The present invention provides color-coded accessories such as wristbands, bibs, and other patient wearables, color-coded pillows and pillow cases, and a universal chart wherein the color code is associated with a specific medical diagnosis. These accessories alert healthcare providers to the medical diagnosis of the patient and enhance patient safety by reducing medical errors during administration of treatments and medicines to the patients. These accessories also provide protection to healthcare providers assisting them to identify diagnostic categories and alerting them to take proper precautions with patients, for example those with infectious diseases, thereby decreasing or preventing transmission of infectious diseases.
FIGURE 1
**UNIVERSAL CHART**

<table>
<thead>
<tr>
<th>WRISTBAND COLOR</th>
<th>DIAGNOSTIC CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHITE</td>
<td>SUBSTANCE ABUSE</td>
</tr>
<tr>
<td>PINK</td>
<td>DIABETES</td>
</tr>
<tr>
<td>YELLOW</td>
<td>HIV</td>
</tr>
<tr>
<td>BLUE</td>
<td>CANCER</td>
</tr>
<tr>
<td>RED</td>
<td>CARDIAC</td>
</tr>
<tr>
<td>GREEN</td>
<td>RESPIRATORY</td>
</tr>
<tr>
<td>ORANGE</td>
<td>TB</td>
</tr>
<tr>
<td>PURPLE</td>
<td>SEIZURES</td>
</tr>
<tr>
<td>BROWN</td>
<td>PSYCHOTROPIC DRUG THERAPY</td>
</tr>
<tr>
<td>BLACK</td>
<td>SUICIDE WATCH</td>
</tr>
<tr>
<td>RED-WHITE-BLUE</td>
<td>PTSD</td>
</tr>
</tbody>
</table>

**FIGURE 7**
COLOR-CODED ACCESSORIES INDICATING A MEDICAL DIAGNOSIS OF A PATIENT AND ENHANCING PATIENT SAFETY

CROSS REFERENCE TO RELATED APPLICATIONS


FIELD OF THE INVENTION

[0002] The present application provides color-coded accessories such as pillows, pillow cases, and bibs and wristbands to be worn by a patient that indicate the medical diagnosis of the patient to a healthcare provider. These color-coded accessories rapidly alert the healthcare provider to the medical diagnosis of the patient. In this manner, the number of errors administering incorrect medicines and treatments is greatly reduced, thereby enhancing the safety of the patient.

BACKGROUND OF THE INVENTION

[0003] Every day errors are made in healthcare facilities through administration of incorrect medications and treatments to patients. Numerous deaths and disabilities result from such errors. Healthcare providers are under extreme time pressure and sometimes do not read the medical chart before administering a medicine or other treatment. What is needed is a simple visual tool, system and method for alerting the healthcare provider to one or more diagnoses of the patient.

[0004] Recent research published in 2013 estimates up to 440,000 Americans are dying annually from preventable hospital errors. This places such errors as the third leading cause of death in the United States, underscore the need for patients to protect themselves and their families from harm, and for hospitals to make patient safety a top priority (www.hospitalsafetycore.org/newsroom/display/hospital-errors-thirdleading-cause).


[0006] According to a landmark 2006 report “Preventing Medication Errors” from the Institute of Medicine, these errors injure 1.5 million Americans each year and cost $3.5 billion in lost productivity, wages, and additional medical expenses (see Sobering statistics, www.Americanrnsetoday.com).

[0007] Accordingly, what is needed are simple visual accessories, systems and methods to rapidly alert healthcare providers to a patient’s diagnosis so that incorrect treatment and administration of medicines to that patient can be dramatically reduced.

SUMMARY

[0008] The present invention solves these problems and provides color-coded accessories such as wristbands, bibs, and other wearables, and color-coded pillows and pillow cases wherein the color code is associated with a specific medical diagnosis. The color-coded accessory associated with a specific diagnosis is also provided to the healthcare provider in the form of a chart, called a universal chart herein, which standardizes the specific colors associated with general diagnostic categories in the healthcare facility. The universal chart can be located at the nursing station, in the patient’s chart and/or in the patient’s room. These color-coded accessories inform a healthcare provider about the diagnosis of the patient. These color-coded accessories have an unexpected benefit of preventing errors in administration of medicines and other treatments to a patient. Color-coded accessories may also be worn by individuals in other facilities besides healthcare facilities, including without limitation, prisons, assisted living centers, and senior living centers, to indicate the medical diagnosis of the individual.

[0009] The color-coded accessories of the present invention provide a rapid, low-cost and effective visual means to alert a healthcare provider about the diagnosis of the patient upon entry into the patient’s room and visualization of the color-coded accessory.

SUMMARY

[0010] In one embodiment, the color-coded accessory is a color-coded wristband. Color-coded wristbands may be made of different materials such as fabric or plastic.

[0011] In another embodiment, the color-coded accessory is a bib which may be worn by the patient.

[0012] In yet another embodiment, the color-coded accessory is a pillow or a pillow case.

[0013] Other objects and advantages of the invention will be apparent from the following summary and detailed description of the embodiments of the invention taken with the accompanying drawing figures.

BRIEF DESCRIPTION OF THE FIGURES

[0014] FIG. 1 is a schematic representation of a fabric wristband.

[0015] FIG. 2 is a schematic representation of a fabric wristband encircling the wrist of a patient.

[0016] FIG. 3 is a schematic representation of plastic wristband containing a ribbon, wherein the plastic is laminated around the ribbon.

[0017] FIG. 4 is a schematic representation of plastic wristband containing a ribbon, wherein the plastic is laminated around the ribbon and a first Velcro strip located on a first side and a second Velcro strip located a second side of the wristband meet and adhere to each other.

[0018] FIG. 5 is a cross sectional view of the wristband of FIG. 4 showing the joining of the two Velcro strips.

[0019] FIG. 6 is a schematic representation of plastic wristband of FIG. 4 encircling the wrist of a patient.

[0020] FIG. 7 is the universal chart showing the colors (by name) associated with general diagnostic categories or specific medical diagnoses.

DETAILED DESCRIPTION

[0021] The present invention provides color-coded accessories such as wristbands, bibs, and other patient wearables, and color-coded pillows and pillow cases wherein the color
code is associated with a general diagnostic category or specific medical diagnosis. The color-coded accessory associated is also provided to the healthcare provider in the form of a chart, called a universal chart herein, which standardizes the specific colors associated with general diagnostic categories or specific medical diagnoses in the healthcare facility. The universal chart can be located at the nursing station, in the patient’s chart or in the patient’s room. These color-coded accessories inform a healthcare provider about the diagnosis of the patient. Color-coded accessories have an unexpected benefit of preventing errors in administration of medicines and other treatments to a patient by visually alerting the healthcare provider to the diagnosis of the patient.

[0022] Further advantages are achieved with the present invention by alerting the healthcare provider to the diagnosis of the patient because the diagnosis of the patient can influence the safety measures followed by the healthcare provider. For example, a healthcare provider should be aware of patients with infectious diseases such as tuberculosis or human immunodeficiency virus so that the healthcare provider can protect himself or herself from airborne, aerosol, fluid borne (sputum, blood, urine) or other forms of transmission of infection.

[0023] In one embodiment, accessories are color-coded to indicate the following medical diagnoses: white—substance abuse; pink—diabetes; yellow—human immunodeficiency virus; blue—cancer; red—cardiac; green—respiratory; orange—tuberculosis; purple—seizure; brown—psychotropic drug therapy; black—suicide watch, and red, white and blue—posttraumatic stress disorder (PTSD). These color codes for specific medical diagnoses are also used by the healthcare providers in the healthcare facility in the form of a chart, called a universal chart herein, which standardizes the specific colors associated with general diagnostic categories or specific medical diagnoses in the healthcare facility (FIG. 7).

[0024] In one embodiment a color-coded plastic wristband may be used for individuals suffering from PTSD, including but not limited to military personnel, law enforcement personnel, firefighters, emergency responders and trauma victims. This wristband contains a ribbon with red, white and blue stripes to indicate a diagnosis of PTSD to the healthcare provider.

[0025] In another embodiment several plastic wristbands may be worn by a patient to indicate to the healthcare provider more than one medical diagnosis for the patient.

[0026] In yet another embodiment several fabric wristbands may be worn by a patient to indicate to the healthcare provider more than one medical diagnosis for the patient.

[0027] In still another embodiment, a colored fabric wristband may contain one or more colored ribbons to indicate to the healthcare provider more than one medical diagnosis for the patient.

[0028] In yet another embodiment, a fabric wristband may contain more than one color to indicate to the healthcare provider more than one medical diagnosis for the patient.

[0029] Wristbands

[0030] Wristbands in the present invention are made from fabric or plastic. Fabric may include various fabrics such as polyester or cotton. Fabric wristbands are washable. Plastic wristbands may be cleaned for another use or discarded.

[0031] In one embodiment a fabric wristband is made from 100% polyester. In another embodiment a fabric wristband is made from 100% cotton. In yet another embodiment a fabric wristband is made from 50% cotton and 50% polyester. It is to be understood that other proportions of polyester to cotton may be employed in the fabric wristband. Fabric wristbands may be made from one or more layers or panels of fabric. In one embodiment of a fabric wristband comprising two layers of fabric, all the outer edges of a first layer of fabric are sewn to the corresponding edges on the second layer of fabric with about a ¼ inch seam allowance. FIG. 1 shows a fabric wristband 100 with two layers of fabric sewn together around the perimeter 102 of the wristband. This fabric wristband is colored according to a color provided in the universal chart 700 which is associated with a medical diagnosis (FIG. 7). A first Velcro strip 104 is sewn onto a first side (top) of the wristband. A second Velcro strip is sewn onto a second side (bottom) of the wristband. In another embodiment, additional diagnoses of the patient can be indicated by one or more colored ribbons 106, 108, 110 sewn onto the fabric wristband. FIG. 2 shows the fabric wristband of FIG. 1 around the wrist of a patient with four medical diagnoses indicated by the color of the fabric wristband and each of the three colored ribbons (colors not shown). In yet another embodiment, a colored ribbon is sewn end to end, essentially forming a loop which may be slipped over an end of one layer of the wristband to indicate a second diagnosis. Such wristbands may be 10 to 11 inches in length to form a loop of about 5 to 1¼ inches. Of course, other lengths may be employed depending on the width of the wristband. One or more such colored ribbons may be slipped over the fabric wristband. In this manner, colored ribbons may be added to or removed from the colored fabric wristband as additional diagnoses are made or are eliminated. In yet another embodiment, plastic laminated wristbands containing a colored ribbon, as described in the present application, may be used to slip over the end of the colored fabric wristband to indicate additional diagnoses.

[0032] In one embodiment, a fabric wristband is about 12 inches long and about 2¼ or 2½ inches wide. A first Velcro® strip, about 2½ to 3 inches long and about ¾ to 1 inch wide, is located and centered approximately ½ to 1 or 1½ inch from a first end of the wristband and is sewn onto a first side of the fabric wristband. A second Velcro® strip, about 2½ to 3 inches long and about ¾ to 1 inch wide, is located and centered approximately ½ to 1 inch or 1½ inch from the second end of the wristband and is sewn onto a second side of the fabric wristband. In this manner, when the fabric wristband is wrapped around the wrist, the two Velcro® strips contact each other, adhere and fasten the wristband. It is to be understood that different lengths and widths of the Velcro® strips may be used for attachment to fabric wristbands of various dimensions. For example, a fabric wristband for a teenager may be about 10 inches long and about 2 inches wide. A fabric wristband for an infant may be about 6 inches long and about 2 inches wide. Velcro® strips may be about 2½ to 3 inches long and about ¾ to 1 inch wide, about 2 inches long and about ½ inch wide or about 1 to 1½ inches long and about ½ to about ¾ inch wide.

[0033] In one embodiment, the entire fabric wristband is a specific color associated with a medical diagnosis, for example white—substance abuse, pink—diabetes, yellow—human immunodeficiency virus, blue—cancer, red—car-
diac, green—respiratory, orange—tuberculosis, purple—seizure, brown—psychotropic drug therapy, and black—suicide watch.

[0034] Plastic wristbands 300 comprise clear plastic 302 encasing the colored ribbon 304 (FIG. 3). The two layers of plastic are laminated 302 together between the ribbon 304 and the edges of the wristband. The plastic is preferably soft, clear and non-allergenic. The ribbons encased in plastic laminate have a specific color associated with a medical diagnosis, for example, white—substance abuse, pink—diabetes, yellow—human immunodeficiency virus, blue—cancer, red—cardiac, green—respiratory, orange—tuberculosis, purple—seizure, brown—psychotropic drug therapy, black—suicide watch, and red, white and blue—post-traumatic stress disorder. These plastic wristbands are disposable or may be used again.

[0035] It is to be understood that different lengths and widths of the wristbands and Velcro® strips of different lengths and widths may be used for attachment to plastic wristbands. In one embodiment a plastic wristband is about 12 inches long and about ½ to 1 inches wide for use with adults. Other sizes include, without limitation, about 6 inches long and about ½ inch wide for use with infants and toddlers, and about 10 inches long and about ½ inch wide for use with teens. Velcro strips may be about 2 inches long and about ½ inch wide, about ½ inch wide and about ½ inch wide or about 1 inch long and about ¼ to about ½ inch wide. A first Velcro strip is placed with adhesive about ½ inch to about ½ inch from the end and in the center of a first side of the plastic wristband, and a second Velcro strip is placed with adhesive about ½ inch to about ½ inch from the end and in the center of a second side of the plastic wristband.

[0036] In one embodiment the laminated plastic wristband 400 containing a colored ribbon 404 encased in plastic 402 has a strip of Velcro attached to a first side of the plastic with adhesive and another strip of Velcro attached to a second side of the plastic with adhesive (FIG. 4). When the two pieces of Velcro are opposed 406, they adhere to each other, thereby fastening the wristband. A cross-sectional view 500 (FIG. 5) of the plastic wristband of FIG. 4 shows plastic 502, a ribbon 504 encased in the plastic laminate, and the first strip of Velcro adhering to the second strip of Velcro 506. FIG. 6 shows the plastic wristband 600 of FIG. 4 encircling a wrist 602 of a patient.

[0037] In another embodiment, a colored wristband is made entirely of non-allergenic soft plastic, elastomeric or other material which may be stretched over the hand and wrapped around the wrist of a patient.

[0038] It is to be understood that wristbands may come in different lengths and widths depending on the size of the individual’s forearm and wrist.

[0039] Pillows

[0040] Pillows and pillow cases may be color-coded with one or more colors to indicate one or more medical diagnoses of a patient. In one embodiment, the perimeter of the pillow case is colored to enhance visibility of the color in an area of the pillow not covered by a patient’s head and/or neck and shoulders. In another embodiment, a variety of shapes may be used in color-coding the pillow or pillow case, such as colored lines, stripes, zig-zag shapes or circles. In other embodiments the entire pillow or pillow case may be colored. More than one color on a pillow or a pillow case indicates different conditions such as a cardiac condition (red) and a respiratory condition (green).

[0041] Bibs

[0042] In another embodiment, a color-coded accessory is a color-coded bib worn by a patient with a specific medical diagnosis. Such bibs may be worn by patients of different ages such as infants, children, adults and the elderly.

[0043] The following examples will serve to further illustrate the present invention without, at the same time, however, constituting any limitation thereof. On the contrary, it is to be clearly understood that resort may be had to various embodiments, modifications and equivalents thereof which, after reading the description herein, may suggest themselves to those skilled in the art without departing from the spirit of the invention.

Example 1

[0044] A nurse has just completed her first work shift and has been asked to continue work for a second shift. She is tired and rushed and has been told to give an injection of morphine to a cancer patient to alleviate pain. She enters the patient’s room and observes the white wristband which indicates a diagnosis of substance abuse. This patient wearing the white wristband is a recovering addict who has abused opiates for years. The nurse realizes that this is not a cancer patient but a patient with a different diagnosis. The nurse checks the patient chart and verifies that the patient does not need a morphine injection. The white wristband alerted the nurse to verify the patient information and this prevented the injection of morphine which could have adverse effects on the recovering opiate addict.

Example 2

[0045] A young intern has finished 24 hours of continuous duty on the hospital floor. He is told to administer taxol and cisplatin to a cancer patient on his floor. The intern enters the patient’s room and observes a red wristband on the patient’s wrist and a red pillow under the patient’s head. The intern realizes that the red color indicates a cardiac patient and not a cancer patient. He returns to the nurse’s station and checks the patient chart and the universal chart to verify this information. Once verified, the intern realizes that the inappropriate administration of medication to that patient was avoided.

Example 3

[0046] A nurse receives orders to administer insulin to an overweight patient with type II diabetes. The nurse enters the patient’s room and sees a yellow bib and wristband worn by the patient. The yellow wristband surprises the nurse who reviews the patient record and universal chart and realizes that this is not a diabetic patient but a patient with a diagnosis of human immunodeficiency virus. The nurse does not inject the patient with insulin, thereby avoiding a mistake.

Example 4

[0047] A nurse receives orders to administer medicine intravenously to a male patient. The nurse enters the patient’s room and sees a yellow bib and wristband worn by the patient. The yellow wristband surprises the nurse who reviews the patient record and realizes that the patient has human immuno-deficiency virus. The nurse then adopts
different precautions to protect herself from possible contamination from the patient’s blood by wearing appropriate gloves, face and respiratory protection.

Example 5

[0048] A respiratory therapist is given instructions to evaluate the respiratory functions of a patient. He enters the patient’s room and observes that there is no green wristband on the patient which would indicate a respiratory condition. Instead, the therapist sees an orange wristband which is associated with a diagnosis of tuberculosis as shown on the color-coded chart posted at the nursing station. The therapist leaves the room, returns to the nursing station to review the patient’s chart and verifies the instructions. The attending physician still wants to evaluate the respiratory function of this patient. The respiratory therapist then obtains all the proper protective equipment to protect himself against contamination from aerosol droplets from the patient with tuberculosis who is coughing. In this manner, the respiratory therapist protects himself against a tuberculosis infection thereby decreasing spread of the disease.

[0049] All patents, publications and abstracts cited above are incorporated herein by reference in their entirety. It should be understood that the foregoing and the figures relate only to preferred embodiments of the present invention and that numerous modifications or alterations may be made therein without departing from the spirit and the scope of the present invention as defined in the following claims.

1. An accessory for a patient, comprising a color-coded accessory wherein the color code indicates a medical diagnosis, and the color-code indicating the medical diagnosis is selected from the group consisting of white—substance abuse, pink—diabetes, yellow—human immunodeficiency virus, blue—cancer, red—cardiac, green—respiratory, orange—tuberculosis, purple—seizure, brown—psychotropic drug therapy, black—suicide watch, and red, white and blue—post-traumatic stress disorder.

2. The color-coded accessory of claim 1, wherein the color-coded accessory is a wristband, a bib, a pillow, a pillow case or a universal chart.

3. The color-coded accessory of claim 2, wherein the wristband is made from fabric or plastic and has a first Velcro strip located on a first side of the wristband and a second Velcro strip located on a second side of the wristband which fasten when the first and second Velcro strips are opposed.

4. A method of alerting a healthcare provider to a medical diagnosis of a patient comprising:

providing a color-coded accessory, wherein a first color code of the color-coded accessory is associated with a first medical diagnosis of the patient selected from the group consisting of white corresponding to substance abuse, pink corresponding to diabetes, yellow corresponding to human immunodeficiency virus, blue corresponding to cancer, red corresponding to cardiac, green corresponding to respiratory, orange corresponding to tuberculosis, purple corresponding to seizure, brown corresponding to psychotropic drug therapy, black corresponding to suicide watch, and a combination of red, white and blue corresponding to post-traumatic stress disorder;

wherein the color-coded accessory comprises a wristband, the wristband defining a first end and a second end, the first end positioned opposite from the second end, the wristband defining a length extending from the first end to the second end, the wristband defining a width, the width defined perpendicular to the length, the wristband defining a first side and a second side, the first side positioned opposite from the second side, the wristband comprising:
a first hook-and-loop fastener strip, the first hook-and-loop fastener strip disposed on the first side of the wristband proximate to the first end; and a second hook-and-loop fastener strip, the second hook-and-loop fastener strip disposed on the second side of the wristband proximate to the second end, the second hook-and-loop fastener strip configured to engage the first hook-and-loop fastener strip; and

wherein the color-coded accessory further comprises a ribbon, the ribbon forming a loop extending around the width of the wristband, the ribbon defining a second color code of the color-coded accessory that is associated with a second medical diagnosis of the patient;

applying the color-coded accessory to the patient by securing the wristband around a wrist of the patient by engaging the first hook-and-loop fastener strip with the second hook-and-loop fastener strip; and

exposing the healthcare provider to the color-coded accessory, wherein the first color code and the second color code alert the healthcare provider to the first medical diagnosis and the second medical diagnosis of the patient.

5. The method of claim 4, wherein the color-coded accessory is a wristband, a bib, a pillow, a pillow case or a universal chart.

6. The method of claim 4, wherein the wristband is made from fabric or plastic and has a first Velcro strip located on a first side of the wristband and a second Velcro strip located on a second side of the wristband which fasten when the first and second Velcro strips are opposed.

7. A method of enhancing patient safety comprising:

providing a color-coded accessory, wherein a first color code of the color-coded accessory is associated with a first medical diagnosis of a patient selected from the group consisting of white corresponding to substance abuse, pink corresponding to diabetes, yellow corresponding to human immunodeficiency virus, blue corresponding to cancer, red corresponding to cardiac, green corresponding to respiratory, orange corresponding to tuberculosis, purple corresponding to seizure, brown corresponding to psychotropic drug therapy, black corresponding to suicide watch, and a combination of red, white and blue corresponding to post-traumatic stress disorder;

wherein the color-coded accessory is a wristband, the wristband defining a first end and a second end, the first end positioned opposite from the second end, the wristband defining a length extending from the first end to the second end, the wristband defining a width, the width defined perpendicular to the length, the wristband defining a first side and a second side, the first side positioned opposite from the second side, the wristband comprising:
a first hook-and-loop fastener strip, the first hook-and-loop fastener strip disposed on the first side of the wristband proximate to the first end; and

wherein the color-coded accessory further comprises a ribbon, the ribbon forming a loop extending around the width of the wristband, the ribbon defining a second color code of the color-coded accessory that is associated with a second medical diagnosis of the patient;

applying the color-coded accessory to the patient by securing the wristband around a wrist of the patient by engaging the first hook-and-loop fastener strip with the second hook-and-loop fastener strip; and

exposing the healthcare provider to the color-coded accessory, wherein the first color code and the second color code alert the healthcare provider to the first medical diagnosis and the second medical diagnosis of the patient.
8. The method of claim 7, wherein the color-coded accessory is a wristband, a bib, a pillow, a pillow case or a universal chart.

9. The method of claim 8, wherein the wristband is made from fabric or plastic and has a first Velcro strip located on a first side of the wristband and a second Velcro strip located on a second side of the wristband which fasten when the first and second Velcro strips are opposed.

10. The method of claim 7, wherein:
   a first hook-and-loop fastener strip is disposed proximate to the first end;
   a second hook-and-loop fastener strip is disposed proximate to the second end; and
   applying the color-coded accessory to the patient comprises engaging the first hook-and-loop fastener strip with the second hook-and-loop fastener strip.

11. The method of claim 7 further comprising attaching a ribbon to the wristband such that the ribbon extends around the width of the wristband, the ribbon defining a second color code of the color-coded accessory, the second color code associated with a second medical diagnosis of the patient.

* * * * *