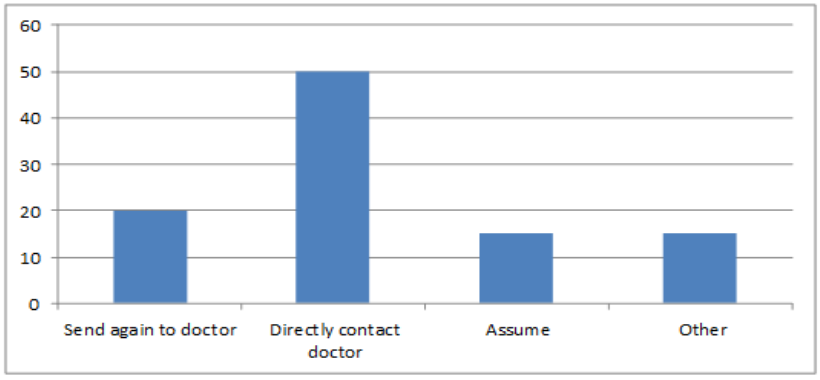
1) Yes 2) No




**2. Chart: Spelling mistake.**

Q.3: On confusion due to spelling mistakes in the prescription, what you do?

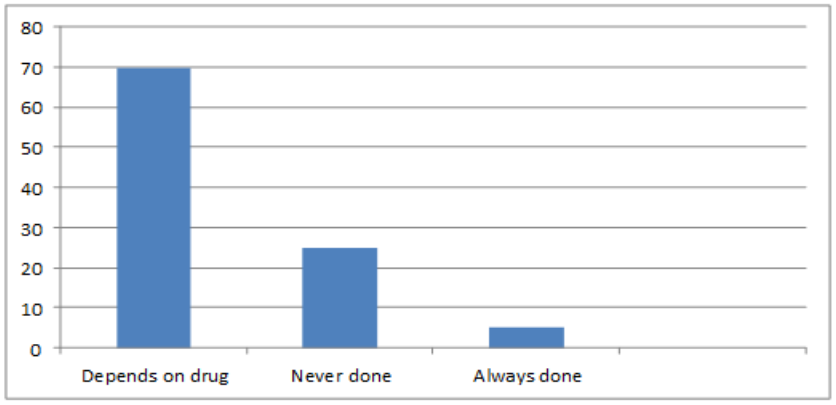
1) Send again to the doctor 2) Directly contact to the doctor 3) Assume 4) Other




**3. Chart: What to do on confusion.**

Q.4: Non OTC Products given without prescription?

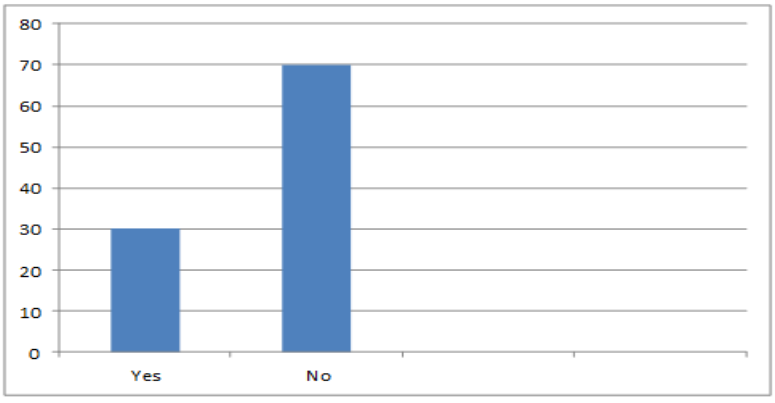
1) depends on drugs 2) Never done 3) Always done




**4. Chart: Non OTC products.**

Q.5: Do you prescribe the medicines without priscription?

**1) Yes 2) No**




**5. Chart: Providing medicines without prescription.**

## DISCUSSION

The data analysis of 20 retail pharmacies that were studied is presented on the basis of Qualifications of personnel handling retail pharmacies.

The educational qualifications of personnel handling the retail pharmacies are depicted in

- Chart 1: It can be seen that 70% of the personnel handling the retail pharmacies are registered pharmacists, 5% have done B. Pharm and 25% are not eligible to handle the pharmacies according to section 10 for education regulation laid by PCI Knowledge of personnel handling pharmacies about the bioavailability of drugs.
- Chart 2: It depicts that 75% of the pharmacists get confused due to spelling mistakes in the prescription and remaining 25% do not get confused and prescribe the drug on their assumption.
- Chart 3: It Clearly indicates that on confusion due to spelling mistakes 25% of the pharmacists send the patient back to the doctor for correction, 55% directly contact the doctor for the corrections to be made, 10% assume themselves and prescribe the drugs and 10% take other measures.
- Chart 4: In case of non OTC products, 80% of the pharmacists provide the non OTC drug depending upon the drug asked, 15% of the pharmacists never provide the drugs and remaining 5% prescribe the drugs without prescription.
- Chart 5: It clearly indicates that 35% of the pharmacists prescribe the drugs without prescription where as remaining 65 % do not prescribe the drugs unless the patient does not have a prescription.

### List of Drugs causing confusion[3],[4],[5],[6]

**Table No. 1: Similarity in brand name but containing different drug moiety.**

| Brand name | Active constituent | Category |
|---|---|---|
| ALBUTOL | Ethambutol | Antitubercular |
| ALBUTAMOL | Bromhexine | Antibacterial |
| | Etofyline | |
| | Salbutamol | Antihistaminic |
| INAC | Dicolfenac | NSAID |
| INACE | Amlodipine | Antihypertensive |
| | Lisinopril | Anthypertensive |
| PROBOFEX | Ferrous sulphate Folic acid Vit B1 B6 B12 Nicotinamide | Haemopoetic |
| PROBETES | Protien Fat Nicotinamide Folic acid Selenium Traicalcium Phosphate Vit A E B1 B2 B 12 B 6 | Protien Supplement |
| ACIO | Omeprazole, Domperidone | Antiemetic |

| | | |
|---|---|---|
| ACL | Amoxacilin Cloxacilin | Antimicrobial |
| ZETO | Itopride | Prokinetic |
| ZEVO | Levofloxacin | Antibacterial |
| UFER | Iron Folic Acid | Haemopoetic |
| USER | Sertraline | Antidepressant |
| MIC | Mosapride | 5HT4receptor agonist |
| MIL | Boric acid, Zinc Sulphate, Chlorpheneramine maleate, Naphthazolin HCL | Anti-infective Ophthalmic Preparation |
| K-CARB | Acarbose | A Glycoside inhibitor |
| K-CARD | Potassium Chloride | Electrolyte |
| QURE | Livofloxacin | Antibacterial |
| QUTE | Coenzyme Q | Mineral |
| INTAC | Ranitidine | H2Receptor antagonist |
| INTAX | Cefotaxime | Antibacterial |

**Table No. 2: Similar Brand Name and Drug Content but Different Manufacturer.**[7],[8]

| Brand Name | Active Constituent | Manufacturer |
|---|---|---|
| BAYCIP TZ | Ciprofloxacin, Tinidazole | Bayer |
| BIOCIP TZ | Ciprofloxacin, Tinidazole | Biochem |
| VERTIGON | Cinnarizine | Geno |
| VERTIRON | Cinnarizine | Cipla |
| ZOLPID | Zolpidem | B & B |
| ZOPID | Zolpidem | Psycorem |
| ALZO | Alprazolam | Ochoa |
| ALZOT | Alprazolam | Pfizer |
| JUMAX | Selegilin | Torrent |
| JUMEX | Selegilin | Sanofi Aventis |
| CLOPI | Clopidogrel | Skymax |
| CLOPID | Clopidogrel | Genix |
| CIPROLEN | Ciprofloxacin | Warren |
| CIPROLET | Ciprofloxacin | DRL |
| CAPRIN | Heparin | Samarth |
| KEPARIN | Heparin | Neon Labs |
| RADISTAT | Ethamsylate | Radicura |
| REVISTAT | Ethamsylate | Intra Labx |
| ARZA | Aripiprazole | Mano |
| ARZU | Aripiprazole | Pinnacle (Lupin) |

**Table No. 3: Similarity in Brand name and certain constituents but on products contains some additional constituents.**[9],[10]

| Brand name | Active ingredients |
|---|---|
| Dolopar | Paracetamol |
| | Caffeine |
| Dolopar 650 | Paracetamol |
| Fibrinil | Paracetamol |
| Fibrinil p | Paracetamol |
| Amlo b | Amlodipine |
| | Benazepril |
| Amlo r | Amlodipine |
| | Ramipril |
| Alfapsin | Trypsin |
| | Chymotrypsin |
| Alfapsin d | Chymotrypsin |
| | Diclofenac potassium |
| Ampilin | Ampicillin |
| Ampilox | Ampicillin |
| | Cloxacillin |
| Zix-sr | Aceclofenac |
| Zix-s | Aceclofenac |
| | Paracetamol |
| Fungid | Fluconazole |
| Fungid-or | Fluconazole |
| | Ornidazole |
| Amlo-l | Amlodipine Besylate |
| | Lisinopril |
| Amlol | Lisinopril |
| Timolet | Timolol |
| Timolen | Timolol maleate |
| | Benzalkonium Chloride |
| Aten | Atenolol |
| Aten-am | Atenolol |
| | Amlodipine |

**Table No 4: List of drugs that may cause confusion.**[11],[12]

| | |
|---|---|
| Accupril, Accutane | Lamictal, lamisil |
| Accutane, Anturane | Lamivudine, lamotrigine |
| Acetazolamide, Acetohexamide | Lanoxin, lasix, lonox |
| Acetylcholine, Acetylcysteine | Levatol, lipitor |
| Aciphex, Aricept | Levbid, lithobid |
| Adderall, Inderal | Levitra, raptiva |
| Albuterol, Atenolol | Librax, librium |
| Aldactazide, Aldactone | Loniten, lotensin, lovastatin |
| Aldomet, Aldoril | Lorabid, slo-bid |
| Aldoril, Elavil | Losartan, valsartan |
| Alfentanil, Fentanyl, Sufenta, Sufentanil | Mandol, nadolol |

| | |
|---|---|
| Allegra, Viagra | Maxidex, maxzide |
| Alprazolam, Diazepam, Lorazepam, Midazolam | Mazicon, mevacor, mivacron |
| Altace, Alteplase | Mebendazole, methimazole |
| Alupent, Atrovent | Meclizine, memantine |
| Amantadine, Rimantadine | Melphalan, mephyton |
| Ambien, Amen | Meperidine, meprobamate |
| Amicar, amikin | Mesantoin, mestinon |
| Amiloride, amiodarone, amlodipine | Metaproterenol, metoprolol |
| Amitriptyline, nortriptyline | Methicillin, mezlocillin |
| Amoxicillin, augmentin | Methotrexate, metolazone |
| Anafranil, enalapril | Metoprolol, misoprostol |
| Apresazide, apresoline | Minoxidil, monopril |
| Asacol, os-cal, oxytrol | Mithramycin, mitomycin |
| Atarax, ativan | Naloxone, naltrexone |
| Atenolol, timolol | Naprelan, naprosyn |
| Avinza, invanz | Navane, nubain |
| Azithromycin, erythromycin | Nelfinavir, nevirapine |
| Baclofen, bactroban | Neurontin, noroxin |
| Benadryl, bentyl, benylin, betalin | Niacinamide, nicardipine |
| Bepridil, prepidil | Nicardipine, nifedipine, nimodipine |
| Betagan, betagen | Norpace, norpramin |
| Bumex, buprenex | Ocufen, ocuflox |
| Bupivacaine, ropivacaine | Olanzapine, olsalazine |
| Bupropion, buspirone | Orinase, ornade |
| Calan, colace | Oxaprozin, oxazepam |
| Calcifediol, calcitriol | Oxycodone, oxycontin |
| Capitrol, captopril | Paclitaxel, paroxetine |
| Cardene, cardizem | Panadol, pindolol, plendil |
| Cardene, codeine | Pancuronium, pipecuronium |
| Cefazolin, cefprozil | Parlodel, pindolol |
| Cefotaxime, ceftizoxime | Paroxetine, pralidoxime, pyridoxine |
| Cefuroximine, deferoxamine | Pelamine, pemoline |
| Cefzil, kefzol | Pentobarbital, phenobarbital |
| Celebrex, celexa | Pentosan, pentostatin |
| Celebrex, cerebyx | Percocet , percodan, procet |
| Chlorpromazine, chlorpropamide, promethazine | Phenaphen, phenergan |
| Ciloxan, cytoxan | Phenelzine, phenylzin |
| Ciprofloxacin, ofloxacin | Phentermine, phentolamine |
| Clinoril, clozaril | Pioglitazone, rosiglitazone |
| Clofazimine, clonidine, clozapine | Pitocin, pitressin |
| Clomiphene, clomipramine | Pravachol, prevacid |
| Clonazepam, clorazepate | Pravachol, propranolol |
| Clonidine, quinidine | Prednisolone, prednisone, primidone |
| Clotrimazole, co-trimoxazole | Premarin, primaxin |
| Codeine, lodine | Prilosec, prinivil, proventil |
| Coreg, zomig | Prilosec, prozac |

| | |
|---|---|
| Cozaar, zocor | Proamatine, protamine |
| Cyclobenzaprine, cyproheptadine | Probenecid, procanbid |
| Cycloserine, cyclosporine | Promazine, promethazine |
| Dacarbazine, procarbazine | Proscar, provera, prozac |
| Dactinomycin, daunorubicin | Protamine, protopam, protropin |
| Danazol, dantrium | Quarzan, questran |
| Dapsone, diprosone | Quinidine, quinine |
| Darvon, diovan | Ranitidine, rimantadine |
| Daunorubicin, idarubicin | Relpax, revex, revia |
| Decadron, percodan | Reminyl, robinul |
| Desipramine, imipramine | Reserpine, risperdal |
| Desogen, desonide | Restoril, vistaril |
| Desoximetasone, dexamethasone | Retrovir, ritonavir |
| Desoxyn, digitoxin, digoxin | Ribavirin, riboflavin |
| Diazepam, ditropan | Rifabutin, rifampin |
| Diazoxide, dyazide | Rifadin, rifamate, rifater |
| Dimenhydrinate, diphenhydramine | Rifadin, ritalin, ritodrine |
| Diprivan, ditropan | Roxanol, roxicet |
| Dipyridamole, disopyramide | Salbutamol, salmeterol |
| Dobutamine, dopamine | Saquinavir, sinequan |
| Doxapram, doxazosin, doxepin, doxycycline | Selegiline, stelazine |
| Doxil, paxil, plavix | Septa, septra |
| Dronabinol, droperidol | Serentil, serevent |
| Dyclonine, dicyclomine | Seroquel, serzone |
| Dynacin, dynacirc | Solu-cortef, solu-medrol |
| Echogen, epogen | Somatropin, sumatriptan |
| Elavil, equanil, mellaril | Spiriva, stalevo |
| Eldepryl, enalapril | Sufenta, survanta |
| Elmiron, imuran | Sulfadiazine, sulfasalazine, sulfisoxazole |
| Eloxatin, exelon | Sumatriptan, zolmitriptan |
| Enalapril, ramipril | Tambocor, tamoxifen |
| Entex, tenex, xanax | Tegaserod, tegretol, toradol |
| Ephedrine, epinephrine | Tequin, ticlid |
| Esmolol, osmitrol | Terbinafine, terbutaline, terfenadine |
| Estraderm, estratab, estratest | Terbutaline, tolbutamide |
| Estraderm, testoderm | Terconazole, tioconazole |
| Ethosuximide, methsuximide | Testolactone, testosterone |
| Etidronate, etretinate | Thiamine, thorazine |
| Eurax, urex | Tiagabine, tizanidine |
| Evista, e-vista | Ticar, tigan |
| Femara, femhrt | Timoptic, viroptic |
| Fenoprofen, flurbiprofen | Tobradex, tobrex |
| Fioricet, fiorinal | Tolazamide, tolbutamide |
| Flaxedil, flexeril | Tolnaftate, tornalate |
| Flomax, fosamax | Trandate, tridate |
| Flunisolide, fluocinonide | Trendar, trental |
| Fluoxetine, fluvastatin, fluvoxamine, | Tretinoin, trientine |

| | |
|---|---|
| paroxetine | |
| Flurazepam, temazepam | Triamcinolone, triaminicin, triaminicol |
| Folic acid, folinic acid | Triaminic, triaminicin |
| Foradil, toradol | Triamterene, trimipramine |
| Fosinopril, lisinopril, risperdal | Trifluoperazine, triflupromazine |
| Fosphenytoin, phenytoin | Ultracef, ultracet |
| Furosemide, torsemide | Urised, urispas |
| Glimepiride, glipizide, glyburide | Valacyclovir, valganciclovir |
| Granulex, regranex | Vancenase, vanceril |
| Guaifenesin, guanfacine | Vanceril, vansil |
| Haldol, stadol | Vepesid, versed |
| Heparin, hepsera, hespan | Verapamil, verelan |
| Hycodan, vicodin | Verelan, virilon |
| Hydralazine, hydroxyzine | Vinblastine, vincristine, vindesine, vinorelbine |
| Hydromorphone, morphine | Wellbutrin, wellcovorin, wellferon |
| Hyperstat, nitrostat | Xanax, zantac |
| Imipenem, omnipen | Zantac, zyrtec |
| Imipramine, norpramin | Zestril, zostrix |
| Inderal, inderide, isordil | Zocor, zoloft |
| Intropin, isoptin | Zofran, zosyn |

## CONCLUSION

To conclude with discussion we say that, a very large amount of non-OTC products 70 to 80 % are sold without prescription. Nearly 20 to 30% of personnel were not pharmacists so they were unaware of the fact that errors may occur due to wrong pronunciation or spelling mistakes. Many of personnel have a practice of replacing brands with some other parallel brands or replacing a drug with a similar drug. If some confusion occurs during dispensing then many of pharmacists nearly 15 to 20% make assumption by themselves and sell the product, remaining 10 to 20% send the patient back to the doctor and nearly 55 to 60% directly contact the doctor. On an average 25 to 30% patients ask for non – OTC products without a prescription.

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