

System and Method for Prescription Drug Authorization Information

Provisional Patent Application

System and Method for Drug Authorization Information

Justin Wilson

601 Jones Ferry Road Apartment B12

Carrboro, NC 27510

Seunghye Jung Wilson

601 Jones Ferry Road Apartment B12

Carrboro, NC 27510

Prior Art.

US Patent Documents

US Pat. US6088677	May, 1997	Loren J. Spurgeon 705/4 and others
US 20030139945	Jan., 2002	Kenneth Brown et al. 705/2 and others
US Pat. US20040006490	Jul., 2002	Mark Gingrich et al. 705/2 and others
US Pat. US20060116907	Nov., 2004	Neal Rhodes et al. 705/2 and others
US 20090024412	Jun., 2007	Mark Medvitz et al. 705/2 and others
US Pat. US8265959	Jan., 2008	Ronald Keith McKenzie et al. 705/3 and others
US 20110282689	May, 2010	Minalkumar Patel et al. 705/3 and others
US Pat. US20130096938	Oct., 2011	Peter Carl Stueckemann et al. 705/2 and others

Advantages.

Various aspects of the system and method for prescription drug authorization information may have one or more of the following advantages:

- Provide a more universal prescription drug authorization information product and/or service within and across providers, organizations, industries, & healthcare environment
- Provide a more automated and up-to-date product and/or service providing authorization information independently obtained and displayed based on prescription drug, payer, insurance company, plan, and geographic location
- Provide a more complete, end-to-end authorization information offering from prior authorization criteria and forms to authorization appeals and reconsideration documentation
- Provide a more integrated and all-inclusive approach for accessing authorization information, policies, criteria, preferred drug lists, formularies, etc. from multiple sources
- Provide a more interactive, dynamic, and multi-platform system that learns and enhances its utility based on user inputs, data, and information
- Provide a more active environment of information contributions by system and user verification of prescription drug authorization information

Drawings.

FIG. 1 illustrates an exemplary digital prescription drug network environment using authorization information features;

System and Method for Prescription Drug Authorization Information

FIG. 2 is a block diagram of an exemplary system and method for prescription drug authorization information;

FIG. 3 is a block diagram of exemplary system components to peruse terms of use, view authorization information, and access change log, to name a few;

FIG. 3A is an exemplary screen shot of an about page with links to view prescription drug authorization information and access the change log, to name a few;

FIG. 4 is an exemplary screen shot to view prescription drug authorization information displayed and filtered by selected prescription drugs, insurance companies (payers and plans), and states;

FIG. 4A is an exemplary screen shot of the hierarchical table view of the prescription drug authorization information from prescription drug, insurance company (payer and plan), and state along with phone/fax, source webpages, and any additional submission instructions;

FIG. 5 is an exemplary screen shot of the change log highlighting updates to prescription drug authorization information over time and filterable by payer, prescription drug, and/or state;

FIG. 6 is a block diagram of the recurring update system that obtains the latest information from publicly available sources, updates the change log, and verifies the information automatically and/or manually.

Detailed Description.

The inventors listed invented system and method for prescription drug authorization information using data mining and visualization techniques and algorithms such as natural language processing, recommender systems, and machine learning, to name a few. Prescription drug authorization information can be defined as, but not limited to, displaying prior authorization forms, prior authorization drug lists, formulary exception medication requests, preferred drug lists, formularies, appeals and reconsideration forms, coverage determination, authorization policy and criteria, etc. based on a select of prescription drugs, insurance companies (payers and plans), and states. Relevant prior art includes a system and method that approves prior authorization requests and another system which facilitates the exchange of prescription data. Primary differentiators of this invention are that it is automated to maintain up-to-date information with little to no intervention and is independent of any specific party, serving as an accurate and impartial reference to the latest details available for prescription drug authorization information. As a result, system and method for prescription drug authorization information **130** provides a healthcare industry-wide resource of mined information from many insurance companies and prescription drug products. This invention also offers a more end-to-end authorization experience from prior authorization to reconsideration and appeal if necessary, to name a few, enabling users **101** to view authorization information **206**, members **101A** and providers **101B** to contribute information and access filterable and searchable change logs **208** since their last visit, and viewers **101C** to view read-only information and/or join the mailing list **350**. Prescription drug authorization information table **410** displays a hierarchy of information by prescription drug, insurance company (payer), and state. Information displayed can be filtered by selecting from a panel of filters **408** or searching and adding **402**. Payer names **413** and plan names **415** are clickable to redirect users **101** to the respective payers' websites. Click on hyperlinks throughout each product table **412** and a new window or download will be performed with the requested information. Comments **409** can be added by users **101** and system moderated for more prescription drug authorization specific information, experience, and/or advice.

System and Method for Prescription Drug Authorization Information

The system and method **130** may host a website that allows one or more users **101**, e.g., the provider users **101B** to optionally communicate with member users **101A** for prescription drug authorization **130** and all users **101** access to prescription drug authorization information, at one or more user devices **110** via a communications network **120** to the website. User devices **110** include a computer terminal, a laptop, a personal digital assistant (PDA), a wireless telephone, a smart phone, a smart phone application, a smart speaker, IoT device, and/or the like. Communications network **120** includes a local area network (LAN), a wide area network (WAN), a wireless network, a cellular network, an intranet, an internet, and/or the like.

Terms of use **202** are accessible via a terms of use link **306**. The terms of use **202** apply to all visitors, users, and others who access the service. Non-registered visitors **102** may view prescription drug authorization information **206** as well as join the mailing list **350**. Non-registered visitors **102** are given read-only access to view prescription drug authorization information **206**, access social media pages **360**, join the mailing list **350**, share pages via LinkedIn **355**, and/or view terms of use **365** until they join. Users **101** unable to login may use forgot password functionality. Users **101** may login by entering required login information **504**, such as registered email address and password. Once logged in, users **101** can access their member resources **208** such as saved prescription drug authorization information and change log preferences and filters. Alternative ways to add additional authorization information may be integration with Electrical Medical Record systems, insurance company resources, and/or other company APIs. Contributions, verifications, and/or accuracy of information by users **101** can also be incentivized using payment systems, blockchain technologies, and/or other company APIs. System updates **210** can be performed on a routine, scheduled basis and/or initiated manually and on-demand. System activity is stored in several databases, schemas, and tables referred to as a resource database **212**.

Brand Name	Generic Name	HCPCS Code	CPT Code(s)
Synagis	Palivizumab	S9562	90378
Xolair	Omalizumab	J2357	96372, 96401
Krystexxa	Pegloticase	J2507	96365, +96366, 96413, +96415, 99211 to 99215, 96360 to 96361
Grastek	(Timothy) Grass Pollen Allergen (Extract)	NULL	95199
All Products	All Products	NULL	NULL
Humira	Adalimumab	J0135	NULL

Table 1: prescription drug information retrieved by brand name, generic name, HCPCS code, CPT codes, and/or the like; note this information and codes may change. Information may be specific to a single prescription drug, class of drugs, and/or all products for a payer, payer state, and/or payer state plan

The web page to view prescription drug authorization information **400** consists of a few sections. Along the top, a navigation bar **310** is available to navigate between internal pages. External links to social media **302** are available on the webpage. Also along the top right, non-registered visitors **102** can enter their email address to join the mailing list. Above terms of use **306** information at the bottom of the page, there is a comments box **409** specific to the current prescription drug, payer, and state selected **408**. Along

System and Method for Prescription Drug Authorization Information

the right side, multi-select filter options **408** are available to filter information displayed in the prescription drug authorization information table **410**. Along the top, auto-complete textbox searches **402** are available to add filters as well. In this exemplary screen shot Figure **4A**, there are separate tables **412** by product, separate rows either by payer **413** or by state **414**, and separate rows by plan **415** underneath the payer of the plan(s). Information relevant to the currently selected filters is retrieved from the resource database **212** which is enhanced and maintained by system updates **210**. Table 1 below shows hierarchical structure of the prescription drug authorization information. Note that there may be multiple instances accessible within each of these levels depending on the system state and filter selections.

Reference Identifier	Hierarchy Level
412	Prescription Drug
413	Payer
414	State
415	Plan

Table 2: hierarchical structure of prescription drug authorization information

In order to see which prescription drugs require authorization, check to see if there is a drug specific or general authorization form in the desired product table **412**. In addition to authorization forms, specific submission instructions may be listed in the steps column **416** which also may provide information on authorization details. Users **101** can also click on the hyperlinks for other forms (such as formulary, preferred drug lists, etc.) or other webpages (such as payer's pharmacy page specific to the selected state, formulary search, etc.) to obtain additional information. Finally, contact information such as phone and fax is often displayed in the table, within attached forms, or available at the payer's hyperlinked site.

State	Payer	Synagis Form	Other Forms	Synagis URL	Other URLs	Fax	Phone	Steps
ND	Blue Cross Blue Shield		> Pre-determination Request Form. > Appeals Form.	> Synagis Page.	> Prior Auth Page.			1) You may verify if prior approval is required for a service by contacting Provider Services at 800-368-2312
RI	Blue Cross Blue Shield						1-866-278-6634	
RI	→ Blue Cross Blue Shield - Commercial Formulary	> Synagis Form. > Synagis Form.	> Formulary.		> Formulary Page. > Prior Auth Drug List.	1-855-212-8110	1-855-457-0759	
RI	→ Blue Cross Blue Shield - BlueCHIP for Medicare				> Formulary Page.			
TN	Blue Cross Blue Shield	> Synagis Form (10/1/17).	> Prior Auth Drug List. > Online Prior Auth.		> Appeals Page. > Pharmacy Page.			1) After Dec. 1, 2016, we will not be able to accept prior authorization requests for specialty medications by fax

System and Method for Prescription Drug Authorization Information

State	Payer	Synagis Form	Other Forms	Synagis URL	Other URLs	Fax	Phone	Steps
								<p>2) We are requiring online or phone prior authorization submissions to help ensure providers get faster responses</p> <p>3) Providers may obtain approval and order Synagis by calling one of the Specialty Pharmacies listed on the Synagis form</p>

Table 3: example rows from a prescription drug authorization information table **412**

By default, all blog posts are sorted by publish date ascending and limited to 10 articles to display. Articles may be filtered via the filtering drop-down, sorted via the sorting drop-down, and limited via the results per page drop-down in section **532**. Search for an article using the search functionality **538** by selecting the search criteria and typing the keyword to search. Each article has its own section of information and statistics **540** displaying article name, image, author, publish date, and description in section **544**. Users **101**, member **101A** and provider **101B** may publish articles as well as comment on articles **409** while viewers **101C** may read-only. To read an article, click on the hyperlinked article name **539**. To comment on an article, click on the article thumbnail **536** and access the specific page for selected article **540**. On this page, notice that the filtering drop-down in section **532** displays “selected” to notify that a specific post has been selected. As a result, you can then find statistics, information, and comments **409** specific to the blog post selected.

There are many alternative ways that system and method for prescription drug authorization information can be implemented:

- Additional required and optional fields can be added to contribute authorization information
- Non-users can register automatically without having to apply
- Non-users can login using their social media accounts via integrations such as Sign in with LinkedIn, Facebook Connect, and/or the like
- Additional authorization information can be displayed and in more places throughout the system
- System updates can be based on alternative data using existing and/or additional sources
- Prescription drug authorization information table can be reorganized and/or based on additional and/or alternative information
- Filtering and sorting can be based on alternative calculations using existing and/or additional metrics; for example, more detailed geographic information such as country, CBSA, city, and/or the like
- Additional search criteria can be added to the search functionality
- Additional filtering criteria can be added to the filtering functionality
- Additional social networks and/or technologies can be integrated and connected
- Information can be further customized by soliciting user input and/or retrieving information from one or more other sources containing such information

System and Method for Prescription Drug Authorization Information

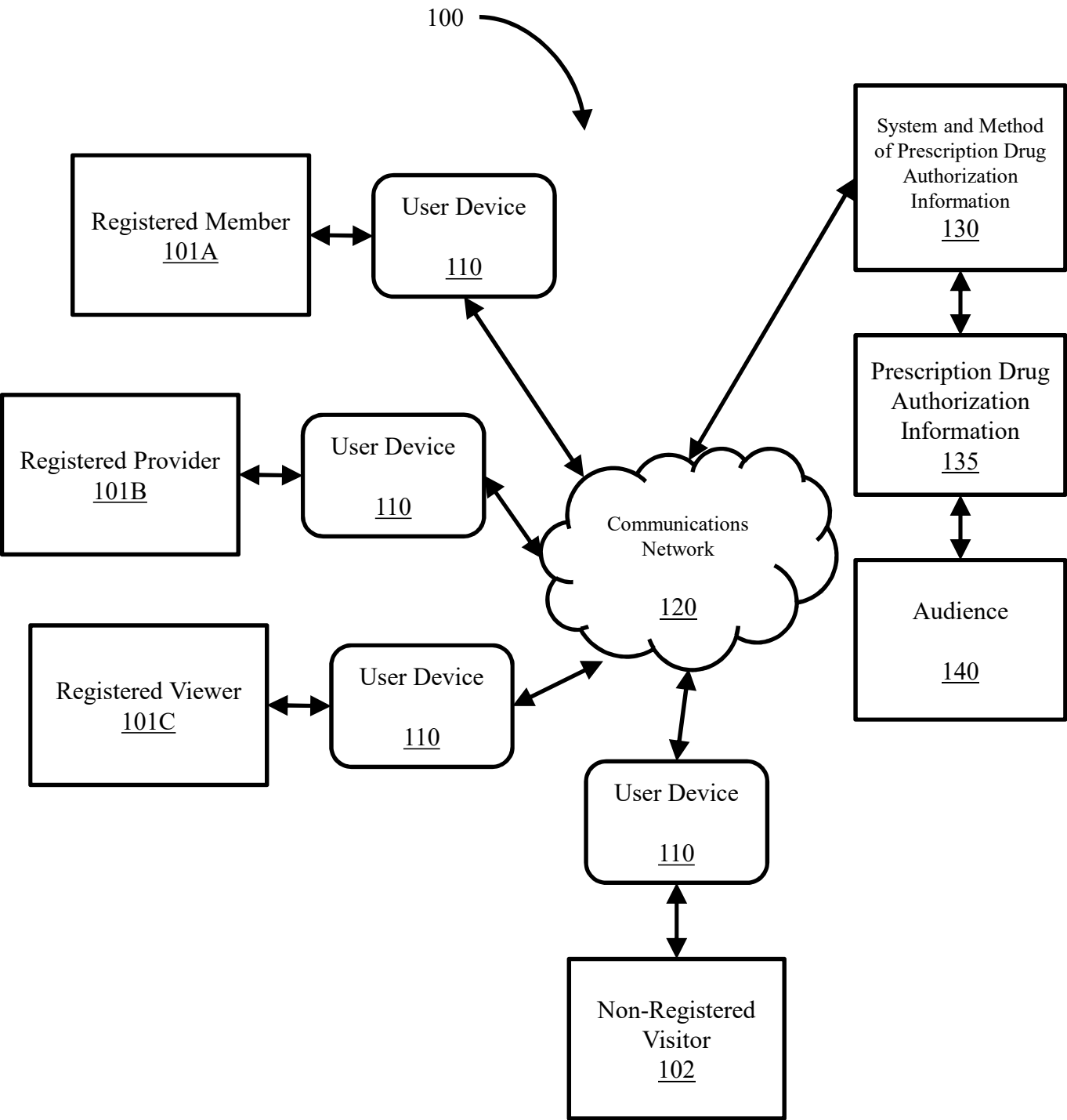
- More prescription drugs, payers, plans, rest of world (e.g. Non-US) geographies, and authorization information from additional sites can be added
- Information can be refreshed more or less frequently and/or more or less changes can be published to the change logs
- Additional information and sources can be added on a continuous basis by users, inventors, and/or others associated with this invention
- Users can view percentage confidence of the authorization information and last updated date accuracy, percentage of reliability from contributing sources of such information, and/or percentage likelihood of an authorization acceptance based on information provided
- Provider users can filter and/or sort how the member users view the information and vice versa
- Eligibility can be defined based on provider notes and/or member inputs, previous postings, and/or the like to permit and/or prevent prescription drug eligibility and/or authorization
- Additional required and optional fields can be added to contribute information
- Users can be alerted when new information is submitted, modified, and/or the like
- Information can be limited to user preferred media/audiences or expanded beyond existing sites to any digital content and/or the like
- Users can connect within and across industries, companies, etc. for other opportunities such as jobs, internships, mentoring, etc.
- Users can submit questions via text message, smartphone app, email, and/or other messaging channel and they will be responded to by an automated question and answering service, chatbot, rule or corpus-based conversational model, by a system moderator, and/or directed to appropriate industry, company, etc. experts to answer, using same or different messaging channel from how the question was submitted
- Questions and/or communications submitted via Facebook, Twitter, and/or other social media networks can be directed to users and/or the appropriate industry, company, etc. experts for comment and follow-up
- Additional machine learning, natural language processing, other automated techniques, and/or the like can be leveraged to further enhance the system and method
- Additional techniques can be incorporated for selecting similar prescription drugs, authorizations, and/or the like
- Users can find other users that are in their industry, company, geographical area, etc. and/or share similar interests or needs
- Users can save specific authorization information and/or filters locally and/or other media
- Users can view their resources, save information, and/or receive information to a profile page specific for each user
- Electronic Medical Record (EMR) systems, Electronic Health Records (EHR), hospital systems, and/or the like can be integrated to further enhance the end to end experience from prior authorization to appeals for example
- Alternative ways to add additional authorization information may be integrated with EMR and EHR systems, insurance company resources, and/or other company APIs
- Contributions, verifications, and/or accuracy of information can also be incentivized using payment systems, blockchain technologies, other company APIs, and/or technologies

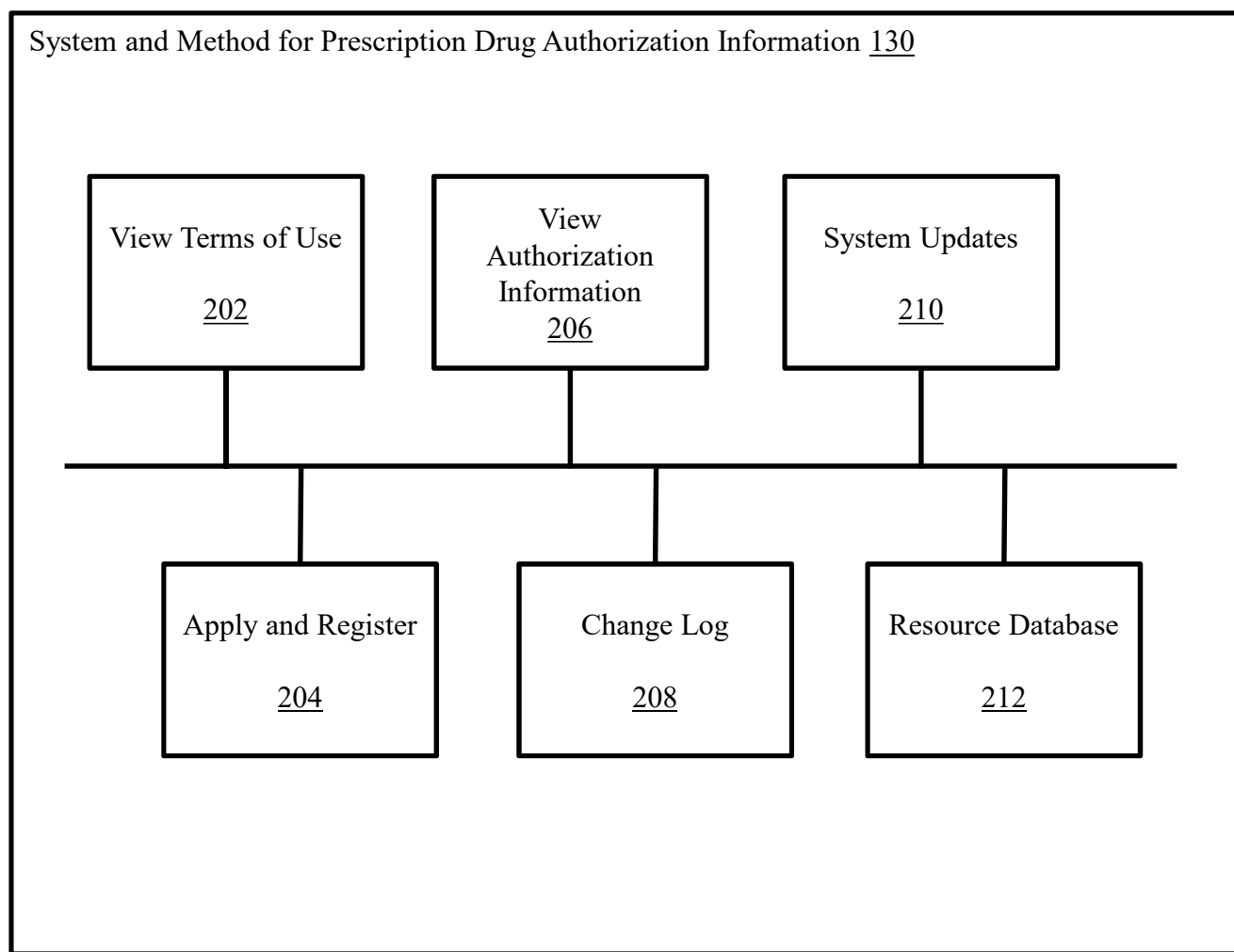
System and Method for Prescription Drug Authorization Information

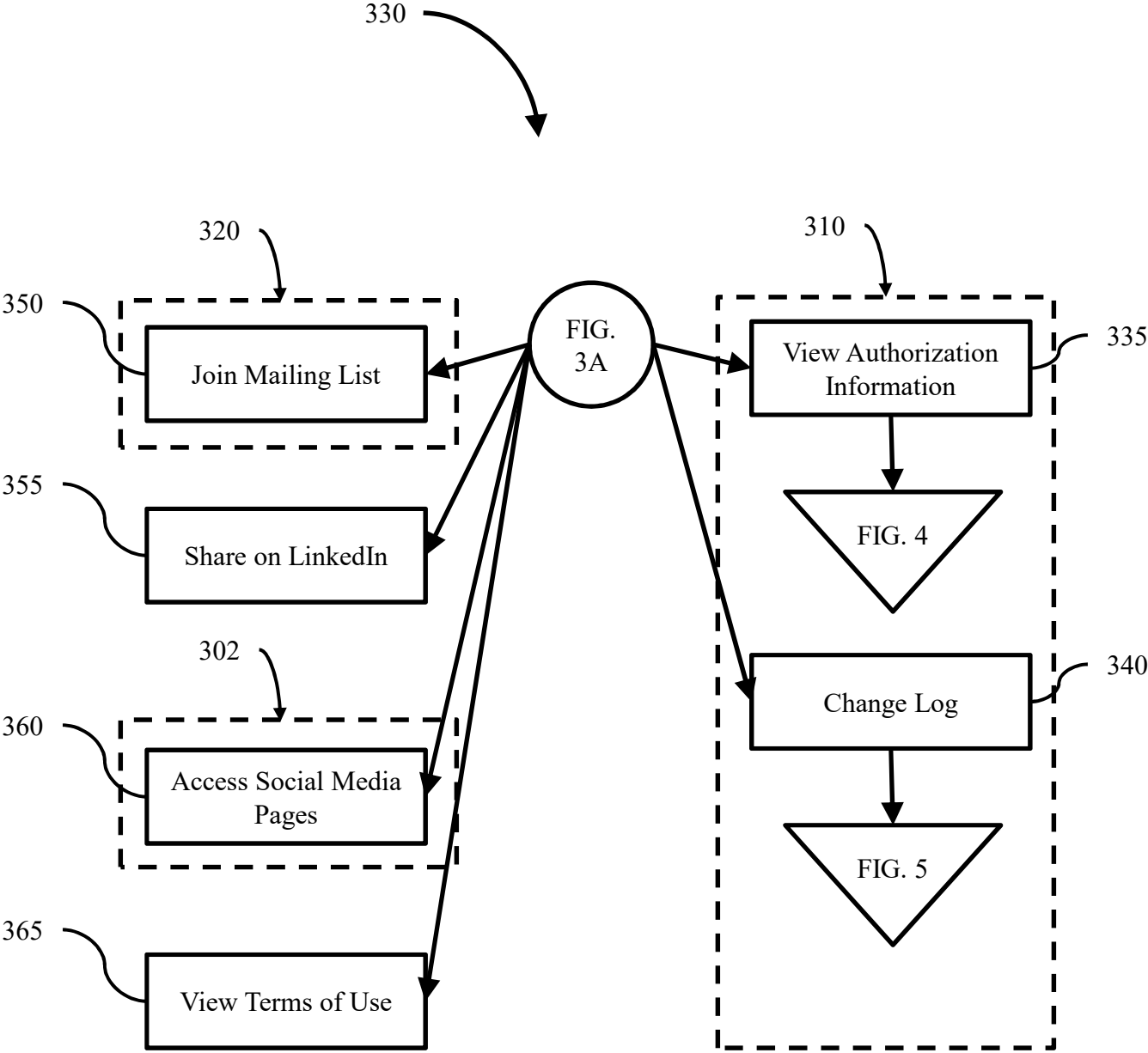
- System activity can be stored and secured in additional databases, schemas, and/or the like tables and/or other storage systems, such as server less technologies, cloud-based, and/or the like and secured using additional cryptography, security technologies and algorithms, and/or the like
- Workday integration to allow users to connect through Workday, streamline health goals and objectives information, and share/receive information
- Ability to virtually shadow users to experience the authorization process from users or from other sources containing such information
- Since the invention spans across industries, companies, etc., it may offer features similar to an umbrella or parent organization; for example, summer weekly internship fellows (SWIFs) that intern at various companies but are members of this invention's community
- Like users can receive notifications about each other in the community and are given the opportunity to gift resources and/or comment/message with other users
- Messaging between users online and offline
- Integration of other healthcare related and/or prescription drug information externally sourced and incorporated into the system and method
- External articles and resources visualized, grouped together, and filterable for relevant prescription drugs
- Additional instructional content, video, publications, blogs, etc. can be produced and displayed about this invention, inventors, and/or others associated with this invention
- Algorithms, clustering techniques, machine learning, etc. may be modified and enhanced
- Blog posts, articles, publications, and/or the like added generally or specifically to a prescription drug, company, industry, etc. can be added and accessible in alternative ways using filtering and visualizations
- Functionality to schedule time with others can be incorporated
- Highlight companies, healthcare providers, members, etc. considered the top or best in category, contributions, and/or the like
- Detection that information and/or forms have been modified using dates, form and/or revision identifiers, machine learning, natural language processing, distance metrics, and/or the like

In summary, system and method **130** of this invention provide a more complete, end-to-end prescription drug authorization information experience enabling users **101** to obtain up-to-date information from frequently changing and publicly available data sources as well as additional information from users in form of comments **409**, submission instructions, relevant forms and webpages, etc. Other alternative ways this invention could be implemented may involve additional functionality, machine learning, natural language processing, speech recognition, algorithms, security, storage, data, and benefits to support the advantages and claims of this invention.

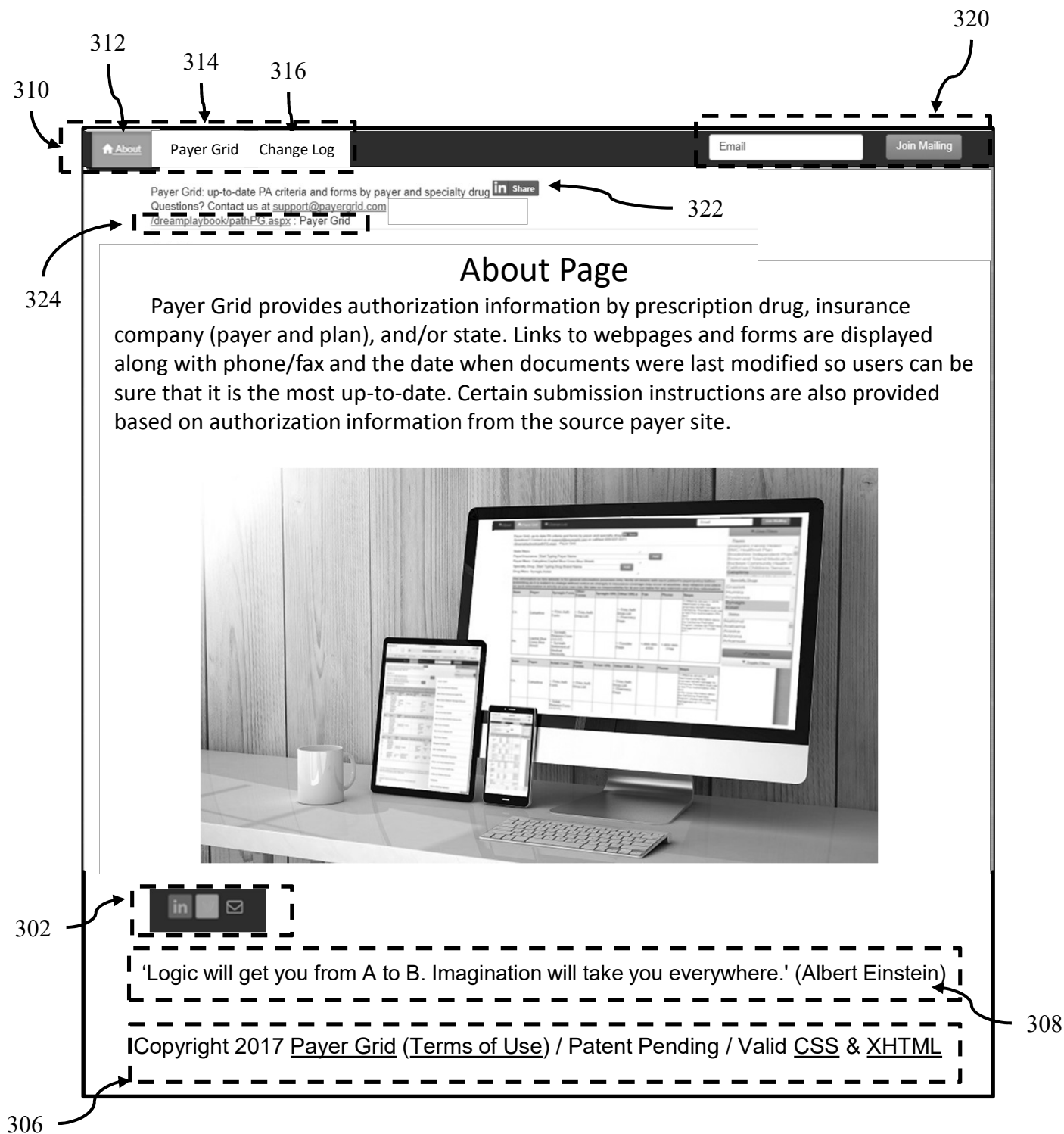
While the invention has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all equivalents, changes, and modifications that come within the spirit of the inventions as described herein are desired to be protected.







300 System and Method of Prescription Drug Authorization Information



System and Method of Prescription Drug Authorization Information

System and Method of Prescription Drug Authorization Information

Navigation: [About](#) | [Payer Grid](#) | [Change Log](#) | | [Join Mailing](#)

Share: [in](#) | [Share](#)

Payer Grid: up-to-date PA criteria and forms by payer and specialty drug
 Questions? Contact us at support@payergrid.com
</dreamplaybook/pathPG.aspx> : Payer Grid

Filters:

State filters: [Add](#)

Payer filters: Caloptima;Capital Blue Cross Blue Shield; [Add](#)

Specialty Drug: [Add](#)

Drug filters: Synagis;Xolair; [Add](#)

[Clear Filters](#)

Payers:

- bluegrass Family Health
- BMC Healthnet Plan
- Brookshire Independent Phys
- Brown and Toland Medical Gr
- Buckeye Community Health P
- California Childrens Services
- Caloptima
- Caloptima Healthnet Medical

Specialty Drugs:

- Grastek
- Humira
- Krystexxa
- Synagis
- Xolair

States:

- National
- Alabama
- Alaska
- Arizona
- Arkansas

[Apply Filters](#) | [Toggle Filters](#)

Disclaimer: The information on this website is for general information purposes only. Verify all details with each patient's payer/policy before submitting as it is subject to change without notice as changes in insurance coverage may occur at anytime. Any reliance you place on such information is strictly at your own risk. We take no responsibility for & are not liable for any use/non-use of this information.

State	Payer	Synagis Form	Other Forms	Synagis URL	Other URLs	Fax	Phone	Steps
CA	Caloptima	> Prior Auth Form	> Prior Auth Drug List		> Prior Auth Drug List > Pharmacy Page			1) Effective January 1, 2016, MediImpact is the new pharmacy benefit manager for CalOptima. Providers must use a new Prior Authorization (PA) form 2) For more information about the CalOptima Pharmacy Program, please call Pharmacy Management at 1-714-248-8471
PA	Capital Blue Cross Blue Shield	> Synagis Request Form (1/1/17) > Synagis Statement of Medical Necessity			> Provider Page	1-866-805-4150	1-800-906-7798	

State	Payer	Xolair Form	Other Forms	Xolair URL	Other URLs	Fax	Phone	Steps
CA	Caloptima	> Prior Auth Form	> Prior Auth Drug List		> Prior Auth Drug List > Pharmacy Page			1) Effective January 1, 2016, MediImpact is the new pharmacy benefit manager for CalOptima. Providers must use a new Prior Authorization (PA) form 2) For more information about the CalOptima Pharmacy Program, please call Pharmacy Management at 1-714-248-8471
		> Xolair Request Form (1/1/17)						

Footer:

[in](#) | [Email](#) | [Comment](#)

'Never mistake activity for achievement' (John Wooden)

Copyright 2017 [Payer Grid](#) ([Terms of Use](#)) / Patent Pending / Valid [CSS](#) & [XHTML](#)

410

System and Method of Prescription Drug Authorization Information

411

The information on this website is for general information purposes only. Verify all details with each patient's payer/policy before submitting as it is subject to change without notice as changes in insurance coverage may occur at anytime. Any reliance you place on such information is strictly at your own risk. We take no responsibility for & are not liable for any use/non-use of this information.

412

State	Payer	Synagis Form	Other Forms	Synagis URL	Other URLs	Fax	Phone	Steps
CA	Capital Blue Cross Blue Shield	> Prior Auth Form .	> Prior Auth Drug List .		> Prior Auth Drug List . > Pharmacy Page .			
PA	Capital Blue Cross Blue Shield	> Synagis Request Form (1/1/17) . > Synagis Statement of Medical Necessity .			> Provider Page .	1-866-805-4150	1-800-906-7798	
MN	Minnesota Blue Cross Blue Shield		> Appeals Form (4/1/11) .		> Forms Page . > Provider Page .			1) Providers can submit an electronic drug PA request online via the CoverMyMed free web portal (for Prime Therapeutics to review) or online via the Blue Cross Availability portal 2) Transmission via NCPDP file using an integrated Electronic Medical Record (EMR) system. To learn how to do this, providers should contact their EMR vendor
MN	Minnesota Blue Cross Blue Shield - Commercial		> Prior Auth Drug List (12/18/17) .		> Provider Page .			1) If a question arises regarding a specific service or to verify if pre-authorization / pre-certification / notification is required, please contact Provider Services 2) Blue Cross Blue Shield of Minnesota: 1-800-262-0820 or (651) 662-5200 3) BlueLink TPA: 1-800-365-2735 or (651) 662-5940 4) Federal Employee Program (FEP) members: 1-800-365-2735 or (651) 662-5940
MN	Minnesota Blue Cross Blue Shield - Government Programs and Blue Plus Blue Advantage		> Prior Auth Drug List (12/18/17) .		> Provider Page .			1) If a question arises regarding a specific service, please contact Provider Services at: 1-800-262-0820 or (651) 662-5200 to verify if pre-authorization / pre-certification is required

415

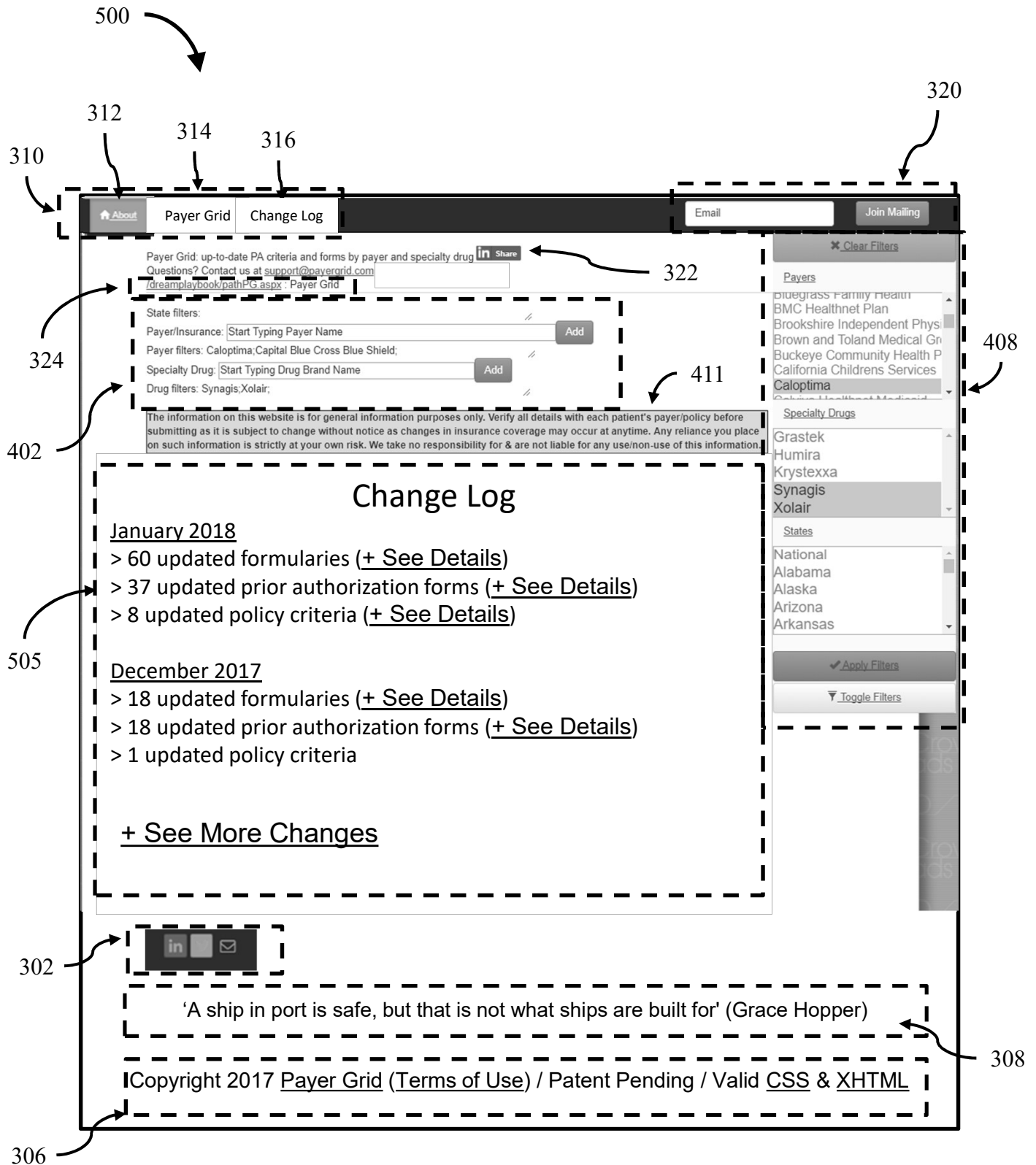
412

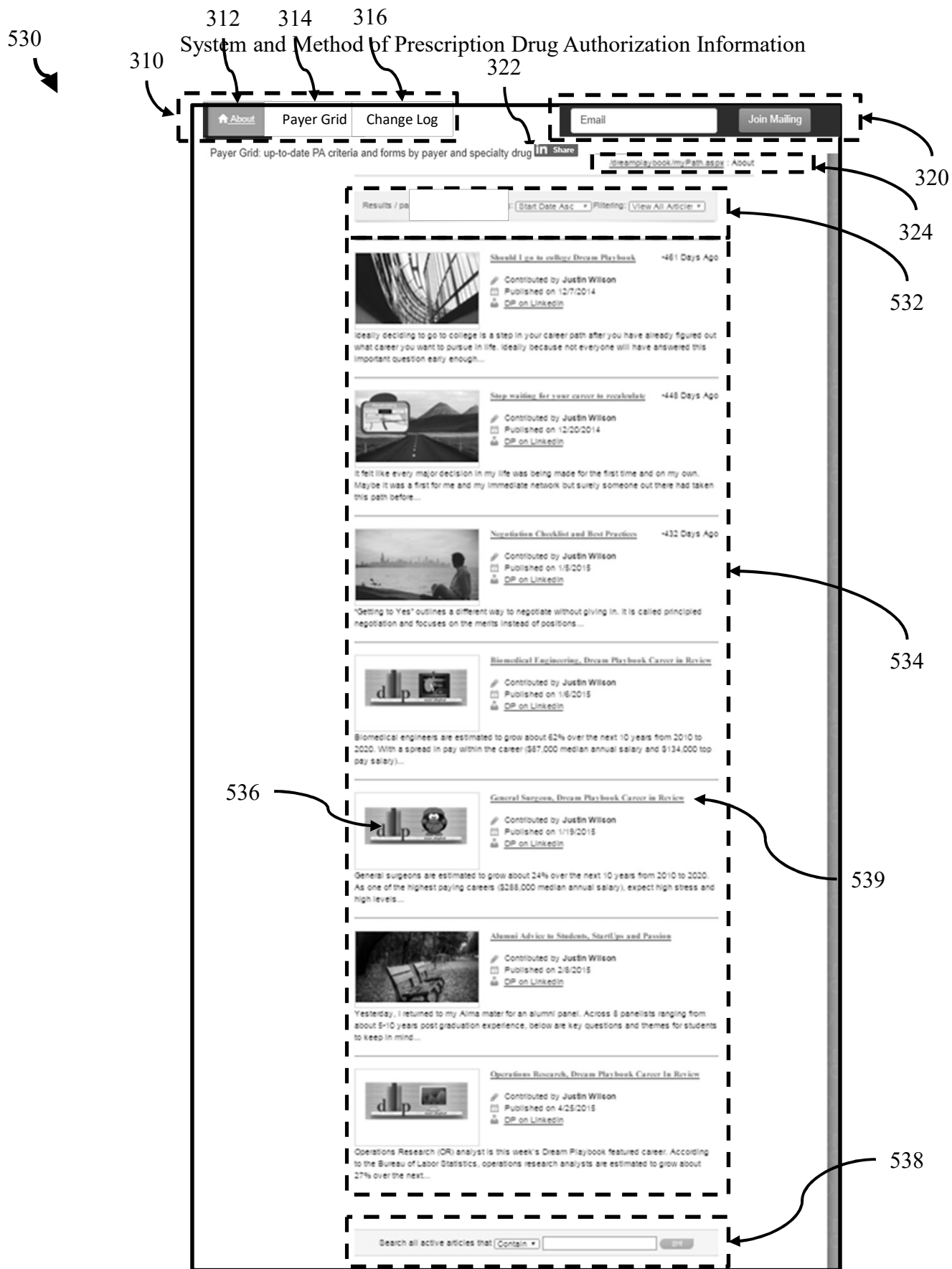
State	Payer	Xolair Form	Other Forms	Xolair URL	Other URLs	Fax	Phone	Steps
CA	Caloptima	> Prior Auth Form .	> Prior Auth Drug List .		> Prior Auth Drug List . > Pharmacy Page .			1) Effective January 1, 2016, MediImpact is the new pharmacy benefit manager for CalOptima. Providers must use a new Prior Authorization (PA) form 2) For more information about the CalOptima Pharmacy Program, please call Pharmacy Management at 1-714-248-8471
		> Xolair Request Form (1/1/17) .						

412: Prescription Drug
413: Payer
414: State
415: Plan

416

System and Method of Prescription Drug Authorization Information





System and Method of Prescription Drug Authorization Information

540

