CLAIMS

What is claimed is:

1. A computer implemented method for transmitting targeted digital impressions to a filtered audience, the method comprising:

receiving, by uploading from a client computer among one or more client computers that are communicatively coupled to one or more computers programmed to implement a demand side platform (DSP) campaign planning system, a first list of one or more healthcare provider identifiers each uniquely identifying healthcare providers;

receiving, at the one or more computers, practice data comprising one or more of: clinical medical data indexed by the healthcare provider identifiers, prescription data specifying drug prescriptions previously written and indexed by the healthcare provider identifiers and/or medical claims data indexed by the healthcare provider identifiers and storing the data in a shared database;

forming counts of healthcare providers by automatically joining and correlating disparate datasets of the practice data, including matching healthcare provider identifiers in the first list to the practice data;

displaying, in a graphical user interface that is generated by the DSP campaign planning system and provided to one or more client computers, the counts of healthcare providers;

receiving, from the one or more client computers, input specifying one or more filter attributes, including input in an input box widget specifying a diagnosis code or procedure code and a radio button specifying a diagnosis or a procedure;

in response, searching for particular parameters in a hierarchical ontology of filter terms that match the input and displaying in the graphical user interface a hierarchical tree of codes and code definitions most closely matching the input, the hierarchical tree including a plurality of expansion icons, and receiving a selection which, when selected, updates the tree to further expand or narrow codes and code definitions shown in the tree;

in response to the input being received to select codes for filtering, filtering the first list based on the one or more filter attributes to produce a filtered second list representing a target audience of healthcare provider identifiers;

transmitting the filtered second list of healthcare provider identifiers to a DSP service implemented using one or more DSP server computers, the DSP service being programmed to receive a particular healthcare provider identifier, match the particular healthcare provider identifier to the filtered second list, and in response to a match, generate instructions for use by one or more of an advertising exchange, media server and/or media and advertisement display channel to cause presentation of a targeted digital impression on a user computer associated with the particular healthcare provider identifier.

2. The method of claim 1, the healthcare provider identifiers comprising any of United States National Provider identifiers (NPIs), CINC values or Practitioner Identifiers.

3. The method of claim 1, further comprising receiving, at the one or more computers, for use in association with the practice data, one or more of demographic data, specialty data, best-of-breed address data and/or education data, each being indexed by the healthcare provider identifiers.

4. The method of claim 1 wherein the practice data comprises at least one of diagnosis, procedure, or prescription history associated with the healthcare provider identifiers.

5. The method of claim 1 wherein the clinical medical data comprises practice and patient statistics related to at least one of HCP specialty, geography, or HCP claim codes.

6. The method of claim 1, further comprising repeating, two or more times, the steps of displaying in a graphical user interface that is generated by the DSP campaign planning system and receiving input specifying one or more filter attributes, thereby repeatedly updating the filtered second list according to different filter attributes.

7. The method of claim 1 further comprising generating and displaying a graphical user interface that is programmed to receive client computer input specifying filter attributes for clinical data by diagnosis or procedure, for specialty by primary or non-primary specialty, for geography, for deciles of the healthcare provider identifiers, for diagnosis codes, and for procedure codes.

8. The method of claim 1, the DSP service being programmed for:

generating instructions for ranking impressions based upon one or more of target HCP practice specialties, target HCP geography, target HCP procedure codes, counts of unique HCPs, counts of unique HCP patients, or estimated numbers of impressions;

generating instructions for submitting bids for purchasing impressions based upon the ranking of the impressions.

9. The method of claim 1, the DSP service being programmed for:

generating instructions for ranking impressions based upon one or more of target HCP practice specialties, target HCP geography, target HCP procedure codes, counts of unique HCPs, counts of unique HCP patients, or estimated numbers of impressions;

generating instructions for submitting bids for purchasing impressions based upon the ranking of the impressions;

the method further comprising:

receiving, across a computer network, results of impressions that were generated in response to the digital publicizing instructions;

based upon the results of impressions, revising instructions for purchasing impressions;

transmitting the revised instructions to an advertising exchange server for executing one or more targeted digital impressions.

10. The method of claim 1, the particular healthcare provider identifier being received from a cookie, mobile advertising identifier, third-party identity token, or other digital identity data value that is capable of use in digital advertising.

11. One or more non-transitory computer readable storage media storing instructions which when executed using one or more computers cause the one or more computers to perform:

receiving, by uploading from a client computer among one or more client computers that are communicatively coupled to one or more computers programmed to implement a demand side platform (DSP) campaign planning system, a first list of one or more healthcare provider identifiers each uniquely identifying healthcare providers;

receiving, at the one or more computers, practice data comprising one or more of: clinical medical data indexed by the healthcare provider identifiers, prescription data specifying drug prescriptions previously written and indexed by the healthcare provider identifiers and/or medical claims data indexed by the healthcare provider identifiers and storing the data in a shared database;

forming counts of healthcare providers by automatically joining and correlating disparate datasets of the practice data, including matching healthcare provider identifiers in the first list to the practice data;

displaying, in a graphical user interface that is generated by the DSP campaign planning system and provided to one or more client computers, the counts of healthcare providers;

receiving, from the one or more client computers, input specifying one or more filter attributes, including input in an input box widget specifying a diagnosis code or procedure code and a radio button specifying a diagnosis or a procedure;

in response, searching for particular parameters in a hierarchical ontology of filter terms that match the input and displaying in the graphical user interface a hierarchical tree of codes and code definitions most closely matching the input, the hierarchical tree including a plurality of expansion icons, and receiving a selection which, when selected, updates the tree to further expand or narrow codes and code definitions shown in the tree;

in response to the input being received to select codes for filtering, filtering the first list based on the one or more filter attributes to produce a filtered second list representing a target audience of healthcare provider identifiers;

transmitting the filtered second list of healthcare provider identifiers to a DSP service implemented using one or more DSP server computers, the DSP service being programmed to receive a particular healthcare provider identifier, match the particular healthcare provider identifier to the filtered second list, and in response to a match, generate instructions for use by one or more of an advertising exchange, media server and/or media and advertisement display channel to cause presentation of a targeted digital impression on a user computer associated with the particular healthcare provider identifier.

12. The storage media of claim 11, the healthcare provider identifiers comprising any of United States National Provider identifiers (NPIs), CINC values or Practitioner Identifiers.

13. The storage media of claim 11, further comprising instructions which when executed using one or more computers cause the one or more computers to perform receiving, at the one or more computers, for use in association with the practice data, one or more of demographic data, specialty data, best-of-breed address data and/or education data, each being indexed by the healthcare provider identifiers.

14. The storage media of claim 11 wherein the practice data comprises at least one of diagnosis, procedure, or prescription history associated with the healthcare provider identifiers.

15. The storage media of claim 11 wherein the clinical medical data comprises practice and patient statistics related to at least one of HCP specialty, geography, or HCP claim codes.

16. The storage media of claim 11, further comprising instructions which when executed using one or more computers cause the one or more computers to perform repeating, two or more times, the steps of displaying in a graphical user interface that is

generated by the DSP campaign planning system and receiving input specifying one or more filter attributes, thereby repeatedly updating the filtered second list according to different filter attributes.

17. The storage media of claim 11 further comprising instructions which when executed using one or more computers cause the one or more computers to perform generating and displaying a graphical user interface that is programmed to receive client computer input specifying filter attributes for clinical data by diagnosis or procedure, for specialty by primary or non-primary specialty, for geography, for deciles of the healthcare provider identifiers, for diagnosis codes, and for procedure codes.

18. The storage media of claim 11, the DSP service being programmed for:

generating instructions for ranking impressions based upon one or more of target HCP practice specialties, target HCP geography, target HCP procedure codes, counts of unique HCPs, counts of unique HCP patients, or estimated numbers of impressions;

generating instructions for submitting bids for purchasing impressions based upon the ranking of the impressions.

19. The storage media of claim 11, the DSP service being programmed for:

generating instructions for ranking impressions based upon one or more of target HCP practice specialties, target HCP geography, target HCP procedure codes, counts of unique HCPs, counts of unique HCP patients, or estimated numbers of impressions;

generating instructions for submitting bids for purchasing impressions based upon the ranking of the impressions;

the method further comprising:

receiving, across a computer network, results of impressions that were generated in response to the digital publicizing instructions;

based upon the results of impressions, revising instructions for purchasing impressions;

transmitting the revised instructions to an advertising exchange server for executing one or more targeted digital impressions.

20. The storage media of claim 11, the particular healthcare provider identifier being received from a cookie, mobile advertising identifier, third-party identity token, or other digital identity data value that is capable of use in digital advertising.