Fundamentals of Homeopathy

J.P. Borneman, Ph.D.  Chairman and CEO, Standard Homeopathic Company  President, Homoeopathic Pharmacopoeia Convention of the United States

Al Lorman, Esq.  General Counsel, American Association of Homeopathic Pharmacists

Eric L. Foxman, R.Ph.  Senior Scientist, Homoeopathic Pharmacopoeia Convention of the United States

Moderated by: Barb Kochanowski, Ph.D., Vice President, Regulatory & Scientific Affairs, CHPA

Objectives

Discuss the technical background of homeopathy

Explain the current structure for regulation of homeopathic drug products, and contrast with dietary supplements and allopathic drugs

Describe the role of the Homeopathic Pharmacopoeia of the United States (HPUS)

Give a guided tour of the HPCUS web tools
$33.9 Billion is Spent on Complementary and Alternative Medicine (CAM) Products Annually

38.1 million adults made an estimated 954.2 million visits to practitioners of CAM.

2014 Sales of homeopathic drug products estimated at $1.1 BN in the U.S.

A total of 40% of all out-of-pocket costs for CAM, or about $14.8 billion, was spent on the purchase of nonvitamin, nonmineral, natural products.

Homeopathy???

Homeopathy- Definitions

- Natural medicines, classified as drugs under FDCA since 1998
- Long history of safety
- Observed to work according to ‘Principle of Similars; like ‘cures’ like
- Uses small doses of drugs
- Controversial: paradoxical drug effects- smaller doses produce larger clinical effects
Homeopathy – Mechanism?

Homeopathy mechanism of action is not well understood.

Clinical research points to a stimulatory response in the organism.

After introduction of the homeopathic drug, organisms tend to resolve symptoms that would have been caused by a large dose of that same drug (Proving).

The Homeopathic Manufacturing Process

Sources: Botanical, Mineral, Biological, Synthetic

Preparation of Mother Tincture:
- Typically, 1/10 drug strength
- Hydroalcoholic extraction

Preparation of further potencies:
- Dilution and Succussion

The Homeopathic Manufacturing Process: Dilution and Succussion
Common Potencies

**Low:**
- 3X, 6X, 12X, 30X
- 3C, 6C, 12C, 30C

**Medium:**
- 200X
- 200C

**High:**
- 1M, 10M, 50M, CM

Tip #1: You will typically see low potencies in a retail location.
Tip #2: 30X is a generally universal potency.

Clinicians Who Use Homeopathy

- Homeopathic specialists (some MD, ND)
- Integrated medical practices
- Orthopedists using Arnica
- Cosmetic and reconstructive surgeons
- Pediatricians using homeopathy for AOM
- In store clinics + 1800 (2014 est.)

Combinations: An Efficient Approach
Legal and Regulatory Framework

Legal Status
Homeopathic drugs have been explicitly regulated as drugs since passage of the 1938 Federal Food, Drug, and Cosmetic Act
Main Senate sponsor of the legislation was Sen. Royal B. Copeland, a homeopathic physician
FD&C Act recognizes the Homeopathic Pharmacopeia of the United States as an “official compendium”
Homeopathic Pharmacopeia sets standards for strength and purity which are adopted by reference by the FD&C Act
Homeopathic drugs which do not meet HPUS standards are adulterated or misbranded unless their label specifies the deviation

Regulatory Status
In 1962, Congress told FDA to review all marketed drugs for efficacy as well as safety. FDA first looked at Rx drugs.
In 1972, FDA started the still-ongoing OTC Drug Review, which looks at OTC drugs by therapeutic class.
FDA specifically omitted homeopathic drugs from the OTC Review
FDA said in 1972 that “because of the uniqueness of homeopathic drugs,” it would “review them as a separate category at a later date after the present OTC drug review is complete.”
Since the “present OTC” review is still incomplete, that left homeopathic drugs in limbo.
Over 25 years ago, industry asked FDA to issue a Compliance Policy Guide that set out the appropriate way to market homeopathic drugs.

The result was CPG 400.400, Conditions Under Which Homeopathic Drugs May Be Marketed (1988).

CPG 400.400

The CPG Establishes:

| The labeling requirements for homeopathic drugs – essentially the same as for allopathic drugs | Adopts the same Rx/OTC classes as apply to allopathic drugs |
| Looks, in the first instance, to the Homeopathic Pharmacopoeia to establish the legitimacy of the active ingredients of homeopathic drugs | Looks to traditional homeopathic literature for the appropriate uses of homeopathic drugs; no clinical trial requirement |

FDA's explicit disclaimer: "A product's compliance with requirements of the HPUS, USP, or NF does not establish that it has been shown by appropriate means to be safe, effective, and not misbranded for its intended use."
**CPG 400.400**

- Homeopathic drugs are exempt from expiration dating, but not stability testing.
- FDA originally proposed to exempt homeopathic drugs from finished product testing but never adopted final regulation, then withdrew proposal.
- Finished product testing appears to be enforced on a risk-based approach.
- Not required to use Drug Facts panel, but many products do.

---

**CPG 400.400**

- With the rules spelled out, the industry has grown.
- Excellent relationship with FDA lasted for about 15 years, followed by a period of apathy and now we are working to restore the previous relationship.
- FDA held a Part 15 hearing on April 20-21, 2015 to solicit input on whether the CPG still accurately reflected the appropriate enforcement priorities.
- Questions asked by FDA at the hearing showed that they had additional issues other than what was noticed in the Federal Register.

---

**CPG 400.400**

- It is unlikely that there will be major revisions to the CPG, although it is possible that there will be changes to the definition of homeopathic.
- Probably the most important change will not be in the CPG, but in enforcement: cGMP compliance.
Industry Disclaimer Program

Industry disclaimer (adopted in 2014): “These statements have not been evaluated by the Food and Drug Administration.”

Required for American Association of Homeopathic Pharmacists (AAHP) member advertising; recommended for labeling as well.

AAHP is the not-for-profit corporation representing the interests of homeopathic manufacturers, distributors, and marketers of homeopathic drug products as well as individual pharmacists in cooperative efforts with regulatory agencies and other organizations nationally.

Allopathic Drugs, Homeopathic Drugs, and Dietary Supplements….

and Why the Difference Matters

Homeopathy v. Dietary Supplements

Homeopathic Products are Not Herbs or Dietary Supplements

Homeopathic drugs regulated under FDCA drug provisions; supplements are regulated under DSHEA

Homeopathic drugs are required to make drug claims; supplements can only make structure/function claims

Homeopathic drugs regulated by CDER; supplements regulated by CFSAN
Claims for Homeopathic Drugs

Homeopathic drugs are drugs; they must have an indication for use.

Homeopathic drugs are subject to the same Rx/OTC dichotomy as allopathic drugs.

Sources of claims for homeopathic drugs:
- OTC monographs
- Rx to OTC switched allopathic drugs
- Homeopathic literature

Issues in Establishing Claims for Homeopathic Drugs

Differences in approach between homeopathic and allopathic drugs
- Symptoms v. disease or conditions
- Claims outside the OTC Review
- Drug Facts panel issues

cGMP

FDA increasingly applies the SAME cGMP requirements to homeopathic drugs as it does to allopathic drugs

Some of the issues that presents
The Role of the HPCUS

HPCUS Stated Purpose

Accumulate pertinent information, and to publish and sell the Homeopathic Pharmacopoeia of the United States (HPUS)

To promote the art of healing according to homeopathic standpoint

To diffuse knowledge among the laity and professionals in the health-care field concerning homeopathic principals through means of publications

To research and obtain a thorough knowledge of the pathogenicity of each drug offered for inclusion in the Homoeopathic Pharmacopoeia of the United States as a homeopathic drug; to develop criteria for eligibility of drugs for inclusion in the Homeopathic Pharmacopoeia of the United States

To serve as a repository for homeopathic literature and drugs.

Generally to do, perform, undertake, direct, encourage and investigate all aspects and functions of any nature directed to the furtherance of homeopathic healing.

HPCUS has Four Important Functions

Focus on Safety.

- Monograph Approval
- Pharmacy Practices and Procedures
- Technical data production for drug standards and controls
- Establishment of safe minimum potencies appropriate to Rx, OTC and external use
2 Important Aspects:
• Safe/Effective
• Homeopathic
Monograph Process Overview

Sponsor Submission → HPUS Editor → Pharmacopeia Review Committee → Monograph Review Committee

Parallel Reviews

Monograph Process Overview

Pharmacopeia Review Committee → Parallel Reviews → HPUS Board of Directors → HPUS Editor

Pharmacy Practices and Procedures

Council on Pharmacy

- Pharmacy Practices and Procedures
- Manufacturing Techniques
- Good Manufacturing Practices (GMP) specific to homeopathic pharmacy
- Labeling Guidelines
Pharmacy Practices and Procedures

Provings Committee

- Practices and Procedures for conducting safe provings
- Safety Criteria (adverse events)
- Guidance on use of statistics

Technical Data Production for Drug Standards and Controls

Standards and Controls Committee

- Technical data production for drug standards and controls
- QC Standards for raw materials and finished product (when appropriate)

Establishment of Safe Minimum Potencies Appropriate to Rx, OTC and External Use

Toxicology and Safety Committee

- Establishes homeopathic potency minimums for all classes of homeopathic drugs.
- Standards based on single exposure and chronic exposure.
- OTC potency typically 2 order of magnitude from NOEL (if known).
Q&A

Why is HPUS Necessary for Users?

- The legal basis for homeopathic drugs in the U.S.
- Official Drug Monographs
- Standards and assay procedures
- Tables with potency recommendations

Complete guidelines for:
- Manufacturing
- Dosage forms
- Good Manufacturing Practices
- Labeling
- Potency levels for safe OTC and Rx products

www.hpus.com

A Tour of Functionality and Information
Pharmacopoeia (pharmacopeia): a book describing drugs, chemicals, and medicinal preparations; especially one issued by an officially recognized authority and serving as a standard.

How to make (official methods)
What to make (official monographs)
How to test (Quality)
Other info

NO indications

How to make (official methods)
These 5 sub-menus contain all the information from the prior two menus, plus more details.

Implementation date is 31 March 2017. (Slight updates being posted this month.)

What's in these 53 sections?
1. DEFINITIONS / NOMENCLATURE / GENERAL COMMENTS
2. DILUENTS AND VEHICLES
3. DEFINITION AND PROPERTIES OF DRUGS
4. CHEMICAL SUBSTANCES
5. CLASS A AND CLASS B ‐‐ PREPARATIONS OF SOLUTIONS
6. ZOOLOGICAL SUBSTANCES
7. CLASS E ‐‐ SARCODES
8. CLASS L ‐‐ SARCODES
9. CLASS I ‐‐ NOSODES
10. BOTANICAL SUBSTANCES
11. BOTANICAL SUBSTANCES ‐‐ COLLECTION INFORMATION
12. CLASS C AND CLASS D ‐‐ BOTANICAL TINCTURES
13. BOTANICAL TINCTURE PREPARATION
14. MACERATION METHOD
15. PERCOLATION METHOD
16. DECOCTION METHOD
17. CLASS P ‐‐ FERMENTATION
18. INCUBATION METHOD
19. INFUSION METHOD
20. CLASS O ‐‐ SUCCUS or Non ‐ Alcoholic Extracts
21. CLASS M ‐‐ FRESH BOTANICAL RAW MATERIALS 1:2 (50%)
22. CLASS N ‐‐ FRESH BOTANICAL RAW MATERIALS 1:3 (33.3%)
23. QUALITY CONTROL OF RAW MATERIALS AND TINCTURES
24. ADJUSTMENT OF A TINCTURE TO A SPECIFIC VALUE OR RANGE
25. ATTENUATIONS ‐ NOMENCLATURE / DESIGNATIONS
26. DECIMAL SCALE OF ATTENUATION – DEFINITION
27. CENTESIMAL SCALE OF ATTENUATION – DEFINITION
28. SUCCUSION
29. HAHNEMANNIAN ATTENUATIONS – MULTIPLE FLASKS
30. KORSAKOVIAN ATTENUATIONS – SINGLE FLASK
31. FIFTY MILLESIMAL (LM) SCALE OF ATTENUATION – DEFINITION
32. FIFTY MILLESIMAL (LM) METHOD OF MANUFACTURE
33. SUCCUSION METHOD
34. COMBINATIONS OF ATTENUATIONS AND (OR) TITRATIONS
35. COMBINATION OF TITRATIONS INTO LIQUID
36. ATTENUATIONS FROM MICROSCOPIC Fungal RAW MATERIALS
37. CLASS F ALGARODES
38. CLASS I GODES
39. CLASS K ISODES
40. CLASS J ALLEROSODES
41. COMBINATIONS OF ATTENUATIONS AND (OR) TITRATIONS
42. COMBINATION OF TITRATIONS INTO LIQUID
43. ATTENUATIONS FROM MICROSCOPIC Fungal RAW MATERIALS
44. FIFTY MILLESIMAL (LM) SCALE OF ATTENUATION – DEFINITION
45. FIFTY MILLESIMAL (LM) METHOD OF MANUFACTURE
46. CLASS F SOLID ATTENUATIONS: TRITURATION
47. CLASS G INSOLUBLE LIQUID ATTENUATIONS: TRITURATIONS
48. CONVERSION OF TRITURATIONS INTO LIQUIDS
49. ATTENUATIONS FROM MICROSCOPIC Fungal RAW MATERIALS
50. CLASS J ALLEROSODES
51. CONTRAINDICATIONS
52. INDICATIONS
53. DOSAGE FORMS
54. MEDICATED GLOBULES
55. MEDICATED Powders
56. MEDICATED TABLETS
57. NASAL SOLUTIONS
58. OPHTHALMIC SOLUTIONS
59. LIQUIDS AND MIX SOLIDS FOR OROMUCOSAL ADMINISTRATION
60. ORAL SOLUTIONS
61. TOPICAL DOSAGE FORMS
62. SUPPOSITORY DOSAGE FORMS
63. CAPSULES
64. METHODS OF STERILIZATION

---

www.hpus.com

How to make (official methods)

Homeopathic Good Manufacturing Practices – Most are in the Code of Federal Regulations (21 CFR 210 - 211), but some points are specific for homeopathic drug products.
What to make (official monographs)

Monographs for botanical and chemical raw materials are laid out the same...

Monograph with all information, including:
- Synonyms
- Biological Classification / Chemical Formula
- Description
- The Habitat of the Plant
- Class of Manufacture, and Part of Plant Used
- Applicable Attenuation Levels
What to make (official monographs)

To understand the medication – the attenuations levels – must first know what is intended.

The Explanations – the “Definitions” – are found here.

www.hpus.com

... It is important to understand the built-in safety margin of OTC homeopathic drug products: Using available acute toxicity data, the HPCUS has determined the amount of each component of concern in an entire usual retail package at a safe attenuation level. And – as an additional margin of safety – has set the OTC level at 2 decimal attenuations higher, for a 100-fold margin of safety.

www.hpus.com

What to make (official monographs)

Monographs for botanical and chemical raw materials are laid out the same...
How to test (Quality)

Organoleptic and ID tests on the Tincture, often including a chromatographic fingerprint...

How to test (Quality)

Quality tests, including assay, on the tincture.

The tests will refer to many reagents, all of which are defined or described in the...

www.hpus.com

STARTING MATERIAL:
A. Macroscopic identification:
1. Exercise a sample of the product from the underside of the leaf under a microscope using a #15 diamond stylus. The lamina of the leaf is compound of cells with large, rectangular, multi-nucleated, palisade tissue, surrounded by a thin-walled, short-peduncled compound of spongy, leaf cells with slightly thickened cell walls, and a single, large leaf cell. The leaf cells contain chlorophyll inclusions of various types.
B. Additional test (optional - for fresh starting material only):
Loss on drying: not less than 0.1% as determined on a sample of the product, as per Section 5 - 5.6.2 Section - Loss on Drying Determination.
www.hpus.com

...section on Standards and Controls.

www.hpus.com

...section on Standards and Controls.

www.hpus.com

The information in the List of Synonyms is also the same as in the individual monograph's Drug Data. Each entry is hyperlinked to its respective monograph, where all this information is imported from. But it can allow for specialized searches...
Monograph search returns information as found in the monograph. Potentially more helpful are searches for Contemporary Name or Synonyms – even if one knows only a part of the name.

Can search for a contemporary botanical name, even if the traditional homeopathic name is different.
Can search for an alternate botanical name, even if the contemporary and traditional homeopathic names are different.
Can search for a foreign common name.
The synonym search will return multiple monographs which have the same synonym.

The HPCUS recognizes that some names are very long and – especially for combination products – some packages are very small.
Thus, a list of Official Short Names has been developed which can be used on packaging of combination products.

NOTE: This information is not found anywhere else on HPUS website.
The Labeling Guidelines are similar to the requirements in 21 CFR. And ALL 21 CFR requirements pertain to Homeopathic Drug Products. But there are a few points which are specific to the HPUS...

Here is the reference to the HPUS's approved use of established short names on the label.

Labeling Guidelines

1. All homeopathic drugs are drugs within the meaning of the United States Food, Drug and Cosmetic Act and therefore are subject to the applicable United States Food and Drug Administration's regulations for labeling.

2. OTC homeopathic drugs are drugs for which adequate directions for use can be written.

3. The label shall contain a statement of identity of the drug, being the official or established short name given in the current homeopathic Pharmacopoeia of the United States, and any supersede therapeutics. The label of a mixture or combination of drugs shall indicate the official or established short name of each drug in the mixture or combination.
Here is a reference to the mandatory use of the word “Homeopathic” on the label.

Here is a reference to the use of the letters “HPUS” on the label.

www.hpus.com

Here is a reference to the ‘explanatory’ statement regarding the letters “HPUS”.

14. On each label and package, the letters “HPUS” should be appended to the name of each official drug or drugs which are present in the product, e.g. ‘Amica Montana 5X HPUS’. In addition, the following statement must appear at the end of the formula section of each label when all products(s) contained therein are official. “The letters ‘HPUS’ indicate that the component(s) in this product is (are) officially monographed in the Homeopathic Pharmacopoeia of the United States.” This statement may not appear unless all active medications are official.

www.hpus.com

For those companies interested in sponsoring a new monograph, these webpages are especially important. An extensive labeling guideline is being posted this month.