

SYSTEM AND DEVICE FOR EVALUATING PARAMETERS PERTAINING TO HEALTH OF AN AREA OF INTEREST ON A PATIENT

TECHNICAL FIELD

[0001] The present disclosure relates generally to the field of patient care. In particular, the present disclosure relates to early prediction and prognosis of pressure ulcers in a patient.

BACKGROUND

[0002] A pressure ulcer is a localized injury to the skin and the underlying tissue that results from pressure on the area, typically in combination with friction and shear. Pressure ulcers are commonly found in persons who are bedridden or are otherwise immovable. Pressure ulcers are found at areas on the body, which, due to immovability of the patient, has to bear constant pressure, friction and shear. Typically, pressure ulcers develop on skin covering bony areas of the body. Pressure ulcers are particularly risky for patients suffering from conditions such as from diabetes, cardiovascular conditions, incontinence and arthritis amongst others. In many such cases, the development of pressure ulcers can lead to complications such as gangrene, infection etc.

[0003] Along with pressure, the occurrence of pressure ulcers depends on a number of factors such as temperature, humidity, age of the patient, state of mobility of the patient, their weight, nature of their skin etc. Presently, in order to detect pressure ulcers, medical professionals are required to typically depend on visual inspection and, from experience and skill, judge if an area of the skin is prone to developing ulcers. As is evident, such an approach is fraught with uncertainty and error, resulting in a potentially missing pressure ulcer occurrence.

[0004] United States patent **US8116838** provides a medical device for diagnosing a pressure ulcer on a patient, the medical device using an optical reflectance spectroscopy method. The medical device includes a tip, which is pressed against an area of skin of the patient, and which collects reflectance data from the area of skin. The medical device further includes a controller configured to process the reflectance data to determine presence of pressure ulcer, and if a pressure ulcer is present, to determine its depth. However, the cited patent functions by detecting an already formed pressure ulcer and does not offer a solution to assess a possibility of occurrence of a pressure ulcer.

[0005] United States patent **US9320665** provides a system and method for modelling a risk of formation of pressure ulcer for a patient by monitoring and analysing pressure exposure at an interface of the patient and a support surface on which the patient rests. The method includes periodically receives pressure values from a pressure mat at the interface between the patient and the support surface and mathematically evaluating a pressure exposure value for each point of contact between the patient and support surface based on a function of instant pressure values from the sensors and a desired turning interval of the patient on the support surface. The method further includes deriving a normalised pressure exposure and displaying the derived value graphically to a user.

[0006] United States patents **US7090647** and **US9980673** provide sensing devices and systems for determining possibility of occurrence of pressure ulcers.

[0007] The cited patent documents provide systems and devices for determining one or more parameters indicative of ulcer formation. However, the systems and devices function by considering only pressure values and discount the roles of other factors such as temperature, humidity, age of the patient, state of mobility of the patient, their weight, nature of their skin etc.

[0008] There is, therefore, a requirement in the art for a means to assess a possibility of occurrence of pressure ulcers holistically to enable early detection of pressure ulcers.

OBJECTS OF THE INVENTION

[0009] A general object of the present invention is to provide a device for predicting occurrence of a pressure ulcer on an area of interest on a patient.

[0010] Another object of the present invention is to provide a system for predicting occurrence of a pressure ulcer on an area of interest on the patient.

[0011] Another object of the present invention is to provide a system for accurately predicting occurrence of a pressure ulcer on an area of interest on the patient using an artificial intelligence-based learning engine.

[0012] Another object of the present invention is to provide a method for predicting occurrence of a pressure ulcer on an area of interest on the patient.

SUMMARY

[0013] The present disclosure relates generally to the field of patient care. In particular, the present disclosure relates to early prediction and prognosis of pressure ulcers in a patient.

[0014] In an aspect, the present disclosure provides a device suitable for evaluating parameters pertaining to health of an area of interest on a patient, the device including: a base adapted to be placed on the area of interest on the patient; and one or more sensors provided on the base, the one or more sensors adapted to measure a corresponding one or more parameters at the area of interest; and a processor operatively coupled to the one or more sensors and configured to receive the measured one or more parameters. The processor is configured to: receive a dataset of patient attributes; and receive, from a learning engine operatively coupled to it, a threshold value for each of the one or more parameters. The processor is configured to prognose occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the at least one primary parameter for at least a predetermined duration of time.

[0015] In a preferred embodiment, a shell can be provided on the base and the one or more sensors to protect the one or more sensors.

[0016] In a preferred embodiment, the one or more sensors can be selected from a group comprising an image capture device, piezo-electric pressure sensor, temperature sensor, humidity sensor, combined temperature and humidity sensor, accelerometer, blood flow sensor, a geolocation unit such as global positioning system, sensor for detection of shear and frictional stress, blood pressure, heart rate, respiration rate, blood oxygen saturation level and a combination thereof.

[0017] In a preferred embodiment, the one or more parameters can be selected from a group comprising image of the area of interest, pressure at the area of interest, blood flow at the area of interest, shear stress at the area of interest, friction at the area of interest, blood pressure, respiration rate, blood oxygen saturation level, humidity, temperature and a combination thereof.

[0018] In a preferred embodiment, the at least one primary parameter can be pressure at the area of interest.

[0019] In a preferred embodiment, patient attributes can be selected from a group comprising age, body weight, body mass index, mobility level, geographic location of the patient and a combination thereof.

[0020] In a preferred embodiment, the learning engine can be artificial intelligence trained to determine corresponding threshold values for the one or more parameters based on trend of historical data of the value of the one or more parameters for the patient corresponding to occurrence of pressure ulcer.

[0021] In a preferred embodiment, the device can include a transmitter configured to transmit the measured one or more parameters and the dataset of patient attributes to the processor.

[0022] In a preferred embodiment, the transmitter can be configured for any or a combination of wireless transmission and wired transmission.

[0023] In a preferred embodiment, the device can be powered by a battery unit.

[0024] In an aspect, the present disclosure provides a system suitable for evaluating parameters pertaining to health of an area of interest on a patient, the system including: a device, which includes: one or more sensors adapted to measure a corresponding one or more parameters at the area of interest; and a processor operatively coupled with a memory, the memory storing instructions executable by the processor to: receive, from the one or more sensors operatively coupled to it, the measured corresponding one or more parameters; receive a dataset of patient attributes; and determine, at a learning engine operatively coupled to it, a threshold value for each of the one or more parameters based on analysis of previous instances corresponding values of the one or more parameters at the area of interest and the dataset of attributes of the patient. The processor is configured to prognose occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the at least one primary parameter for at least a predetermined duration of time.

[0025] In a preferred embodiment, the learning engine can be artificial intelligence trained to determine corresponding threshold values for the one or more parameters based on trend of historical data of the value of the one or more parameters for the patient corresponding to occurrence of pressure ulcer.

[0026] In a preferred embodiment, the processor can be provided on a mobile device.

[0027] In a preferred embodiment, the learning engine can be provided on the mobile device.

[0028] In a preferred embodiment, any of the one or more parameters, the corresponding threshold values of the one or more parameters, the at least one primary parameter, the dataset of patient attributes, and the prognosis of occurrence of pressure ulcer at the area of interest can be displayed on a display screen.

[0029] In a preferred embodiment, the display screen can be provided on the mobile device.

[0030] In an aspect, the present disclosure provides a method suitable for evaluating parameters pertaining to health of an area of interest on a patient, where the method includes the steps of: receiving, at a processor of a computing device from one or more sensors of a device operatively coupled to it, measured corresponding one or more parameters of the area of interest; receiving, at the processor of the computing device, a dataset of patient attributes; and determining, at a learning engine operatively coupled to the processor of the computing device, a threshold value for each of the one or more parameters based on analysis of previous instances corresponding values of the one or more parameters at the area of interest and the dataset of attributes of the patient. The processor is configured to prognose occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the at least one primary parameter for at least a predetermined duration of time.

[0031] Various objects, features, aspects and advantages of the inventive subject matter will become more apparent from the following detailed description of preferred embodiments, along with the accompanying figures in which like numerals represent like components.

BRIEF DESCRIPTION OF DRAWINGS

[0032] The accompanying figures are included to provide a further understanding of the present disclosure and are incorporated in and constitute a part of this specification. The drawings illustrate exemplary embodiments of the present disclosure and, together with the description, serve to explain the principles of the present disclosure.

[0033] FIG. 1 illustrates a three-dimensional representation of a device for predicting occurrence of pressure ulcers in a patient, in accordance with a preferred embodiment of the present disclosure.

[0034] FIGs. 2A and 2B illustrate a top view and side view respectively of a sectional representation of the proposed device for predicting occurrence of pressure ulcers in a patient, in accordance with a preferred embodiment of the present disclosure.

[0035] FIG. 3 illustrates a block diagram of a system for the proposed device, for predicting occurrence of pressure ulcers in a patient, in accordance with a preferred embodiment of the present disclosure.

[0036] FIG. 4 illustrates a flow diagram of a method using the proposed device, for predicting occurrence of pressure ulcers in a patient, in accordance with a preferred embodiment of the present disclosure.

DETAILED DESCRIPTION

[0037] The following is a detailed description of embodiments of the disclosure depicted in the accompanying drawings. The embodiments are in such details as to clearly communicate the disclosure. However, the amount of detail offered is not intended to limit the anticipated variations of embodiments; on the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the present disclosure as defined by the appended claims.

[0038] In an aspect, the present disclosure provides a device for predicting occurrence of a pressure ulcer on an area of interest on a patient, the device including: a base adapted to be placed on the area of interest on the patient; and one or more sensors provided on the base, the one or more sensors adapted to measure a corresponding one or more parameters at the area of interest; and a processor operatively coupled to the one or more sensors and configured to receive the measured one or more parameters. The processor is configured to: receive a dataset of patient attributes; and receive, from a learning engine operatively coupled to it, a threshold value for each of the one or more parameters. The processor is configured to prognose occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the at least one primary parameter for at least a predetermined duration of time.

[0039] FIG. 1 illustrates a three-dimensional representation of a device for predicting occurrence of pressure ulcers in a patient, in accordance with a preferred embodiment of the present disclosure.

[0040] FIGs. 2A and 2B illustrate a top view and side view respectively of a sectional representation of the proposed device for predicting occurrence of pressure ulcers in a patient, in accordance with a preferred embodiment of the present disclosure.

[0041] The device 100 can be adapted to be in contact with an area of human skin 102 of a patient, and through an array of one or more sensors 104 (hereinafter, collectively referred to as “sensors 104”), transmit data from the sensors 104 to a computing unit 106 operatively coupled with the sensors 104. The computing unit 106 can include one or more processors adapted for receiving data and processing the data in accordance with a set of instructions embedded in the computing unit 106. The computing unit 106 can be operatively coupled with the device 100 by any or in part, being physically present in the device 100, being a cloud-based computing unit and in a mobile device operatively coupled with the device 100.

[0042] In the device 100 of the preferred embodiment, the sensors 104 can be at least one of a piezo-electric pressure sensor, temperature sensor, humidity sensor, combined temperature and humidity sensor, accelerometer, blood flow sensor, a geolocation unit such as global positioning system, sensor for detection of shear and frictional stress, blood pressure, heart rate, respiration rate and blood oxygen saturation level. The sensors 104 can be embedded in a pad (hereinafter, also referred to as “patch 108”), the pad 108 being in contact with the skin 102. It can be appreciated that the pad 106 can be of any size as required to cover a specified area of skin. The pad 108 can be made of any material such that the sensors 104 can read the various corresponding parameters, while also being friendly to the skin 102 in that, pressure of the device 100 is uniformly distributed across the area of the pad 108 and the material does not cause any irritation to the skin 102. In one preferred embodiment, the material of the pad 108 can be any polymer such as, but not limited to polydimethylsiloxane (PDMS). The device can be provided with a shell 110 to accommodate the components. The shell can be made of a foam, PDMS or any other suitable polymer-based material.

[0043] One implementation of the device 100 can be to predict and prognose occurrence of pressure ulcers in the area of skin 102 in contact with the device. Patients who are bed-ridden or otherwise immovable for extended periods of time are particularly susceptible to occurrences of pressure ulcers. A pressure ulcer is a localized injury to the skin and/or underlying tissue, typically over a bony prominence due to pressure on the skin and underlying tissue, where the pressure can block circulation of blood between the bony prominence and the region of skin and underlying tissue under pressure. The pressure ulcer can also occur due to additional shear and friction at the skin and underlying tissue. An important parameter to

determine possibility of occurrence of a pressure ulcer at an area of skin is the pressure at the area, along with other secondary parameters, which can include environmental variables such as time of application, temperature and humidity and patient-specific data such as age and mobility level.

[0044] The computing unit 106 of the device 100 can be adapted to receive the data from the sensors 104 and, additionally, image data of the physical area of skin 102 that is in contact with the pad 108 of device 100 via any image capturing device. The computing unit 106 is configured to analyse the received data, and to predict, based on other information, any condition of the area of skin 102 in contact with the device 100. The other information can include location of the patient, condition of the patient's bed area and historical patient data. Additionally, based on the data received in real-time, the computing unit 106 is configured to assess a current condition of the area of skin 102 in contact with the device. Based on the assessment, the computing unit 106 can also suggest possible remedial measures to alleviate the condition, based on information contained in a database operatively coupled to the data processing unit. The data processing unit can use artificial intelligence to compute a prognostic function to determine a prognostic value a possibility of occurrence of pressure ulcer on the area of skin 102.

[0045] Additionally, the received images from the image capture device can be suitably processed to extract one or more features that can be processed by the computing unit 106 to determine the prognostic value.

[0046] In a preferred embodiment, the data from the sensors 104, the image capture device and the data processing unit can be displayed on a display screen operatively coupled with the device 100. The display screen can be on any of a mobile device and a computer device.

[0047] It would be appreciated that the proposed device can have other implementations such as, but not limited to neonatal (paediatric) prognosis application, Deep Vein Thrombosis prognosis and compression applications with additional components, hip and joint replacement application to understand and measure impact force prognosis, orthopaedic rehabilitation application, sports equipment applications, automotive applications and robotics applications.

[0048] In an aspect, the present disclosure provides a system for predicting occurrence of a pressure ulcer on an area of interest on a patient, the system including: a device, which includes: one or more sensors adapted to measure a corresponding one or more parameters at

the area of interest; and a processor operatively coupled with a memory, the memory storing instructions executable by the processor to: receive, from the one or more sensors operatively coupled to it, the measured corresponding one or more parameters; receive a dataset of patient attributes; and determine, at a learning engine operatively coupled to it, a threshold value for each of the one or more parameters based on analysis of previous instances corresponding values of the one or more parameters at the area of interest and the dataset of attributes of the patient. The processor is configured to prognose occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the at least one primary parameter for at least a predetermined duration of time. The system includes a remedial device adapted to be placed on the area of interest to provide remedial measures for the condition.

[0049] FIG. 3 illustrates a block diagram of a system for the proposed device, for predicting occurrence of pressure ulcers in a patient, in accordance with a preferred embodiment of the present disclosure. The system 300, in preferred embodiment, can be partially or fully deployed within the proposed device 100 to predict, assess and suggest remedial action to for an area of skin the device 100 is attached to. The system 300 can be operatively coupled to a sensor unit 302 with sensors being at least one of a piezo-electric pressure sensor, temperature sensor, humidity sensor, combined temperature and humidity sensor, accelerometer, blood flow sensor, a geolocation unit such as global positioning system, sensor for detection of shear and frictional stress, blood pressure, heart rate, respiration rate and blood oxygen saturation level. The sensor unit 302 can also include an image capture device. The system 300 can include a data processor 304 and a transmitter 306. The transmitter 306 can be operatively coupled with the sensor unit and can transmit data by any or a combination of wired and wireless means. The transmitter 306 is further configured to receive patient data from an input 308. Patient data can be any information pertaining to the patient such as, but not limited to age, body weight, height, BMI and mobility level. The input 308 can be a database containing patient data.

[0050] The system 300 can be include a battery unit 310 which supplies power to the device 100, the system 300 and its associated components.

[0051] The system can include a mobile device 312 such as, but not limited to mobile phones, tablets, computers etc., which can be configured to receive data from the transmitter 306. The mobile device 312 can be operatively coupled to a computing unit 314, which can include one or more processors adapted for receiving data and processing the data in

accordance with a set of instructions embedded in the computing unit 314. In a preferred embodiment, the computing unit 314 can be driven by artificial intelligence to process data received from the transmitter 306. The computing unit 314 can be deployed partially or fully within the mobile device 312. In another embodiment, the computing unit 314 can be partially or fully a cloud-based computing environment.

[0052] The system 300 is adapted to, after processing the data and determining a prognostic value, display the data received from the transmitter 306 and the computing unit 314 on a display screen 316 operatively coupled with the transmitter 306 and the computing unit 314 respectively. In a preferred embodiment, the display screen 316 can be on the mobile device 312.

[0053] In the present embodiment, the device 100 can be provided with sensors 104 embedded in a pad 106, which can be in contact with the skin 102. The pad 106 can be made of any material such that the sensors 104 can read the various corresponding parameters, while also being friendly to the skin 102 in that, pressure of the device 100 is uniformly distributed across the area of the pad 106 and the material does not cause any irritation to the skin 102. In one preferred embodiment, the material of the pad 106 can be any polymer such as, but not limited to polydimethylsiloxane (PDMS). The device can be provided with a shell 108 to accommodate the components. The shell can be made of a foam, PDMS or any other suitable polymer-based material.

[0054] In the present embodiment, it can be a requirement for acquisition of data from a plurality of skin sites on body of the patient, and this is achieved by using a plurality of devices such as the proposed device 100 on the skin sites. Each of the plurality of devices can have different set of sensors. Data pertaining to the plurality of skin sites from the corresponding plurality of devices is stored under a same label.

[0055] The tactile sensor present on the device 100 is particularly adapted to continuously monitor pressure value at the corresponding skin site, which when reaches a threshold value and stays at the threshold value for a predetermined period of time, provides an actuation signal to actuate the device to operate to measure and process data from the corresponding skin site.

[0056] In a preferred embodiment, the sensors 104 (with the possible exception of the tactile sensor) can be adapted to measure corresponding parameters periodically to provide periodic measurement values.

[0057] The computing unit 314 of the device 100 can be adapted to receive the data from the sensors 104 and the image capture device. The computing unit 314 is configured to analyse the received data, and to predict, based on other information, any condition of the area of skin in contact with the device 100. The other information can include location of the patient, condition of the patient's bed area and historical patient data. Additionally, based on the data received in real-time, the computing unit 314 is configured to assess a current condition of the area of skin in contact with the device 100. Based on the assessment, the computing unit 314 can also suggest possible remedial measures to alleviate the condition, based on information contained in a database operatively coupled to the data processing unit. The computing unit 314 can use artificial intelligence to compute a prognostic function to determine a prognostic value indicative of a possibility of occurrence of pressure ulcer on the area of skin.

[0058] In a preferred embodiment, the mobile device 312 can be enabled with wireless connectivity with the device 100. The mobile device 312 can be embedded with an application and interface capable of receiving and transmitting data from and to the device respectively. The interface can be such that data from different devices can be placed in a separate label. The application can also have a database of patient information such as patient identity, and the data received from the transmitter 306 and the computing unit 314 can be stored in the database against the label of the corresponding patient.

[0059] The interface can be customisable depending on requirement of a user of the device 100. Predetermined settings such as, but not limited to, threshold values of different sensors, data streams from different devices and prognostic parameters of the device itself can be monitored from the mobile device 312. Data from multiple devices for a single patient can be collated and can be viewed as desired.

[0060] In another embodiment, a single mobile device can be configured to access data from multiple patients.

[0061] FIG. 4 illustrates a flow diagram of a method using the proposed device, for predicting occurrence of pressure ulcers in a patient, in accordance with a preferred embodiment of the present disclosure.

[0062] In an aspect, the method 400 can include the steps of: receiving, at a processor of a computing device from one or more sensors of a device operatively coupled to it, measured corresponding one or more parameters of the area of interest (402); receiving, at the processor of the computing device, a dataset of patient attributes (404); and determining, at a learning

engine operatively coupled to the processor of the computing device, a threshold value for each of the one or more parameters based on analysis of previous instances corresponding values of the one or more parameters at the area of interest and the dataset of attributes of the patient (406). The processor is configured to prognose occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the at least one primary parameter for at least a predetermined duration of time (408).

[0063] In an implementation of the preferred embodiment, the device and system facilitate prediction of occurrence of pressure ulcers in a patient, thereby enabling early prognosis. Based on the prediction, suitable preventive or remedial measures can be applied.

[0064] Thus, aspects of the present disclosure provide a means for prediction of occurrence of a pressure ulcer at an area of interest of a patient based on whether any one or more measured parameters of the area of interest exceeds a corresponding threshold value of the any one or more parameters for longer than a specified duration of time. The threshold values are obtained from an artificial intelligence capable of being trained to detect a trend of values for each of the one or more parameters that results in the occurrence of the pressure ulcer. Prediction of occurrence of the pressure ulcers allow for early detection and prognosis of the pressure ulcers and allows for suitable preventive or remedial measures to be applied to enhance the recovery of the patient.

[0065] While the foregoing describes various embodiments of the invention, other and further embodiments of the invention may be devised without departing from the basic scope thereof. The scope of the invention is determined by the claims that follow. The invention is not limited to the described embodiments, versions or examples, which are included to enable a person having ordinary skill in the art to make and use the invention when combined with information and knowledge available to the person having ordinary skill in the art.

ADVANTAGES OF THE INVENTION

[0066] The present invention provides a device for predicting occurrence of a pressure ulcer on an area of interest on a patient.

[0067] The present invention provides a system for predicting occurrence of a pressure ulcer on an area of interest on the patient.

[0068] The present invention provides a system for predicting occurrence of a pressure ulcer in a patient by considering a plurality of factors that play a role in the formation of pressure ulcers such as temperature, humidity, age of the patient, state of mobility of the patient, their weight, nature of their skin etc.

[0069] The present invention provides a system for accurately predicting occurrence of a pressure ulcer on an area of interest on the patient using an artificial intelligence-based learning engine.

[0070] The present invention provides a method for predicting occurrence of a pressure ulcer on an area of interest on the patient.

We claim:

1. A device suitable for evaluating parameters pertaining to health of an area of interest on a patient, said device comprising:
 - a base adapted to be placed on the area of interest on the patient;
 - one or more sensors provided on the base, said one or more sensors adapted to measure a corresponding one or more parameters at the area of interest; and
 - a processor operatively coupled to the one or more sensors and configured to receive the measured one or more parameters, said processor configured to:
 - receive a dataset of patient attributes; and
 - receive, from a learning engine operatively coupled to it, a threshold value for each of the one or more parameters,wherein the processor prognoses occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the at least one primary parameter for at least a predetermined duration of time.
2. The device as claimed in claim 1, wherein a covering shell is provided on the base to protect the one or more sensors.
3. The device as claimed in claim 1, wherein the one or more sensors are selected from a group comprising an image capture device, piezo-electric pressure sensor, temperature sensor, humidity sensor, combined temperature and humidity sensor, accelerometer, blood flow sensor, a geolocation unit such as global positioning system, sensor for detection of shear and frictional stress, blood pressure, heart rate, respiration rate, blood oxygen saturation level and/or a combination thereof.
4. The device as claimed in claim 1, wherein the one or more parameters are selected from a group comprising image of the area of interest, pressure at the area of interest, blood flow at the area of interest, shear stress at the area of interest, friction at the area of interest, blood pressure, respiration rate, blood oxygen saturation level, humidity, temperature and/or a combination thereof.
5. The device as claimed in claim 4, wherein the at least one primary parameter is pressure at the area of interest.

6. The device as claimed in claim 1, wherein patient attributes are selected from a group comprising age, body weight, body mass index, mobility level, geographic location of the patient and/or a combination thereof.
7. The device as claimed in claim 1, wherein the learning engine is artificial intelligence trained to determine corresponding threshold values for the one or more parameters based on trend of historical data of the value of the one or more parameters for the patient corresponding to occurrence of pressure ulcer.
8. The device as claimed in claim 1, wherein the device comprises a transmitter configured to transmit the measured one or more parameters and the dataset of patient attributes to the processor.
9. The device as claimed in claim 8, wherein the transmitter is configured for any or a combination of wireless transmission and wired transmission.
10. The device as claimed in claim 1, wherein the device is powered by a battery unit.
11. A system suitable for evaluating parameters pertaining to health of an area of interest on a patient, said system comprising:
 - a device comprising:
 - one or more sensors adapted to measure a corresponding one or more parameters at the area of interest; and
 - a processor operatively coupled with a memory, said memory storing instructions executable by the processor to:
 - receive, from the one or more sensors operatively coupled to it, the measured corresponding one or more parameters;
 - receive a dataset of patient attributes; and
 - determine, at a learning engine operatively coupled to it, a threshold value for each of the one or more parameters based on analysis of previous instances corresponding values of the one or more parameters at the area of interest and the dataset of attributes of the patient,
 - wherein the processor prognoses occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the

at least one primary parameter for at least a predetermined duration of time.

12. The system as claimed in claim 11, wherein the learning engine is artificial intelligence trained to determine corresponding threshold values for the one or more parameters based on trend of historical data of the value of the one or more parameters for the patient corresponding to occurrence of pressure ulcer.
13. The system as claimed in claim 11, wherein the processor is provided on a mobile device.
14. The system as claimed in claim 11, wherein the learning engine is provided on the mobile device.
15. The system as claimed in claim 11, wherein any of the one or more parameters, the corresponding threshold values of the one or more parameters, the at least one primary parameter, the dataset of patient attributes, and the prognosis of occurrence of pressure ulcer at the area of interest is displayed on a display screen.
16. The system as claimed in claim 15, wherein the display screen is provided on the mobile device.
17. A method suitable for evaluating parameters pertaining to health of an area of interest on a patient, said method comprising the steps of:
 - receiving, at a processor of a computing device from one or more sensors of a device operatively coupled to it, measured corresponding one or more parameters of the area of interest;
 - receiving, at the processor of the computing device, a dataset of patient attributes; and
 - determining, at a learning engine operatively coupled to the processor of the computing device, a threshold value for each of the one or more parameters based on analysis of previous instances corresponding values of the one or more parameters at the area of interest and the dataset of attributes of the patient,wherein the processor prognoses occurrence of the pressure ulcer at the area of interest when the value of at least one primary parameter of the one or more parameters exceeds a corresponding threshold value for the at least one primary parameter for at least a predetermined duration of time.