CLINICAL INVESTIGATION PLAN (CIP)

CLINICAL INVESTIGATION TITLE: An open, single-arm, post-market clinical investigation to verify the ability of TENA SmartCare Change Indicator™ to reduce the number of manual checks between changes of absorbing incontinence products in a home environment.
CLINICAL INVESTIGATION CODE: POWER (NCT04846270)
INVESTIGATIONAL DEVICE: TENA SmartCare Change Indicator™
PRINCIPAL INVESTIGATOR: Prof. Piotr Radziszewski Medical Concierge Centrum Medicine Ul. Polnej Rózy 6 lok. U2 02-798 Warzaw Poland
SPONSOR: Essity Hygiene and Health AB SE-405 03, Gothenburg Sweden
DATE: 07-Sep-2020

Version	Revision history
A	First release

This clinical investigation will be conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki. Furthermore, the clinical investigation will be performed in compliance with the latest version of the ISO 14155 standard, Medical Device Regulation (MDR) 2017/745 and applicable regional or national regulations.

1 SYNOPSIS

NAME OF THE SPONSOR: Essity Hygiene and Health AB
CLINICAL INVESTIGATION TITLE: An open, single-arm, post-market clinical investigation to verify the ability of TENA SmartCare Change Indicator™ to reduce the number of manual checks between changes of absorbing incontinence products in a home environment.
CLINICAL INVESTIGATION CODE: POWER
INVESTIGATIONAL DEVICE: TENA SmartCare Change Indicator™
OBJECTIVES: **Primary Objective** To demonstrate performance through the ability to reduce the number of manual checks in-between changes of absorbing incontinence products using the TENA SmartCare Change Indicator compared to Standard of Care. **Secondary Objectives** - Evaluate safety through analyzing device-related adverse events reported during the investigation. - Evaluate leakage into clothes and/or bed linen. - Evaluate change in skin redness and irritation. - Evaluate usability - Evaluate the number of fecal incidences
OVERALL CLINICAL INVESTIGATION DESIGN: The purpose of this post market clinical investigation is to demonstrate the performance and safety of the TENA SmartCare Change Indicator. The TENA SmartCare Change Indicator is intended for use on individuals, dependent end user (DEU), suffering from Urinary Incontinence (UI) who are cared for in a home environment, by one or more caregivers (CGR). The TENA SmartCare Change Indicator is an accessory to TENA absorbing incontinence products. This clinical investigation is intended to demonstrate that use of TENA SmartCare Change Indicator has the ability to reduce the number of manual checks between daily changes of absorbing incontinence products. Secondarily, the investigation will evaluate number of leakages, skin redness, usability and fecal incidence. Furthermore, the safety will continuously be monitored through analyzing device-related adverse events reported during the investigation. Statistical calculations support the recruitment of 35 DEUs to account for an estimated premature withdrawal rate of 30%. To demonstrate the primary objective 24 evaluable subjects are needed to complete the investigation. Prior to initiation of any investigational procedures, applicable informed consents are to be obtained. Each DEU and CGR will meet with the investigator to give informed consent, see section 18. The clinical investigation is designed to be conducted in the DEU's home environment, for a duration of three (3) weeks + potential incontinence product training and visit window scheduling. The first week will establish an individual baseline for each DEU, during which the number of manual checks between changes of the TENA incontinence product are to be registered continuously in a diary by the CGR. During the second week the CGR will be provided with and

trained in the use of the TENA SmartCare Change Indicator. During the third week the TENA SmartCare Change Indicator is to be used as intended by the manufacturer, while the number of manual checks between changes of the TENA incontinence product are to be registered in a diary by the CGR. The resulting numbers are to be analyzed with regard to the individual baseline in order to evaluate the expected reduction of number of manual checks. In total, the clinical investigation involves eight visits out of which two are optional and conducted as deemed necessary.

Summation of planned contacts/visits:

Visit 0: Initial visit
This visit will be the screening visit for subjects who have not previoulsy used TENA incontinence products. Only these subjects are to attend this visit, for other subjects this visit corresponds to visit 1. During 7 days after the visit the subject and caregiver will develop familiarity with TENA incontinence products to ensure representative data collection during baseline week and the remainder of the investigation.

At visit 0, the following assessments/procedures will be performed:

- Performed by investigator and designated nurse. CGR, informed consent witness, and DEU visit site, or investigator and nurse visit DEU's home.
- Informed consent DEU and witness as applicable, legally designated representative in case DEU is considered unable to provide informed consent.
- Informed consent CGR.
- Eligibility verification (DEU and CGR).
- Demography (DEU and CGR).
- Medical and surgical history (DEU).
- Relevant concomitant medication (DEU).
- Evaluation of general cognitive function (DEU).
- Physical examination (DEU).
- Skin redness/irritation assessment (DEU).
- Pregnancy test (DEU with childbearing potential).
- Instruction and handover of single-use TENA incontinence products.
- Scheduling of visit 1.

Visit 1: Investigation initiation
This will be the screening visit for subjects and CGRs who did not need to attend Visit 0.
At visit 1, the following assessments/procedures will be performed for those who did not need to attend Visit 0:

- Day 0
- Performed by investigator and designated nurse. CGR, informed consent witness, and DEU visit site, or investigator and nurse visit DEU's home.
- Informed consent DEU and witness as applicable.
- Informed consent CGR.
- Eligibility verification (DEU and CGR).
- Demography (DEU and CGR).
- Medical and surgical history (DEU).
- Relevant concomitant medication (DEU).
- Evaluation of general cognitive function (DEU).
- Physical examination (DEU).
- Skin redness/irritation assessment (DEU).
- Pregnancy test (DEU with childbearing potential).

- Instruction and handover of baseline week diary.
- Instruction and handover of single-use TENA incontinence products.
- Scheduling of visit 2.

At visit 1, the following assessments/procedures will be performed for those who completed visit 0:

- Day 0 (+1-3 days)
- Instruction and handover of baseline week diary.
- Handover of single-use TENA incontinence products.
- Relevant concomitant medication review (DEU).
- Skin redness/irritation assessment (DEU).
- Scheduling of visit 2.

Baseline registrations are to be initiated on the first day following the enrollment, i.e. day 1.
If required, additional support will be provided as needed during the course of the clinical investigation.

Visit 2: Initiate baseline week.

- Day 1 (+1-3 days)
- Performed by designated nurse in DEU's home, over phone or video call.
- Confirmation of correct baseline week diary initiation.
- Concomitant medication review (DEU).
- Scheduling of visit 3.

Visit 3: Initiate learning week.

- Day 8 (+1-3 days).
- Performed by designated nurse in DEU's home.
- Confirmation of correct baseline week diary registration.
- Concomitant medication review (DEU).
- Skin redness/irritation assessment (DEU).
- Documentation of AE/ADE (DEU and CGR).
- Handover of TENA SmartCare Change Indicator (including instruction/training/verification of understanding).
- Instruction and handover of learning week diary.
- Handover of single use TENA incontinence products.
- Scheduling of Visit 4/5, as applicable.

Visit 4: Assure correct learning and use as intended (optional visit)

- 1-3 days post visit 3.
- Performed by designated nurse, as required based on need for additional support, e.g. visit/phone call/video call.

In case the visit is conducted the following will be investigated:

- Confirmation of correct learning week diary registration.
- Concomitant medication review (DEU).
- Correct use of TENA SmartCare Change Indicator.
- Documentation of AE/ADE (DEU and CGR) and DD if applicable.
- Scheduling of Visit 5.

Visit 5: Initiate investigation week.

- Visit to be take place at ≥ 7 completed days post Visit 3, but ≤ 10 completed days after Visit 3
- Performed by designated nurse in the DEU's home.
- Confirmation of correct learning week diary.
- Concomitant medication review (DEU).
- Skin redness/irritation assessment (DEU).
- Documentation/follow-up of AEs/ADEs (DEU and CGR) and DDs as applicable.
- Instruction and handover of investigational week diary.
- Handover of single use TENA incontinence products.
- Scheduling of visit 6/7, as applicable.
- Questionnaire completion (CGR);
    - Usability

Visit 6: Additional support, if needed (optional visit).

- 1-2 days post visit 5.
- Performed by designated nurse, as required based on need for additional support, e.g. visit/phone call/video call

In case the visit is conducted the following will be investigated:

- Confirmation of correct investigational week diary registration.
- Concomitant medication review (DEU).
- Correct use of TENA SmartCare Change Indicator.
- Documentation of AEs/ADEs (DEU and CGR) and DDs, or follow-up as applicable.
- Scheduling of visit 7, as applicable.

Visit 7: Investigation completion and termination.

- ≥ 7 completed days post Visit 5.
- Performed by investigator and designated nurse in the DEU's home or at site.
- Confirmation of correct investigational week diary registration.
- Concomitant medication review (DEU).
- Skin redness/irritation assessment (DEU).
- Documentation of AEs/ADEs (DEU and CGR) and DDs, or follow-up as applicable.
- Finalization of study period.
- Collection of investigational products.
- Pregnancy test (DEU with childbearing potential).
- Questionnaire completion (CGR);
    - Whether the TENA SmartCare Change Indicator facilitates the decision to change the TENA incontinence product
    - Likelihood of continued use of the TENA SmartCare Change Indicator.
    - Perceived wellbeing and comfort of DEU.
    - Usability

INCLUSION AND EXCLUSION CRITERIA:

Inclusion Criteria

The DEUs and/or CGRs must meet all of the following criteria to be eligible for this clinical investigation:

1. DEU is diagnosed with urinary incontinence managed with a tape-style incontinence product.

2. DEU is unable to sufficiently communicate the need for an incontinence product to be changed.
3. DEU is being cared for in a home environment and most of the care is provided by a main CGR.
4. DEU is willing and able to provide informed consent and to participate in the clinical investigation or has a legally designated representative willing to provide informed consent on behalf of the DEU. Note, the legally designated representative and main CGR cannot be the same person.
5. CGR is willing and able to provide informed consent to participate in the clinical investigation.
6. The CGR frequently checks the saturation level of the incontinence product, manually and/or by a touch-feel process.
7. If incontinence is managed by pharmaceuticals, the dose regime is stable.
8. DEU and CGR $\geq$ 18 years of age.

Exclusion Criteria
DEUs and/or CGRs meeting any of the following criteria will not be permitted to participate in the clinical investigation:

1. DEU is cared for in a professional establishment or is institutionalized.
2. DEU has $\geq$ 4 fecal ”incidences” per week.
3. DEU has severe incontinence product related skin problems, as judged by the investigator.
4. DEU has any type of urinary catheter(s) resulting in improved/treated urinary incontinence.
5. The incontinence product is changed on a routine based on time (schedule) or device alert, without manual checks.
6. Any other condition that may make participation in the clinical investigation inappropriate, as judged by investigator.
7. CGR is incapable or unwilling to use the required smartphone application and/or the diary registration webpage required for the clinical investigation.
8. Participation in an investigational study of a drug, biologic, or device within 30 days prior to entering the clinical investigation or planned during the course of the clinical investigation.
9. DEU is pregnant or nursing.
10. CGR or DEU with an alcohol or drug addiction

PERFORMANCE AND SAFETY ENDPOINTS:

Primary Endpoint

- Change in the number of manual checks in-between the daily changes of the absorbing incontinence product at week 3 (investigational week) compared to week 1 (baseline week).

Secondary Endpoints

- Incidence of adverse events during week 2 (learning week) and week 3 (investigational week); adverse events (AE), adverse device effects (ADE), serious adverse events (SAE), and serious adverse device effects (SADE), and device deficiency (DD).
- Change in the number of leakages into the clothes and/or bed linen at week 3 (investigational week) compared to week 1 (baseline week).
- Evaluate change in skin redness and irritation, at week 3 (investigational week) compared to week 1 (baseline week).
- Evaluate usability (questionnaire week 2 and 3).
- Evaluate the number of fecal incidences.

STATISTICAL METHODS:
Statistical analysis on variables of interest, including subject demographics, baseline characteristics, performance and safety endpoints will be collected. If nothing else is stated, descriptive statistics will be given for each variable in the investigation. This means number of subjects (n), mean, median, standard deviation (SD), minimum (min) and maximum (max) values will be presented for continuous data and frequencies and percentages for categorical data. The level of significance is set to 5% for all tested variables and specified in section 12.3.

The primary variable is the percentage change of the number of manual checks between week 1 and week 3 of the trial. A one-tailed paired t-test will be used to test if the number of manual checks have been reduced relative to week 1. If the variable is not normally distributed the non-parametric Wilcoxon signed-rank test will be used and in case of a significant result, a one-sided 95% confidence interval will be constructed for the percentage change in checks between week 1 and week 3 to validate at least a 30% reduction.

Performance Analysis
The main analyses will be analyses of changes: investigation week compared to baseline week. Paired comparison will be conducted on the primary and secondary variables. T-test or non-parametric tests will be used (if normality cannot be assumed). The significance level will be set to 5%.

Safety Analysis
Data on incidence and severity of adverse events related to TENA SmartCare Change Indicator will be summarized in terms of AE, ADE, SAE, SADE and DD

All safety variables will be tabulated for the Safety Population.

2 CIP APPROVAL PAGE

The undersigned hereby confirms that they have read and understood the content of this Clinical Investigation Plan (CIP) and further approves its content.

_____ _____

Dr. Arne Böhling
Clinical Affairs Director, Essity Hygiene and Health AB

Date (dd-Mmm-yyyy)

_____ _____

Dr. Fredrik Agholme
Clinical Trials Manager, Essity Hygiene and Health AB

Date (dd-Mmm-yyyy)

The undersigned hereby confirms that they have read and understood the content of this Clinical Investigation Plan (CIP) and further approves its content.

I will conduct the investigation according to the procedures specified herein.

Site No.: 01

_____ _____

Prof. Piotr Radziszewski
Principal Investigator
Medical Concierge Centrum Medyczne,
Polnej Rózy 6/U2, 02-798 Warszawa

Date (dd-Mmm-yyyy)

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4 ABBREVIATIONS AND ACRONYMS

ADE	Adverse Device Effect
AE	Adverse Event
App	Application
ASADE	Anticipated Serious Adverse Device Effect
BMI	Body Mass Index
CA	Competent Authority
CER	Clinical Evaluation Report
CGR	Care Giving Relative, synonymous with “caregiver”
CIP	Clinical Investigation Plan
CIR	Clinical Investigation Report
CRF	Case Report Form
CRO	Contract Research Organization
DD	Device Deficiency
DEU	Dependent End User, synonymous with “subject”
DMC	Data Monitoring Committee
DMP	Data Management Plan
DMR	Data Management Report
DVP	Data Validation Plan
EEA	European Economic Area
EU	European Union
GCP	Good Clinical Practice
GDPR	EU General Data Protection Act
GLOBIAD	Ghent Global IAD Categorisation Tool
IAD	Incontinence associated dermatitis
IB	Investigator’s Brochure
ICF	Informed Consent Form
ICS	International Continence Society
IEC	Independent Ethics Committee
IFU	Instructions for Use
ISF	Investigation Site File
ISO	International Organization for Standardization
Legally designated representative	Individual, judicial, or other body authorized under applicable law to consent, on behalf of a prospective subject, to the subject’s participation in the clinical investigation
MDD	Medical Device Directive – Council Directive 93/42/EEC
MDR	Medical Device Regulation – Regulation (EU) 2017/745
PI	Principal Investigator
QoL	Quality of Life
Residual Risk	Risk remaining after risk control measures has been taken
SADE	Serious Adverse Device Effect
SAE	Serious Adverse Event
SAP	Statistical Analysis Plan
SDV	Source Data Verification
SOP	Standard Operating Procedure
TENA incontinence products	TENA tape style incontinence product with absorbing core longer than 40 cm and a textile-like back sheet.
UI	Urinary Incontinence
USADE	Unanticipated Serious Adverse Device Effect

5 INTRODUCTION

5.1 Background

The definition of Urinary Incontinence (UI) is “the complaint of any involuntary leakage of urine”, according to the International Continence Society (ICS). UI is a common complaint throughout the world known to carry a profound effect on social and physiological well-being. However, estimates of prevalence depend on the definition of incontinence and the population studied. Consequently, the estimates varies in the literature [1, 2]. Among adults older than 65 years and living at home while receiving home care services a prevalence rate of 46% has been identified. Factors associated with higher incidence of UI are e.g. high age, high Body Mass Index (BMI), a large number of reasons for admission to homecare, impaired mobility, diabetes mellitus and fecal incontinence [3]. Even if not proven to have negative impact on interactions with family and friends in all populations UI has been reported to impact on self-rated health and other measures of quality of life (QoL). Positive associations between UI and depression have been identified [4], as well as to isolation, skin ulceration/ moisture-associated skin damage, Urinary Tract Infection (UTI), sleep disturbances, fatigue, falls and fractures [5].

Among a plethora of treatment options, conservative management is the first-in-line option for most patients with UI. Conservative management comprises lifestyle interventions (weight loss, smoking cessation, fluid reduction, constipation management), physical therapies (pelvic floor muscle training/exercises (PFMT/PFME) and vaginal cones), behavioral therapies (bladder training, prompted or scheduled/timed voiding) and mechanical devices (continence pessaries, urethral plugs). Little evidence is available to support use of drug therapy over conservative treatment options. In addition, patient satisfaction is generally lower [1]. As such, pharmacological treatments are generally indicated if conservative management options have failed. Pharmaceutical options include antimuscarinic drugs, β3-antagonists, duloxetine, estrogen, desmopressin, and botulinum toxin type A injections. Surgical management (e.g. open abdominal retropubic suspension, laparoscopic retropubic suspension, midurethral sling procedures, traditional suburethral sling procedures, anterior vaginal repair, bladder neck needle suspensions, peri-urethral injections and artificial sphincters) is the highest risk option available for treatment of UI and mainly aim to lift and support the urethrovesical junction [1] [6-12]. As described, a wide range of active treatments are available for UI. For use in addition, or as separate measures, conservative and passive containment strategies such as toileting programs, pads etc. may be used for management of UI. Containment is important for UI patients when active treatment does not cure the problem, or is not available/possible and in patients who prefer containment over active treatment with its associated risks. This includes the use of absorbing pads, urinary catheters, external collection devices, penile clamps for men and intravaginal devices for women [1].

During the ongoing marketing of the TENA product line of incontinence products the need for easy-to-use products and solutions to support family caregivers have been identified. Typically, an absorbing incontinence product is changed three to four times per day. Changing too early leads to unutilized products being discarded and changing too late implies a risk of leakages onto garments and furniture as well as risk of moisture-associated skin damage. To provide quality care and reassure that the incontinent individual is comfortable, a family caregiver checks the saturation status of each pad on average 2-3 times between changes, a manual process involving touch-feel, looking, and/or asking that not only implies worry for the caregiver but also is an invasion of the privacy of the incontinent individual being cared for [13].

The aim of this interventional, post-market clinical investigation is to demonstrate the performance and safety of the TENA SmartCare Change Indicator as an accessory to TENA incontinence products. The primary objective is to demonstrate that use of TENA SmartCare Change Indicator has the ability to reduce the number of manual checks by informing the CGR about increasing saturation of the absorbing core. The target population for this clinical investigation is individuals suffering from UI (DEU) who are cared for in a home environment, by one "main" CGR. The clinical investigation will be conducted in compliance with Declaration of Helsinki and the most current version of ISO 14155, and all approvals (i.e. Independent Ethical Committee (IEC) approval and Competent Authority (CA) approval) will be retrieved before study initiation.

The clinical data retrieved from this clinical investigation will be evaluated and incorporated in the product Clinical Evaluation Report (CER).

6 IDENTIFICATION AND DESCRIPTION OF THE INVESTIGATIONAL DEVICE

TENA SmartCare Change Indicator is a medical device accessory that has been developed and marketed by Essity Hygiene and Health AB. TENA SmartCare Change Indicator is an assortment of wetness indicators to be used as an accessory to an absorbing hygiene product. These absorbing products are intended to be used by individuals suffering from light to heavy incontinence problems. The products can be used in a home-care environment or at institutions.

TENA SmartCare Change Indicator is a system that consists of a reusable electronic sensor and an application installed on one or more smart devices. The TENA SmartCare Change Indicator monitors the saturation level of the absorbing incontinence product by using a sensor placed on the outside of the absorbing incontinence product.

The TENA SmartCare Change Indicator user interface shows the urine saturation level of the absorbing incontinence product. Information about saturation level aids in decision support for Caregivers to know when it is time to change their Dependent End User's (DEU) absorbing incontinence product, complementing a manual check routine.

6.1 Manufacturer

Essity Hygiene and Health AB is the legal manufacturer of the TENA Smartcare Change Indicator.

Address:
Essity Hygiene and Health AB
SE-405 03 Göteborg
Sweden

6.2 Identification of clinical investigational medical device

6.2.1 Classification According to MDR

Absorbing Incontinence products are class I medical devices and TENA SmartCare Change Indicator is considered an non-invasive accessory to the Incontinence product.

The TENA SmartCare Change Indicator is CE-marked as a Medical Device and classified as Class I according to rule 1 and 11 of Annex VIII Medical Devices Regulation (EU) 2017/745.

The TENA SmartCare Change indicator is a Class A software product according to IEC 62304 and the Level of Concern for the software is minor according to FDA regulation.

6.2.2 Device Labeling

For this investigation marketed devices will be used. The devices will labelled with “exclusively for clinical investigation” (Figure 1).

English	**Polish**
Product: TENA SmartCare Change Indicator™	Produkt: TENA SmartCare Change Indicator™
Study Code: POWER	Kod badania: POWER
Description of content: The TENA SmartCare Change Indicator is an accessory to TENA absorbing incontinence products.	Opis zawartości: TENA SmartCare Change Indicator to wskaźnik zmian, dodatkiem do produktów wchłaniających TENA na nietrzymanie moczu.
Follow instructions provided by your study doctor and refer to the INSTRUCTIONS FOR USE.	Należy przestrzegać instrukcji przekazanych przez swojego lekarza prowadzącego badanie i zapoznać się z INSTRUKCJĄ UŻYCIA.
Exclusively for clinical investigation	Wyłącznie do użytku w badaniach klinicznych.
Keep out of reach of children	Przechowywać w miejscu niedostępnym dla dzieci.

Figure 1. *Labeling of the TENA SmartCare Change Indicator (not to scale). The labeling will be present as stickers put clearly visible on the SmartCare Change Indicator.*

6.3 Device traceability

The Sponsor and site personnel will keep records documenting the location of all investigational devices from shipment from Sponsor, usage by study participants, and return to sponsor (if applicable). This will be documented by a shipment log at the Sponsor and in device accountability log(s) stored at the site(s). The device accountability log at site will include the following information:

- Date, Lot No and Expiry date for each delivered device.
- Date and subject No for each used device.
- Date for each device returned to Sponsor from site (if applicable).

The investigational devices will be handled and stored safely, properly and in agreement with the storage conditions in the Instructions For Use (IFU) [14]. Returned and unused investigational devices are accounted when returned to the Sponsor.

The monitor will verify the accountability process at each site during the site monitoring visits.

6.4 Intended purpose

The TENA SmartCare Change Indicator is an accessory to absorbing incontinence products, intended for use on individual(s) suffering from urinary incontinence in a home or professional environment who are dependent on one or more caregivers to change the absorbing incontinence products. The TENA SmartCare Change Indicator estimates the degree of urine saturation in the absorbing incontinence product and notifies the care giver(s). This facilitates the care giver decision regarding when to change the absorbing incontinence product.

In this investigation the TENA SmartCare change Indicator will be used according to the its intended use and in accordance with the IFU for home care users [14].

6.5 Indication and population

The TENA SmartCare Change Indicator is intended to be used in adult patients (DEU) diagnosed with urinary incontinence, who are unable to sufficiently communicate the need to change an incontinence product to a caregiver. For this investigation the caregiver is a care giving relative (CGR) that will use the device in a home environment. Subjects participating in the investigation are to be part of the intended user population and will meet specific eligibility criteria, see section 10.3.

6.6 Technical and Functional Features

The TENA SmartCare Change Indicator System (system) is described in figure 1. The system consists of the TENA SmartCare Transmitter (transmitter) and the TENA SmartCare Sensor Strip (sensor strip). When the transmitter is combined with a sensor strip they form a reusable electronic sensor, the change indicator (Figure 2). The change indicator is attached to the outside of the absorbing incontinence product and estimates the impedance in the absorbing incontinence product. The transmitter then sends the impedance data wirelessly to the TENA SmartCare Gateway (gateway).

The gateway communicates with the TENA SmartCare Backend Services which is a cloud based solution consisting of the Device Backend Service and the Application Backend Service. The device backend acts as the communication path between the Gateway and the TENA SmartCare Applications using public cellular networks and internet infrastructure. The application Backend services are used to handle application specific services such as logins and handling of personal data used by the TENA SmartCare Change Indicator Application (app). In the application backend the saturation level is calculated using the impedance data.

In the final part of the system the user receives saturation level notifications in the user interface of the app. This notification aid the caregiver in deciding if it is time to change the absorbing incontinence product.

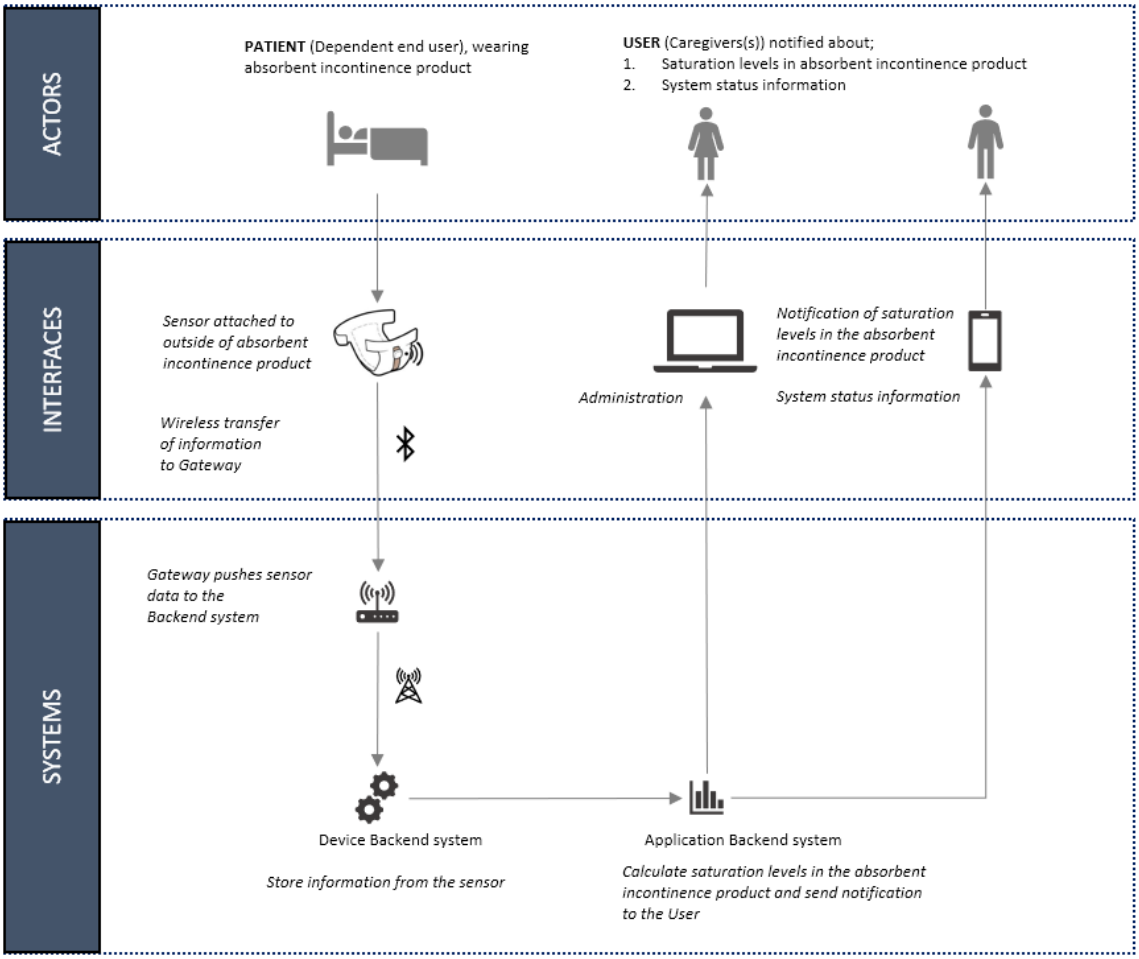

Figure 2. *The TENA SmartCare Change Indicator System*

Figure 3. *The transmitter and sensor strip is combined to a change indicator*

6.7 Manufacturing and materials

Manufacturing and packaging of the TENA SmartCare Change Indicator are all conducted by or for Essity. The TENA SmartCare Change Indicator will be manufactured according to ISO 13485:2016 quality management system.

No parts of the TENA SmartCare Change Indicator are in direct contact with the subject' tissues or body fluids. In addition, TENA SmartCare Change Indicator does not contain any medicinal products, human or animal tissues or their derivates or other biological active substances.

The only products in direct contact with the subject' tissues and body fluids are the absorbing incontinence products used during the clinical investigation. These products will be of the TENA brand, are CE-marked Class I medical devices and will be used according to their intended use. As for TENA SmartCare Change Indicator, the absorbing products do not contain any medicinal products, human or animal tissues or their derivates or other biological active substances.

6.8 Training and experience

Investigators and designated nurses will receive investigational device related training according to approved IFU prior to clinical investigation initiation to ensure that the TENA SmartCare Change Indicator and TENA incontinence products are used according to Sponsor's instructions. It is the responsibility of the Sponsor to ensure that involved staff is appropriately trained on the investigational devices.

Prior to involvement in the clinical investigation investigators and nurses will receive applicable investigational training(s), e.g. CIP content, safety reporting procedures and timelines, informed consent process and forms, regulatory requirements including Good Clinical Practice (GCP), Case Report Form (CRF) content, and content/logs etc. of the Investigator's Site File (ISF) etc. The training is conducted to ensure patient safety, compliance to approved CIP and applicable regulations/guidelines, and accuracy of obtained clinical data. The principal investigator will ensure that appropriate training relevant to the clinical investigation is given to any other site personnel involved in the investigation and that new information of relevance to the performance of the investigation is forwarded to staff involved.

CGRs participating in the trial will receive brief instructions regarding the use of the investigational devices and basic functionality. This training will take part in visit 2. Any instructions will be in line of what is given in the IFU.

6.9 Installation and use

The device does not need to be formally installed or maintained. It is to be setup and used according to its intended use as specified in the IFU for home care users [14]. In the setup of the system a gateway needs to be connected to a power outlet and an app needs to be downloaded and installed on a smartphone. In this investigation a smartphone will be provided to the subjects by the sponsor.

7 JUSTIFICATION OF CLINICAL INVESTIGATION DESIGN

This post-market clinical investigation explores topics that are important to the patient but are beyond the already established performance and safety topics for the device. Since the intended use of the device in its target population occurs in a homecare environment with the presence of at least two individuals, the family caregiver (CGR) and dependent end user (DEU), there is a need for a clinical investigation to explore the objectives of the investigation. CGRs spend considerable time and effort caring for DEUs suffering from urinary incontinence. Typically, an absorbing incontinence product is changed three to four times per day. Changing too early leads to unutilized products being discarded and changing too late implies a risk of leakages and skin irritation and redness leading to a risk of reduced quality of life for both DEU and CGR. To provide quality care and reassure that the DEU is comfortable, a CGR checks the saturation status of each incontinence product on average 2-3 times between changes, a manual process involving touch-feel, looking, and/or asking that not only implies worry for the caregiver but also is an invasion of the privacy of the DEU being cared for.

To meet the objectives the investigation has a single arm, prospective and interventional design. The DEU will act as its own control, and outcome variables for an investigational week (week 3) will be compared to the Standard of Care during a baseline week (week 1). The time period of 3 weeks is to allow for a sufficient number of product changes, to occur. The design with internal controls offers the benefit of requiring fewer DEUs to be subjected to investigation. The underlying incontinence condition is not affected by introduction of the study device. Hence, a sequential measurement series should suffice to meet study objectives.

8 RISKS AND BENEFITS OF THE INVESTIGATIONAL DEVICE AND CLINICAL INVESTIGATION

When discussing risks and benefits of a new medical device, there are different aspects that have to be considered, including the potential risks and benefits for the subjects participating in the clinical investigation and for future patients with clinical use of the new device.

The risk management related to the device has been conducted in accordance with ISO 14971:2019 and the manufactures procedure for risk management. The risk management included risk analysis and risk evaluation, risk control and pre-production and post-production review.

8.1 Anticipated clinical benefits

The anticipated benefit of the TENA SmartCare Change Indicator is that the urine saturation of an incontinence product can be monitored. Furthermore, the following clinical benefits are anticipated:

- A reduction in manual checks is anticipated which will increase the quality of life for DEU and CGR due to the reduced stress for CGR to monitor the saturation of the incontinence product. Further, the anticipated reduction in manual checks leads to decrease in disturbance and will increase the dignity for the DEU.
- Reduction in DEU skin redness and irritation due to incontinence products being changed when saturated, which limits the time spent in a saturated product.
- Reduction in leakages increases dignity and quality of life for CGR and DEU.

8.2 Anticipated adverse device effects

No adverse device effects are anticipated. During the previous clinical investigation (FUEL) no such effects were observed.

8.3 Residual risks

After the risk assessment [15] were performed, there were five residual risks remaining. Most of these risks are related to severe misuse of the device due to impaired cognitive and/or physical function, see table 1. For the POWER clinical investigation, the study will be supervised thus reducing the risk of severe misuse even further. Considering the controlled setting and applied inclusion/exclusion criteria these risks are deemed unlikely to occur. Risks have been reduced as far as possible and additional risk control measure are judged to infringe on the intended use and reduce the clinical benefit of the device. All individual risks (except the residual risks) where accepted in the risk assessment. After the risk/benefit analysis the residual risks were also accepted as it was evaluated that the benefit of the device outweighs the risks as documented in the risk management report for the device [16].

Table 1: Summary of residual risks for the TENA SmartCare Change Indicator

Risk ID	Hazard	Hazardous situation	Risk/benefit analysis
4.1	Allergic reaction causing anaphylactic shock or other symptom with fatal outcome.	Change indicator in contact with skin	The risk of having a hyper sensitive person among the users of the device are judged as very low.
39.1	Suffocation	The dependent end user may ingest the transmitter	The transmitter has been designed to be too large to easily ingest. This risk will also be present for dependent end users in a home or professional environment.
39.2	Suffocation	The dependent end user winds the sensor strip around the neck	The risks for the device are similar to that of any long thin object present in a home or professional environment. It is not possible to re-design the sensor strip without risking device performance.
39.4	Burns, Indigestion	The transmitter is opened and the battery swallowed	The battery type is common in electric appliances in society and the risks are well known. Design measures have been included to secure the battery, but the presence of the battery is necessary to achieve intended use.
39.7	Suffocation	Transmitter parts excluding battery may be ingested	It is not possible to design the components of the urine sensor to mitigate this risk without risking device performance and intended use.

8.4 Risks associated with participating in the clinical investigation

The overall risk of using absorbing incontinence products with the accessory TENA SmartCare Change Indicator is considered low. Except for the identified residual risks described in section 8.3, no specific investigation related risk has been identified.

This clinical investigation will be conducted in line with applicable regulations and ethical principles designed to safeguard study subjects. The PI will ensure that appropriate training relevant to the investigation is provided to the staff involved.

The reporting of adverse events and monitoring described in section 11 and 19 respectively, will assure early detection of any increased risk or unanticipated subject safety concerns.

8.5 Possible interactions with concomitant medical treatments

No interactions with concomitant medication treatment have been identified.

8.6 Risk control

From the possible hazards, foreseeable sequences of events and possible harms were identified, evaluated and mitigated. The following risk control measures have been used in the priority order listed:

1. Eliminate or reduce risks as far as possible (inherent safety by design).
2. Protective measures in the medical device itself or in the manufacturing process.
3. Information to the user of the residual risk due to any shortcomings of the protection measures adopted.

All risks have been reduced as far as possible, meaning that all safety principles have been applied where possible and where safety could be improved.

8.7 Risk-to-benefit rationale

The risks from all identified hazardous situations have been considered [15]. It is concluded that the clinical benefit of using the device is greater than the residual risks, and the overall residual risk associated with the product are judged to be acceptable [16]. Using the device adds no extra risk to the risk found for the absorbing incontinence products. The device is intended to be used in combination with these products. Absorbing incontinence products have been on the market for many years and showed to be low risk devices with a clear clinical benefit.

The risk management activities are in line with the risk management plan [17], the risk management procedure [18] and the requirements of the EN ISO 14971:2019 standard. The risk management have been made with regard to the general safety and performance requirements of the Medical Device Regulation 2017/745.

9 OBJECTIVES AND HYPOTHESES OF THE CLINICAL INVESTIGATION

9.1 Primary Objective

The primary objective of this clinical investigation is to demonstrate performance through the ability to reduce the number of manual checks in-between the daily changes of absorbing incontinence products using the TENA SmartCare Change Indicator compared to Standard of Care.

9.2 Secondary Objectives

The secondary objectives are to:

- Evaluate safety through analyzing device-related adverse events reported during the investigation.
- Evaluate leakage into clothes and/or bed linen.
- Evaluate change in skin redness and irritation.
- Evaluate usability.
- Evaluate the number of fecal incidences.

9.3 Hypothesis

The null hypothesis (H_0) is that there is no difference in the mean number of checks performed during the investigation week compared to the baseline week.

The alternate hypothesis (H_1) is that there is a reduction in the mean number of checks performed during the investigation week compared to the baseline week.

9.4 Claims and intended performance of the investigational device

The device has no specific claim for performance other than what is stated in its intended use and indication.

- The TENA SmartCare Change Indicator estimates the degree of urine saturation in the absorbing incontinence product and notifies the care giver. It is to be use on individual(s) suffering from urinary incontinence in a home or professional environment who are dependent on one or more caregivers to change the individual´s absorbing incontinence products.

The device has no specific claim for safety other than that it is safe to use when used as intended.

9.5 Risks and anticipated device effects

There are no anticipated device effects, the device is used in combination with an absorbing incontinence product which have the primary function to alleviate the incontinence issues suffered by the DEU. There are no unacceptable risks connected to participating in the investigation besides the residual risks reported in section 8.3.

10 DESIGN OF THE CLINICAL INVESTIGATION

10.1 General

This is a prospective, interventional, post-market clinical investigation with the aim to demonstrate the performance and safety of the TENA SmartCare Change Indicator when used as intended in subjects affected with UI compared to Standard of Care. The outcome will be evaluated and incorporated in the product specific CER and serve as a base for continuous investigations.

Thirty-five (35) DEUs with UI cared for in a home environment mainly by one CGR will be recruited in Poland.

The clinical investigation is designed to be conducted in the individuals home environment, for a duration of three (3) weeks + potential incontinence product training week (one) and potential additional days depending on the visit window scheduling. Eight visits are planned for each subject during the duration of the clinical investigation. However, two of the visits are optional and conducted as needed. If considered necessary by the investigator, nurse, or CGR, additional contacts (e.g. visits/phone calls/video calls) can be arranged. The first week will establish an individual baseline for each EDU, during which the number of manual daily checks between changes of the TENA incontinence product are to be registered by the CGR. During the second week the CGR will be provided the TENA SmartCare Change Indicator and learn how to set up and use it as intended by the manufacturer. During the third week the TENA SmartCare Change Indicator will be used as intended by the manufacturer, while the number of additional manual checks between changes of the TENA incontinence product are to be registered by the CGR. The number of manual checks will be analyzed with regard to the individual baseline in order to evaluate the reduction of manual checks.

The overall duration of the investigation is estimated to 8 months, including a 6-month recruitment period. Expected duration of each subject's participation is 3-6 weeks depending on potential incontinence product training week and potential additional days depending on the visit window scheduling.

10.1.1 Primary Endpoint

- Change in the number of manual checks in-between the daily changes of the absorbing incontinence product at week 3 (investigational week) compared to week 1 (baseline week).

10.1.2 Secondary Endpoints

- Incidence of adverse events during week 2 (learning week) and week 3 (investigational week); adverse events (AE), adverse device effects (ADE), serious adverse events (SAE), and serious adverse device effects (SADE), and device deficiency (DD).
- Change in the number of leakages into the clothes and/or bed linen at week 3 (investigational week) compared to week 1 (baseline week).
- Evaluate change in skin redness and irritation, at week 3 (investigational week) compared to week 1 (baseline week).
- Evaluate usability (questionnaire week 2 and 3).
- Evaluate the number of fecal incidences.

10.2 Investigational device(s) and comparator(s)

This is a single arm clinical investigation. The DEU will act as its own control and documented checks during the investigational week will be compared to the Standard of Care during the baseline week.

Each participating CGR will be provided with the investigational product; TENA SmartCare Change Indicator (sensor and app), as well as single use TENA incontinence products. The single use TENA incontinence products will be used during the entire study period. CGR will receive enough products throughout the clinical investigation. TENA SmartCare Change Indicator is a re-usable medical device accessory to be used with single use TENA incontinence products. TENA SmartCare Change Indicator will be provided to each participating CGR/EDU, with the assumption that one product per subject will be needed. In case of malfunction, the investigational product will be replaced. To ensure this is made in a timely manner the CGR will be provided with an extra set of transmitter and sensor strips. These will be accounted for and traced similar to all other study devices.

Within the scope of this clinical investigation, no other additional medical device or medication is required.

10.3 Subjects

10.3.1 Inclusion Criteria

The DEUs and/or CGRs must meet all of the following criteria to be eligible for this clinical investigation:

1. DEU is diagnosed with urinary incontinence managed with a tape-style incontinence product.
2. DEU is unable to sufficiently communicate the need for an incontinence product to be changed.
3. DEU is being cared for in a home environment and most of the care is provided by a main CGR.
4. DEU is willing and able to provide informed consent and to participate in the clinical investigation or has a legally designated representative willing to provide informed consent on behalf of the DEU. Note, the legally designated representative and main CGR cannot be the same person.
5. CGR is willing and able to provide informed consent to participate in the clinical investigation.
6. The CGR frequently checks the saturation level of the incontinence product, manually and/or by a touch-feel process.
7. If incontinence is managed by pharmaceuticals, the dose regime is stable.
8. DEU and CGR $\geq$ 18 years of age.

10.3.2 Exclusion Criteria

DEUs and/or CGRs meeting any of the following criteria will not be permitted to participate in the clinical investigation:

1. DEU is cared for in a professional establishment or is institutionalized.
2. DEU has $\geq$ 4 fecal ”incidences” per week.
3. DEU has severe incontinence product related skin problems, as judged by the investigator.
4. DEU has any type of urinary catheter(s) resulting in improved/treated urinary incontinence.
5. The incontinence product is changed on a routine based on time (schedule) or device alert, without manual checks.

6. Any other condition that may make participation in the clinical investigation inappropriate, as judged by investigator.
7. CGR is incapable or unwilling to use the required smartphone application and/or the diary registration webpage required for the clinical investigation.
8. Participation in an investigational study of a drug, biologic, or device within 30 days prior to entering the clinical investigation or planned during the course of the clinical investigation.
9. DEU is pregnant or nursing.
10. CGR or DEU with an alcohol or drug addiction

10.3.3 Relationship of investigation population to target population

The TENA SmartCare Change Indicator is intended to be used in adults diagnosed with urinary incontinence, who are unable to sufficiently communicate the need to change an incontinence product to a caregiver. For this investigation the caregiver is a care giving relative (CGR) that will use the device in a home environment.

10.3.4 Number of Subjects

The investigation population will be comprised of 35 DEUs suffering from UI, cared for in a home environment mainly by one CGR, and that are fulfilling all of the inclusion criteria and none of the exclusion criteria for the clinical investigation. For details linked to sample size calculations, see section 12.2.

10.3.5 Methods of Assigning Subjects to the different treatment arms

Not applicable as this is a non-randomized single arm clinical investigation.

10.3.6 Subject withdrawal or discontinuation

DEUs and/or CGRs are free to discontinue participation in the clinical investigation at any time and are not required to give a reason for their decision. However, DEUs and/or CGRs who discontinue the investigation should always be asked about the reason(s) for their discontinuation and about the presence of any AE/ADE and, if possible, be assessed by an investigator. Discontinuation from the clinical investigation will not affect the future treatment/care of the DEU or the CGR. In case a CGR withdraw from the study, the respective DEU can not participate in the study anymore.

If the DEU/CGR withdraw his/her consent no further data will thereafter be recorded. Data collected up to the date of withdrawal of informed consent will be used in the data analysis and for the Clinical investigation Report (CIR), provided that the subject and or CGR do not actively request all data to be removed.

Participants may be withdrawn from the clinical investigation and assessments at any time, if deemed necessary by the investigator.

Specific reasons for withdrawal of participants from this clinical investigation are:

- The decision of a DEU/CGR to withdraw from the investigation.
- The investigator deems the DEU/CGR unfit for the investigation or suspects poor CIP compliance.
- DEU/CGR lost to follow-up.

In case of withdrawal, all AEs/ADEs should be followed up until the event is resolved or judged as stabel by the sponsor, if possible. Applicable documentation should be returned to the Sponsor.

Incorrectly enrolled subjects will be withdrawn from further investigation and assessments. A subject may, however, continue the clinical investigation under exceptional circumstances (i.e. if continuation of investigation or follow-up are necessary for the subject's safety and wellbeing, or if only a follow-up period remain, and the continuation of the investigation is not expected to be associated with any risk or discomfort for the subject).

10.4 Clinical investigation duration

Table 1. *Overview of clinical investigation duration.*

Point of enrolment:	Q1 2021
Total expected duration of the clinical investigation:	8 months
Expected duration of each subject's participation:	3-6 weeks depending on potential incontinence product training weekand potential additional days depending on the visit window scheduling
Enrolment period:	6 months

10.5 Clinical Investigation Procedures

10.5.1 Schedule of clinical investigation procedures/assessments

The assessments and procedures that will be performed during the clinical investigation is illustrated in **Table 2** below. Further information is provided in the sections below.

Table 2. *Clinical investigation schedule for assessments and procedures.*

Clinical Investigation Visit:	**Visit 0[1]**	**Visit 1**	**Visit 2**	**Visit 3**	**Visit 4[2]**	**Visit 5**	**Visit 6[2]**	**Visit 7**
Visit time window:	*Day -7*	*Day 0 (+1-3 days)*	*Day 1 (+1-3 days)*	*Day 8 (+1-3 days)*	*1-3 days post Visit 3*	*≥ 7 completed days post Visit 3, but ≤10 completed days after Visit 3)*	*1-2 days post Visit 5.*	*≥7 completed days post Visit 5*
Visit conducted by:	*Investigator and nurse*	*Investigator and nurse*	*Nurse*	*Nurse*	*Nurse*	*Nurse*	*Nurse*	*Investigator and nurse*
Assessments and procedures:								
Informed consent DEU and witness	X	X[3]						
Informed consent CGR	X	X[3]						
Eligibility verification (DEU and CGR)	X	X[3]						
Demography (DEU and CGR)	X	X[3]						
Concomitant Medication review (DEU)	X	X	X	X	X	X	X	X
Medical and surgical history (DEU)	X	X[3]						
Evaluation of general cognitive function (DEU)	X	X[3]						
Physical examination (DEU)	X	X[3]						
Visual assessment and GLOBIAD scoring of skin redness/irritation in the body region covered by the absorbing incontinence product (DEU)	X	X		X		X		X
Pregnancy test for women of childbearing potential (DEU)	X	X[3]						X
Instruction and handover of baseline week diary		X						
Instruction and handover of single use TENA incontinence products, as required	X	X		X		X		
Confirmation of correct baseline week diary registration			X	X				
Handover of TENA SmartCare Change Indicator and instructions				X				
Instruction and handover of learning week diary				X				
Confirmation of correct use of TENA SmartCare Change Indicator					X		X	
Confirmation of correct learning week diary registration					X	X		
Instruction and handover of investigational week diary						X		
Additional support as required					X		X	
Confirmation of correct investigational week diary registration							X	X
Questionnaire completion (CGR)						X		X
Adverse Event (DEU and CGR)/Device deficiency documentation/Follow-up				X	X	X	X	X
Collection of investigational products								X
Finalization of study period								X

[1] Earlier investigation initiation for subjects not previoulsy used to TENA Incontinence products.

[2]Optional visits conducted if considered required.

[3] Will not be completed during Visit 1 for subjects who completed Visit 0.

10.5.1.1 Visit 0 (Day -7)

This visit will only be completed for subjects who have not previously used TENA incontinence products. During 7 days the subject and caregiver will develop familiarity with TENA Incontinence products to ensure representative data collection during baseline week and the remainder of the investigation. This will be the screening and baseline visit for these subjects.

The screening visit is conducted by the investigator and the designated nurse, either at the site or in the DEU's home, as considered most appropriate. The investigator will introduce the clinical investigation and explain the CIP, procedures and objectives to the potential DEU, his/her witnesses and the CGR (Note, the CGR can act as one of the DEU's witnesses. If so the CGR and one of the witnesses is the same person). The investigator will verbally inform about the investigation and provide written patient information describing the clinical investigation, potential discomforts, risks and benefits of participation. Potential DEUs, their witnesses, and their CGRs will be given adequate time for review of the patient information and time to discuss the investigation and ask questions to the investigator. Any queries that a potential DEU/witness/CGR may have regarding the investigation will be addressed appropriately by the investigator. Potential DEU and their CGR will be instructed that they are free to withdraw their consent and to discontinue their participation in the investigation at any time without prejudice. In case a DEU is considered unable to provide informed consent, e.g. due to intellectual challenges, a legally designated representative must be available and willing to provide informed consent on behalf of the subject. If the DEU and the CGR are willing to participate in the investigation, they need to sign and date the Informed Consent Form (ICF) together with the investigator who gave the verbal and written information. The original ICF will be retained in the Investigator Site File (ISF) and a copy provided to the DEU and CGR. The investigator must obtain written informed consent before any clinical investigation-related procedures are performed on the subject, for further details on the informed consent process please see section 18.

After written informed consent has been obtained the DEU and CGR are considered to be enrolled in the clinical investigation. The DEU be allocated to a unique subject identification number.

After enrollment, relevant medical/surgical history will be collected together with a review of current medication and information on the subject's (DEU) demographics. The DEU's general cognitive function will be evaluated. A physical examination will be performed on the DEU and DEUs with childbearing potential will conduct a pregnancy test. Visual assessment and GLOBIAD scoring of skin redness/irritation in the body region covered by the absorbing incontinence product will be performed on the DEU. After confirmation of the inclusion and exclusion criteria the caregiver will be provided with instructions and single use TENA incontinence products sufficient to cover the one week-training period.

At visit 0, the following assessments/procedures will be performed:

- Informed consent DEU and witness as applicable, legally designated representative in case DEU is considered unable to provide informed consent.
- Informed consent CGR.
- Eligibility verification (DEU and CGR).
- Demography (DEU and CGR).
- Medical and surgical history (DEU).
- Relevant concomitant medication (DEU).
- Evaluation of general cognitive function (DEU).
- Physical examination (DEU).
- Skin redness/irritation assessment (DEU).
- Pregnancy test (DEU with childbearing potential).

- Instruction and handover of single-use TENA incontinence products.
- Scheduling of visit 1.

10.5.1.2 Visit 1 (Day 0 (+ 1-3 days if V0 completed))

This will be the screening visit for subjects and CGRs who did not complete visit 0.
Subjects and CGRs who completed visit 0 will at this visit receive the baseline week diary, instructions for diary completion and additional single-use incontinence products as required. Further, visual assessment and GLOBIAD scoring of skin redness/irritation in the body region covered by the absorbing incontinence product will be performed on the DEU, relevant concomitant medication will be reviewed and scheduling of Visit 2 will be performed.

The screening visit is conducted by the investigator and the designated nurse, either at the site or in the DEU's home, as considered most appropriate. The investigator will introduce the clinical investigation and explain the CIP, procedures and objectives to the potential DEU, his/her witnesses and the CGR (Note, the CGR can act as one of the DEU's witnesses. If so the CGR and one of the witnesses is the same person). The investigator will verbally inform about the investigation and provide written patient information describing the clinical investigation, potential discomforts, risks and benefits of participation. Potential DEUs, their witnesses, and their CGRs will be given adequate time for review of the patient information and time to discuss the investigation and ask questions to the investigator. Any queries that a potential DEU/witness/CGR may have regarding the investigation will be addressed appropriately by the investigator. Potential DEU and their CGR will be instructed that they are free to withdraw their consent and to discontinue their participation in the investigation at any time without prejudice. In case a DEU is considered unable to provide informed consent, e.g. due to intellectual challenges, a legally designated representative must be available and willing to provide informed consent on behalf of the subject. If the DEU and the CGR are willing to participate in the investigation, they need to sign and date the Informed Consent Form (ICF) together with the investigator who gave the verbal and written information. The original ICF will be retained in the Investigator Site File (ISF) and a copy provided to the DEU and CGR. The investigator must obtain written informed consent before any clinical investigation-related procedures are performed on the subject, for further details on the informed consent process please see section 18.

After written informed consent has been obtained the DEU and CGR are considered to be enrolled in the clinical investigation. The DEU be allocated to a unique subject identification number.

After enrollment, relevant medical/surgical history will be collected together with a review of current medication and information on the subject's (DEU) demographics. The DEU's general cognitive function will be evaluated. A physical examination will be performed on the DEU and DEUs with childbearing potential will conduct a pregnancy test. Visual assessment and GLOBIAD scoring of skin redness/irritation in the body region covered by the absorbing incontinence product will be performed on the DEU. After confirmation of the inclusion and exclusion criteria the CGR will be instructed in how to fill in the baseline week diary. Before the visit is completed the CGR will receive the baseline week diary and instruction, as well as single use TENA incontinence products (sufficient to cover at least the baseline registration period) and instructions as needed.

At visit 1, the following assessments/procedures will be performed for those who did not complete visit 0:

- Informed consent DEU and witness as applicable, legally designated representative in case DEU is considered unable to provide informed consent.

- Informed consent CGR.
- Eligibility verification (DEU and CGR).
- Demography (DEU and CGR).
- Medical and surgical history (DEU).
- Relevant concomitant medication (DEU).
- Evaluation of general cognitive function (DEU).
- Physical examination (DEU).
- Skin redness/irritation assessment (DEU).
- Pregnancy test (DEU with childbearing potential).
- Instruction and handover of baseline week diary.
- Instruction and handover of single-use TENA incontinence products.
- Scheduling of visit 2.

At visit 1, the following assessments/procedures will be performed for those who completed visit 0:

- Instruction and handover of baseline week diary.
- Handover of single-use TENA incontinence products.
- Relevant concomitant medication review (DEU).
- Skin redness/irritation assessment (DEU).
- Scheduling of visit 2.

10.5.1.3 Visit 2 (Day 1 (+ 1-3 days))

Visit 2 is conducted by the designated nurse either in the DEU's home or over the phone (as agreed during visit 1). The aim of the visit is to verify that the baseline diary is correctly filled in, single-use TENA incontinence products used as intended, and all eventual questions are answered satisfactory. To avoid systematic queries, visit 2 is to be conducted as early during the baseline registration as possible, preferably during the first day of baseline registrations.

At visit 2, the following assessment/procedures will be performed:

- Confirmation of correct baseline week diary registration.
- Concomitant medication review (DEU).
- Scheduling of visit 3.

10.5.1.4 Visit 3 (Day 8 (+ 1-3 days))

Visit 3 is conducted by the designated nurse in the DEU's home. Correctness of baseline week diary registrations will be confirmed. Visual assessment and GLOBIAD scoring of skin redness/irritation in the body region covered by the absorbing incontinence product will be performed on the DEU. All AEs/ADEs and/or DDs will be documented and followed-up. The TENA SmartCare Change Indication (sensor and app) and applicable instruction (IFU), learning week diary, and additional single use TENA incontinence products will be provided.
Before completion of visit 3, the designated nurse shall assure that the CGR understands how to install and use the investigational product.

At visit 3, the following assessment/procedures will be performed:

- Confirmation of correct baseline week diary registration.
- Concomitant medication review (DEU).
- Skin redness/irritation assessment (DEU).
- Documentation of AE/ADE (DEU and CGR).

- Handover of TENA SmartCare Change Indicator (including instruction/training/verification of understanding).
- Instruction and handover of learning week diary.
- Handover of single use TENA incontinence products.
- Scheduling of Visit 4/5, as applicable.

10.5.1.5 Visit 4 (1-3 days post Visit 3)

Visit 4 is an optional visit conducted as required with the aim to provide additional support to involved participants. The visit is conducted by the designated nurse either in the DEU's home or over the phone/video call. The study nurse shall verify that the TENA SmartCare Change Indicator is used as intended and provide support as needed. If conducted the nurse will also verify that the learning week diary is correctly filled in.

At visit 4, the following assessment/procedures will be performed:

- Additional support as required.

In case the visit is conducted the following will also be investigated:

- Confirmation of correct learning week diary registration.
- Concomitant medication review (DEU).
- Correct use of TENA SmartCare Change Indicator.
- Documentation of AE/ADE and DD if applicable
- Scheduling of Visit 5.

10.5.1.6 Visit 5 (≥ 7 completed days post Visit 3, but ≤ 10 completed days after Visit 3)

Visit 5 is conducted by the designated nurse in the DEU's home. Correctness of learning week diary registrations will be confirmed. Visual assessment and GLOBIAD scoring of skin redness/irritation in the body region covered by the absorbing incontinence product will be performed on the DEU. All AEs/ADEs and/or DDs will be documented and followed-up. Investigational week diary and instruction, and additional single use TENA incontinence products provided as applicable.

At visit 5, the following assessment/procedures will be performed:

- Confirmation of correct learning week diary.
- Concomitant medication review (DEU).
- Skin redness/irritation assessment (DEU).
- Documentation/follow-up of AEs/ADEs (DEU and CGR) and DDs as applicable.
- Instruction and handover of investigational week diary.
- Handover of single use TENA incontinence products.
- Scheduling of visit 6/7, as applicable.
- Questionnaire completion (CGR);
    - Usability

10.5.1.7 Visit 6 (1-2 days post visit 5)

Visit 6 is an optional visit conducted as required with the aim to provide additional support to involved participants. The visit is conducted by the designated nurse either in the DEU's home or over the phone/video call. If conducted the nurse will verify that the TENA SmartCare Change Indicator is used as intended and provide support as needed. The nurse will also verify that the investigational week diary is correctly filled in.

At visit 6, the following assessment/procedures will be performed:
- Additional support as required.

In case the visit is conducted the following will also be investigated:
- Confirmation of correct investigational week diary registration.
- Concomitant medication review (DEU).
- Correct use of TENA SmartCare Change Indicator.
- Documentation of AEs/ADEs (DEU and CGR) and DDs, or follow-up as applicable.
- Scheduling of visit 7, as applicable.

10.5.1.8 Visit 7 (≥7 completed days post Visit 5)

Visit 7 is conducted by the investigator and nurse in the DEU's home or at site. Correctness of investigational week diary registrations and applicable questionnaires filled in by the CGR, will be confirmed. Visual assessment and GLOBIAD scoring of skin redness/irritation in the body region covered by the absorbing incontinence product will be performed on the DEU. All AEs/ADEs and/or DDs will be documented and followed-up, as applicable. After completion of visit 7 the DEU and CGR will finish the clinical investigation.

At visit 7, the following assessment/procedures will be performed:
- Confirmation of correct investigational week diary registration.
- Concomitant medication review (DEU).
- Skin redness/irritation assessment (DEU).
- Documentation of AEs/ADEs (DEU and CGR) and DDs, or follow-up as applicable.
- Finalization of study period.
- Collection of investigational products.
- Pregnancy test (DEU with childbearing potential).
- Questionnaire completion (CGR);
    - Whether the TENA SmartCare Change Indicator facilitates the decision to change the TENA incontinence product
    - Likelihood of continued use of the TENA SmartCare Change Indicator.
    - Usability

10.5.1.9 Unscheduled visits/contacts

If deemed necessary for any reason, e.g. additional support or AEs/ADEs, unscheduled visits may be conducted within the course of the clinical investigation. Unscheduled visits may be conducted at site or in the home of the DEU. In addition, unscheduled telephone/skype contacts may be conducted as required. All unscheduled visits shall be documented in the CRF and medical notes, as applicable.

10.5.2 Demographic Data and Baseline Measurements

10.5.2.1 Demographic data

At screening visit the following demographic data is to be collected for DEU and CGR: date of birth (documented according to country specific requirements, if any) and gender.

10.5.2.2 Medical and surgical history

During visit 1 relevant medical and surgical history will be elicited for each DEU. The medical history will assess the DEU for any disqualifying medical conditions as specified in the exclusion criteria.

10.5.2.3 Evaluation of general cognitive function

During Visit 1 the PI will evaluate the general cognitive function of the DEU i.e.: no cognitive impairment, mild cognitive impairment or severe cognitive impairment.

10.5.2.4 Physical examination

A comprehensive physical examination will be obtained for the DEU at visit 1.

10.5.2.5 Pregnancy test for women of childbearing potential

At visit 1 pregnancy test will be obtained for all women of childbearing potential judged by the investigator. In case a potential DEU is pregnant, the subject is considered ineligible and will be exited from further participation in the clinical investigation.

10.5.3 Performance Variables and Measurements

10.5.3.1 Diary completion

Three different diaries will be filled out and completed by the CGR; Baseline diary, learning week diary, and investigational week diary. Number of manual checks in-between the daily changes of the absorbing incontinence product are to be documented continuously throughout the day. The investigational week diary will be compared to the baseline week diary.

The following data will be documented in the diary:

- Number of manual checks in-between the daily changes of the absorbing incontinence product
- Leakage into clothes and/or bed linen
- Fecal incidences
- Concomitant medication

10.5.3.2 Questionnaires

Questionnaires are to be completed by the CGR at visit 5 and 7 and will evaluate the following:

- Whether the TENA SmartCare Change Indicator facilitates the decision to change the TENA incontinence product (V7)
- Likelihood of continued use of the TENA SmartCare Change Indicator (V7)
- Perceived wellbeing and comfort of DEU (V7)
- Usability (V5 and V7)

10.5.3.3 Visual assessment and scoring of skin redness/irritation in the body region covered by the absorbing incontinence product

During visit 0, 1, 3, 5 and 7 visual assessment and GLOBIAD scoring of skin redness/irritation in the body region covered by the absorbing incontinence product will be performed for the DEU [19].

10.5.4 Safety Variables and Measurements

All incidences of adverse events (DEU and CGR) and device deficiencies will be documented and reported during the course of the clinical investigation. Adverse events will be documented as adverse events AE, ADE, SAE, and SADE. For details related to adverse event definitions or reporting see section 11.

All events will be followed up until resolved or judged as clinically stable according to the investigator, if possible.

10.5.5 Activities performed by Sponsor

The Sponsor is responsible for device training of involved personnel. Device training will be documented in applicable training logs.

Sponsor is also responsible for reporting of device deficiencies discovered by the sponsor.

Reporting of SAEs according to section 19.4.

10.5.6 Potential Confounding Factors

- Use of TENA single-use incontinence product prior to the clinical investigation.
- Concomitant medications that could potentially affect urination.
- Subjects with regular fecal incidents.
- Illnesses occurring during the investigational period.

11 MONITORING PLAN

A detailed description of the monitoring activities will be explained in investigation specific monitoring manual.

11.1 Subject Records and Source Data

Subject data recorded directly in the eCRF, eDiaries, and eQuestionnaires and not into the medical record, will be considered as source data. It is the responsibility of the PI to record essential information in the medical records, in accordance with national regulations and requirements. The origin of the source data in this clinical investigation will be further specified in a separate document ("Origin of Source Data").
In general, the following information shall be recorded in the medical records:

- Clinical investigation code.
- Subject identification number.
- That informed consent for participating in the clinical investigation was obtained and when.
- Diagnosis.
- All visits during the investigation period.
- All AEs/ADEs/DDs.
- Treatments and medications.

The PI is responsible for ensuring the accuracy; completeness, legibility and timeliness of the data recorded in the eCRFs, while the CGR is responsible for the data recorded in the eDiaries, and eQuestionnaires. Completed sections of eCRFs, eDiaries, and eQuestionnaires will be monitored on regular basis.

11.2 Access to Source Data and Documentation

The PI should guarantee access to source documents for the monitor and auditors as well as for inspection by appropriate regulatory agencies, and the IEC, if required.

12 STATISTICAL CONSIDERATIONS

12.1 Statistical design, method and analytical procedures

If nothing else is stated, descriptive statistics will be given for each variable in the trial. This means number of subjects (n), mean, median, standard deviation (SD), minimum (min) and maximum (max) values will be presented for continuous data and frequencies and percentages for categorical data. The level of significance is similar for all variables and specified in section 12.3. The primary variable is the percentage change of the number of manual checks between week 1 and week 3 of the trial. A one-tailed paired t-test will be used to test if the number of manual checks have been reduced relative to week 1. If the variable is not normally distributed the non-parametric Wilcoxon signed-rank test will be used and in case of a significant result, a one-sided 95% confidence interval will be constructed for the percentage change in checks between week 1 and week 3 to validate at least a 30% reduction.

For the secondary variable change in number of leakages between week 1 and week 3. The The analysis is to determine if there is a significant difference in leakages. A paired t-test will be used for comparison. If the variable is not normally distributed a non-parametric Wilcoxon signed rank test will be used.

The secondary variable change in skin redness/irritation between week 1 and 3. This variable is evaluated using the Ghent Global IAD Categorisation Tool (GLOBIAD) [19]. GLOBIAD is a categorisation tool to monitor IAD prevalence and incidence. IADs can be scored as 1A, 1B, 2A and 2B. The analysis is to determine if there is a significant difference in scoring between the time points. A paired t-test will be used for comparison. If the variable is not normally distributed a non-parametric Wilcoxon signed rank test will be used. For this variable it is possible we cannot detect any difference due to the short time period.

For the secondary variable number of fecal incidences per week in the trial, the analysis is to determine if there is significant difference in incidences per week. A non-parametric Wilcoxon signed rank test will be used for comparison.

There are also safety and usability endpoints in the trial however these are only to be covered by descriptive and summary statistics.

12.2 Sample size

The sample size calculation is based on the assumption of a reduction of the number of manual checks in-between incontinence product changes by 30%. Based on data from [20] and the statistical power in section 12.3 this give a sample size of 24 subjects. Assuming a 30% dropout rate, the investigation will include up to 35 subjects. If for any reason the dropout rate should be higher than this, additional subjects might be enrolled in the investigation to reach a total of 24 completed subjects.

12.3 Level of significance and power

The level of statistical significance is set to 0.05 The level of statistical power is set to 90% for the primary endpoint.

12.4 Drop-out rates

A drop-out rate of 30% as been assumed based on previous experience. However, due to limited knowledge, actual dropout rate is difficult to estimate.

12.5 Pass/fail criteria

To reduce the number of manual checks by more than 30% between the daily change of absorbing incontinence products using the TENA SmartCare Change Indicator compared to Standard of Care. Checks will be documented in diaries completed by the CGR.

12.6 Interim analysis

No interim analysis is currently planned in the clinical investigation.

12.7 Criteria for termination on statistical grounds

Study termination based on statistical reason is not foreseen.

12.8 Reporting of deviations from the original Statistical Analysis Plan (SAP)

Any deviation(s) from the original SAP will be described and justified in a CIP Amendment and/or in a revised SAP and/or in the final report, as appropriate.

12.9 Subgroups for analysis

Subgroup analysis is not possible due to the low number of subjects included in this clinical investigation.

12.10 Missing, unused or spurious data

Outliers will be included in summary tables and listings and will not be handled separately. Available data from prematurely withdrawn subjects will be included in the analysis as far as possible. Missing data will not be analyzed.

12.11 Exclusion of particular information from the testing of the hypothesis

No exclusions of this kind is planned to be performed.

13 DATA MANAGEMENT

Data management and handling will be conducted according to the investigation specific Data Management Plan (DMP) in accordance with applicable guidelines and CRO's Standard Operating Procedures (SOPs). Any deviations, i.e. discrepancies and additions from the process defined in the DMP, will be described in an investigations specific Data Management Report (DMR).

Data will be collected in eCRFs specifically designed for this clinical investigation. The PI or an authorized person will record subject data in the CRF in a precise and accurate manner. Abbreviations should not be used. The investigator is responsible for the data entered and sign off the CRF at the end of the clinical investigation. The data should be recorded as soon as they are generated.

The person entering data into the database is not allowed to attempt any personal interpretation or to make any decisions on the data other than self-evident corrections as listed in the Data Entry Instructions or Data Handling Report. Single data entry type will be applied. Data required to determine eligibility for investigation participation will be collected in the database for screening failures.

Data validation / data cleaning procedures are designed to assure validity and accuracy of clinical data. These procedures consist of manual reviewing during data entry and computerized edit checks and queries for identifying data values that are outside the allowed range, CIP deviations, incomplete or inconsistent. The Data Validation Plan (DVP) specifies the checks that are to be performed on subject data for the clinical investigation. All investigation-specific and standard data validation programming will be tested in a separate testing environment prior to use on production data.

When all data from all endpoints of all study participants have been entered, discrepancies solved and all reconciliation with the safety database is complete, the database will be locked, and the data will be analyzed.

13.1 Data Retention

The medical files of clinical investigation subjects must be retained in accordance with local legislation and in accordance with the maximum period of time permitted by the hospital, institution or private practice.

The investigator shall retain all clinical investigation records during the investigation and for the period required by the applicable regulatory requirements or for at least 10 years after the premature termination or completion of the clinical investigation, whichever is the longer. The PI must take measures to prevent accidental or premature destruction of these documents. The PI should contact the sponsor prior to destruction of any records or reports pertaining to the clinical investigation in order to ensure they no longer need to be retained. In addition, if the PI leaves the hospital, he/she should provide the sponsor with the name and address of the person who will look after and be responsible for the clinical investigation-related records. If the records will be transferred to another person/party, the transfer will be documented at the investigation site and/or at the Sponsor.

13.2 Monitoring, Audits and Inspections

During the investigation, the monitor will have regular contacts with the investigation site. These contacts will include visits to confirm that the facilities remain adequate to specified standards and that the investigation team is carrying out the procedure stated in the CIP. All data must be accurately recorded in the eCRF. Source Data Verification (SDV), a comparison of data in the eCRF with the subject's medical records and other records at the investigation site, will also be performed. The eCRF and source documents and records must be made accessible during the visit.

The monitor or other Sponsor personnel/representatives will be available between visits if the PI or other investigation staff at the site needs information and/or advise. Authorized representatives of the Sponsor and/or Competent Authority (CA) may visit the site to perform audits/inspections, including SDV.

14 AMENDMENTS TO THE CIP

Any change to the approved clinical investigation documents will be documented and include a written justification. Any effects of the implemented changes on other clinical investigation documents shall be evaluated and documented. If deemed necessary, affected documents shall be properly updated and relevant parties notified. The version number and date of amendments shall be documented.

Proposed amendments to the CIP shall be agreed upon between the Sponsor and the PI. The amendments to the CIP shall be notified to, or approved by, the IEC and CA, if required.

All amendments to the CIP will be documented in an amendment log and communicated to relevant parties.

15 DEVIATIONS FROM THE CIP

A CIP deviation is a failure to follow, intentionally or unintentionally, the requirements of the CIP. Every effort should be made to comply with the requirements of the CIP and the investigator is not allowed to deviate from the CIP.

As required by national regulations or guidelines, requests for deviations and reports of deviations will be provided to the IEC if the deviation affects subject's rights, safety and well-being, or the scientific integrity of the clinical investigation.

Under emergency circumstances deviations from the CIP may proceed without prior approval by the Sponsor and favorable opinion of the IEC if the rights, safety and well being of human subjects need to be protected. Such deviations will be documented and reported to the Sponsor and IEC as soon as possible in accordance with national regulations.

When the monitor or Sponsor identifies that the PI is out of compliance, this will be notified to the PI in writing, with a request to correct the source of the deviation immediately. Corrective action will be implemented to avoid repeated non-compliance, which will usually include re-training and may include termination of the clinical investigation at the site.

The Sponsor is responsible for analyzing deviations and assessing their significance. Corrective actions will be implemented to avoid repeated deviations, which may include suspending the clinical investigation, or disqualifying the PI.

16 DEVICE ACCOUNTABILITY

As also specified in section 6.3 the Sponsor and the PI will keep records documenting the location of all investigational devices from shipment of investigational devices to the investigation sites until return. This will be documented by a shipment log stored at the Sponsor and in a device accountability log at the investigation site. The device accountability log at site will include information on: date, lot no, list of delivered devices, date and subject identification for used devices, and date and lot no of devices returned.

The monitor will verify the accountability process during the site monitoring visits.

17 STATEMENTS OF COMPLIANCE

This clinical investigation will be conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki (Appendix B). Furthermore, the clinical investigation will be conducted in compliance with the latest version of the ISO 14155 standard, Medical Device Regulation (MDR) 2017/745 and applicable regional or national regulations.

17.1 Institutional Ethics Review

The final CIP, including the final version of the ICF, must be approved or given favorable opinion in writing by an IEC, and CA if applicable, before enrolment of any subject into the clinical investigation. The PI is responsible for informing the IEC of any amendment to the CIP as per local requirements.

Any additional requirements imposed by the IEC or CA shall be followed.

17.2 Insurance

The Sponsor will be responsible for ensuring adequate insurance covering any injuries to the subject caused by the investigational medical device.

18 INFORMED CONSENT PROCESS

All DEUs and CGRs will receive written and verbal information regarding the investigation prior to any investigation-related procedures. This information will emphasize that participation in the investigation is voluntary and that it is possible to withdraw from the investigation at any time and for any reason. If any new important information occurs during the clinical investigation the DEU and CGR will be informed both orally and in writing. All DEUs and CGRs will be given the opportunity to ask questions about the investigation and will be given sufficient time to decide whether to participate in the investigation or not. For subjects able to understand the procedures and give verbally consent, but have difficulties to sign the form, presence of two impartial witnesses is required. The two witnesses shall be present during the informed concent process and sign off and verify that the DEU has received sufficient information and responses to eventual questions related to the clinical investigation. One of the witnesses is usually a family member. In this clinical investigation the CGR can act as witness for the DEU and thereby sign off both as witness and as CGR. The other witness is usually a non-study team medical professional from the investigational site. For subjects incapable to sign off on the informed consent, e.g. due to intellectual challenges, a legally designated representative must be available and sign off on behalf of the subject. If no legally designated representative is available, the vulnerable subject cannot participate in the clinical investigation.

The written subject information explains that the data will be stored in a computer database (located within the EU), maintaining confidentiality in accordance with national data legislation, and that authorized representatives of the Sponsor, CA or any IEC may require direct access to those parts of the medical records relevant to the investigation, including medical history, for verification of data.

Additionally, the written information specifies that data will be recorded, collected, processed and may be transferred (to either EEA countries and/or non-EEA countries). If data is transferred to a non-EEA country, it will be confirmed that the country has an adequate level of data protection according to decision by the EU Commission or through referring to appropriate safeguards. In accordance with the EU General Data Protection Regulation (GDPR), the data will not identify any persons taking part in the investigation.

Before any investigation-related procedures are initiated, informed consents will be signed and dated by the DEU, the witnesses or legally designated representative as applicable, the CGR, and the investigator who gave the verbal and written information.

19 ADVERSE EVENTS, ADVERSE DEVICE EFFECTS AND DEVICE DEFICIENCIES

The definitions and procedures for reporting Adverse Events (AE), Adverse Device Effects (ADE), Serious Adverse Events (SAE), Serious Adverse Device Effects (SADE) and Unanticipated Serious Adverse Device Effects (USADE) are presented in the subsections below. It is of utmost importance that all staff involved in the investigation is familiar with the definitions and procedures and it is the responsibility of the PI to ensure this.

19.1 Definitions

The definitions below originate from the ISO/FDIS 14155(E).

Adverse Event (AE)

Untoward medical occurrence, unintended disease or injury, or any untoward clinical signs (including an abnormal laboratory findings) in subjects, users or other persons, whether or not related to the investigational medical device and whether anticipated or unanticipated

Note 1: This definition includes events related to the investigational medical device or the comparator.

Note 2: This definition includes events related to the procedures involved.

Note 3: For users or other persons, this definition is restricted to events related to the use of investigational medical devices.

Adverse Device Effect (ADE)

Adverse event related to the use of an investigational medical device.

Note 1: This definition includes adverse events resulting from insufficient or inadequate instructions for use, deployment, implantation, installation, or operation, or any malfunction of the investigational medical device.

Note 2: This definition includes any event resulting from use error or from intentional misuse of the investigational medical device.

Note 3: This includes comparator if the comparator is a medical device.

Device Deficiency (DD)

Inadequacy of a medical device with respect to its identity, quality, durability, reliability, usability, safety or performance.

Note 1: Device deficiencies include malfunctions, use errors, and inadequacy in the information supplied by the manufacturer including labelling.

Note 2: This definition includes device deficiencies related to the investigational medical device or the comparator.

Serious Adverse Event (SAE)

Adverse event that led to any of the following:

a) death,
b) serious deterioration in the health of the subject, users, or other persons as defined by one or more of the following:

- a life-threatening illness or injury, or
- a permanent impairment of a body structure or a body function including chronic diseases, or
- in-patient or prolonged hospitalization, or
- medical or surgical intervention to prevent life-threatening illness or injury, or permanent impairment to a body structure or a body function,

c) foetal distress, foetal death, congenital abnormality, or birth defect including physical or mental impairment.

Note 1: Planned hospitalization for a pre-existing condition, or a procedure required by the CIP, without serious deterioration in health, is not considered a serious adverse event.

Serious Adverse Device Effect (SADE)

Adverse device effect that has resulted in any of the consequences characteristic of a serious adverse event.

Serious health threat

Signal from any adverse event or device deficiency that indicates an imminent risk of death or a serious deterioration in the health in subjects, users or other persons, and that requires prompt remedial action for other subjects, users or other persons.

Note 1: This would include events that are of significant and unexpected nature such that they become alarming as a potential serious health hazard or possibility of multiple deaths occurring at short intervals.

Unanticipated Serious Adverse Device Effect (USADE)

Serious adverse device effect which by its nature, incidence, severity or outcome has not been identified in the current risk assessment

Note 1: Anticipated serious adverse device effect (ASADE) is an effect which by its nature, incidence, severity or outcome has been identified in the risk assessment.

19.2 Methods for discovering and documenting AE/ADE

All subjects will be carefully monitored for the occurrence of AEs throughout the clinical investigation, from enrollment to completion the clinical investigation. Events prior to enrollment will be considered medical history. The investigator will collect safety information using non-leading questions such as “have you experienced any new health problems or worsening of existing conditions?” Events directly observed or spontaneously volunteered by subjects will also be recorded throughout the clinical investigation.

Clearly related signs, symptoms and abnormal diagnostic procedure results should be grouped together and reported as a single diagnosis or syndrome whenever possible.

All AEs, including but not limited to events reported by the subject or reported in response to an open question by the PI or member of the investigation team, which fall into any of the previously defined definitions must be recorded as an AE in the CRF and should include the following information:

- Brief description of the event (diagnosis).
- Date of event onset (and time, if relevant).

- Date of event resolution (and time, if relevant).
- Severity.
- Seriousness.
- Causality assessment (i.e. relationship to medical device and/or procedure).
- Event treatment.
- Event outcome.

If the AE meets seriousness criteria it should be subject to expedited reporting as described in section 19.4.

19.2.1 Severity

Severity describes the intensity of an AE and will be assessed as:

1. Mild: asymptomatic or mild symptoms; clinical or diagnostic observations only; intervention not indicated.
2. Moderate: minimal, local or non-invasive intervention indicated, limiting age-appropriate instrumental activities of daily living.
3. Severe or medically significant but not immediately life-threatening: hospitalization or prolongation of hospitalization indicated; disabling; limiting self care activities of daily living.
4. Life-threatening consequences; urgent intervention indicated.
5. Death related to AE.

If an AE changes in severity, it should be reported as an AE of new severity but with the same description and identifier.

19.2.2 Causality

Causality is the relationship between the use of the medical device (including the investigational device and the medical – surgical procedure) and the occurrence of each AE.

During causality assessment activity, clinical judgment shall be used and the relevant documents, such as the Investigator Brochure (IB), the CIP or the risk analysis report shall be consulted, as all the foreseeable serious adverse events and the potential risks are listed and assessed there. The presence of confounding factors, such as concomitant medication/treatment, the natural history of the underlying disease, other concurrent illness or risk factors shall also be considered.

For the purpose of harmonizing reports, each SAE will be classified according to five different levels of causality. The sponsor and the investigator will use the following definitions to assess the relationship of the SAE to the investigational medical device or procedures:

a) Not related: relationship to the device or procedures can be excluded when:
   - The event is not a known side effect of the product category the device belongs to or of similar devices and procedures;
   - The event has no temporal relationship with the use of the investigational device or the procedures;
   - The serious event does not follow a known response pattern to the medical device (if the response pattern is previously known) and is biologically implausible;
   - The discontinuation of medical device application or the reduction of the levels of activation/exposure – when clinically feasible – and reintroduction of its use (or increase of the level of activation/exposure), do not impact on the serious event;
   - The event involves a body-site or an organ not expected to be affected by the device or procedure;

- The serious event can be attributed to another cause (e.g. an underlying or concurrent illness/clinical condition, an effect of another device, drug, treatment or other risk factors);
- The event does not depend on a false result given by the investigational device used for diagnosis when applicable;
- Harms to the subject are not clearly due to use error;
- In order to establish the non-relatedness, not all the criteria listed above might be met at the same time, depending on the type of device/procedures and the serious event.

b) Unlikely: the relationship with the use of the device seems not relevant and/or the event can be reasonably explained by another cause, but additional information may be obtained.

c) Possible: the relationship with the use of the investigational device is weak but cannot be ruled out completely. Alternative causes are also possible (e.g. an underlying or concurrent illness/clinical condition or/and an effect of another device, drug or treatment). Cases were relatedness cannot be assessed or no information has been obtained should also be classified as possible.

d) Probable: the relationship with the use of the investigational device seems relevant and/or the event cannot reasonably be explained by another cause, but additional information may be obtained.

e) Causal relationship: the serious event is associated with the investigational device or with procedures beyond reasonable doubt when:
   - The event is known side effect of the product category the device belongs to or of similar devices and procedures;
   - The event has a temporal relationship with investigational device use/application or procedures;
   - The event involved a body-site or organ that

f) The investigational device or procedures are applied to;

g) The investigational device or procedures have an effect on;
   - The serious event follows a known response pattern to the medical device (if the response pattern is previously known);
   - The discontinuation of medical device application (or reduction of the level of activation/exposure) and reintroduction of its use (or increase of activation/exposure), impact on the serious event (when a clinically feasible);
   - Other possible causes (e.g. an underlying or concurrent illness/clinical condition or/and an effect of another device, drug or treatment) have been adequately ruled out;
   - Harm to the subject is due to error in use;
   - The event depends on a false result given by the investigational device used for diagnosis, when applicable;
   - In order to establish the relatedness, not all the criteria listed above might be met at the same time, depending on the type of device/procedures and the serious event.

The Sponsor and the investigator will distinguish between the AEs related to the investigational device and those related to the procedures (any procedure specific to the clinical investigation). An AE can be related to both the procedures and the device. Complications of procedures are considered not related if the said procedures would have been applied to the subjects also in the absence of device use/application.

Particular attention shall be given to the causality evaluation of USADE, since the occurrence of USADE could suggest that the clinical investigation places subjects at increased risk of harm than was expected beforehand.

In case of disagreement between the Sponsor and the PI assessments of the AE, both opinions shall be communicated to concerned parties.

19.3 Methods for discovering and documenting Device Deficiencies

Inadequacy of a medical device with respect to its identity, quality, durability, reliability, safety or performance shall be reported as a device deficiency without unnecessary delay to the Sponsor by using the device deficiency form. It is the PI's responsibility to record every observed device deficiency together with an assessment. The sponsor will monitor the devices used in the investigation in order to discover DDs that may not be noticable to the PI och subjects. The Sponsor shall review all DDs and determine and document in writing whether they could have led to a SADE. Device Deficiencies that are assessed to or have SADE potential should be subjected to expedited reporting as described in section 19.4. As determined by sponsor, the devices subjected to DDs are to be replaced with new devices.

19.4 Reporting of SAE/SADE and Device Deficiencies with SADE potential

All SAEs, whether or not related to the investigational medical device or procedure involved shall be entered into the eCRF.

The following events are considered reportable events according to MDR 2017/745:

a) Any SAE that has a causal relationship with the investigational device, the comarator or the investigation procedure or where such causal relationship is reasonably possible;
b) Any Device Deficiency that might have led to a SAE if:
    a. appropriate action had not been taken, or
    b. intervention had not occurred, or
    c. circumstances had been less fortunate.
c) Any new findings in relation to any event referred to in points a) and b).

The above must be reported to the Sponsor immediately, without unneccary delay, after investigational site investigation personnel's awareness of the event, regardless of the time that may have elapsed from the time the event occurred.

The initial report should contain as much information as possible, but as a minimum the following information:

- Subject identification.
- Site contact information.
- Date of procedure/first use.
- Date of event onset.
- Event type (i.e. SAE or DD with SADE potential).
- Description of event.
- Action/treatment/subject outcome.
- Relationship to investigation procedure.
- Relationship to medical device.
- Unanticipated SADE (Yes/No).
- Treatment Arm.
- Event status.

The Sponsor must also promptly receive a completed report. All SAEs have to be reported whether or not they are considered causally related to the investigational medical device.

SAE/SADE EMERGENCY CONTACT DETAILS
Name: Romana Stefek
Address: Essity Hygiene and Health AB, SE-405 03 Göteborg, Sweden
Phone:
E-mail:

Since this is a post-market clinical investigation all reportable events will be handled according to the Sponsors vigilance system and in accordance with MDR 2017/745.

19.5 Data Monitoring Committee

Establishment of a Data Monitoring Committee (DMC) is not considered necessary for this post-market clinical investigation as 1) the investigation duration for the subjects are short 2) there will be only one investigational site and 3) the risk analysis indicates no need for a DMC. In case data retrieved during the clinical investigation contradicts this decision, it might be reconsidered.

20 Vulnerable population

In this clinical investigation DEUs unable to give informed consent, e.g. due to intellectual challenges may be included. This vulnerable group of subjects can only be included in the clinical investigation if they have a legally designated representative available and willing to sign off on behalf of the DEU. In case any DEU unable to sign off on informed consent is included in the clinical investigation, the DEU shall receive sufficient information related to the clinical investigation up to the level of the DEUs understanding. The DEUs reluctancy to participate should as much as possible be respected. A specific Patient Information Sheet and Informed Consent Form for sign off by legally designated representatives will be developed.

No specific additional medical care will be provided to the study subjects (DEUs) after completion of the clinical investigation.

21 SUSPENSION OR EARLY TERMINATION OF THE CLINICAL INVESTIGATION

If the investigation is terminated early or suspended due to reasons of safety, the Sponsor will promptly inform the PI and the investigation site of the termination or suspension and the reason(s) thereof. The IEC will also be informed promptly and provided with the reason(s) for the termination or suspension by the Sponsor or by the PI/investigation site.

In addition, CIP violations may result in termination of the clinical investigation at a site. CIP violations are deviations made without permission as a result of error or fraud/misconduct. Where the monitor or Sponsor identifies that the PI is out of compliance, this will be noted to the PI in writing, with a request to correct the source of the deviation immediately. Corrective actions will be implemented to avoid repeated non-compliance, including re-training. However, in case of repeated non-compliance despite implemented corrective actions, the clinical investigation will be terminated at the site.

21.1 Criteria for breaking the blinding code

Not applicable, as this is a non-randomized single arm clinical investigation.

21.2 Subject follow-up

If the clinical investigation is prematurely terminated, the Sponsor and the PI will assure that adequate consideration is given to the protection of subjects' interest, including subject follow-up, e.g. ongoing AEs/ADEs, or subjects becoming pregnant during the course of the clinical investigation (if applicable).

22 PUBLICATION POLICY

The clinical investigation will be registered in a publicly accessible database before recruitment of the first subject.

A final report of the investigation, a Clinical Investigation Report (CIR), will be completed, even if the investigation is prematurely terminated. The report will be prepared by the Sponsor according to the guideline presented in Annex D of ISO 14155:2020. All publications and presentations must be based upon the CIR.

All information supplied by the Sponsor in connection with this investigation will remain the sole property of the Sponsor and is to be considered confidential information. No confidential information will be disclosed to others without obtaining prior written consent from the Sponsor and will not be used except in the performance of this investigation.

The Sponsor may choose to publish or present data from this investigation. If a PI is offered first authorship, he/she will be asked to comment and approve the publication. The Sponsor has the right to use the results for registration and internal presentation and for promotion.

23 REFERENCES

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24 APPENDICES

24.1 Appendix A – Clinical Investigation Contact List

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24.2 Appendix B – Declaration of Helsinki

WORLD MEDICAL ASSOCIATION DECLARATION OF HELSINKI
Ethical Principles for Medical Research Involving Human Subjects

Adopted by the 18th WMA General Assembly, Helsinki, Finland, June 1964, and amended by the:
29th WMA General Assembly, Tokyo, Japan, October 1975
35th WMA General Assembly, Venice, Italy, October 1983
41st WMA General Assembly, Hong Kong, September 1989
48th WMA General Assembly, Somerset West, Republic of South Africa, October 1996
52nd WMA General Assembly, Edinburgh, Scotland, October 2000
53rd WMA General Assembly, Washington, DC, USA, October 2002 (Note of Clarification added)
55th WMA General Assembly, Tokyo, Japan, October 2004 (Note of Clarification added)
59th WMA General Assembly, Seoul, Republic of Korea, October 2008
64th WMA General Assembly, Fortaleza, Brazil, October 2013

PREAMBLE

1. The World Medical Association (WMA) has developed the Declaration of Helsinki as a statement of ethical principles for medical research involving human subjects, including research on identifiable human material and data.

   The Declaration is intended to be read as a whole and each of its constituent paragraphs should be applied with consideration of all other relevant paragraphs.

2. Consistent with the mandate of the WMA, the Declaration is addressed primarily to physicians. The WMA encourages others who are involved in medical research involving human subjects to adopt these principles.

GENERAL PRINCIPLES

3. The Declaration of Geneva of the WMA binds the physician with the words, “The health of my patient will be my first consideration,” and the International Code of Medical Ethics declares that, “A physician shall act in the patient's best interest when providing medical care.”
4. It is the duty of the physician to promote and safeguard the health, well-being and rights of patients, including those who are involved in medical research. The physician's knowledge and conscience are dedicated to the fulfillment of this duty.
5. Medical progress is based on research that ultimately must include studies involving human subjects.
6. The primary purpose of medical research involving human subjects is to understand the causes, development and effects of diseases and improve preventive, diagnostic and therapeutic interventions (methods, procedures and treatments). Even the best proven interventions must be evaluated continually through research for their safety, effectiveness, efficiency, accessibility and quality.
7. Medical research is subject to ethical standards that promote and ensure respect for all human subjects and protect their health and rights.
8. While the primary purpose of medical research is to generate new knowledge, this goal can never take precedence over the rights and interests of individual research subjects.
9. It is the duty of physicians who are involved in medical research to protect the life, health, dignity, integrity, right to self-determination, privacy, and confidentiality of personal

information of research subjects. The responsibility for the protection of research subjects must always rest with the physician or other health care professionals and never with the research subjects, even though they have given consent.

10. Physicians must consider the ethical, legal and regulatory norms and standards for research involving human subjects in their own countries as well as applicable international norms and standards. No national or international ethical, legal or regulatory requirement should reduce or eliminate any of the protections for research subjects set forth in this Declaration.
11. Medical research should be conducted in a manner that minimises possible harm to the environment.
12. Medical research involving human subjects must be conducted only by individuals with the appropriate ethics and scientific education, training and qualifications. Research on patients or healthy volunteers requires the supervision of a competent and appropriately qualified physician or other health care professional.
13. Groups that are underrepresented in medical research should be provided appropriate access to participation in research.
14. Physicians who combine medical research with medical care should involve their patients in research only to the extent that this is justified by its potential preventive, diagnostic or therapeutic value and if the physician has good reason to believe that participation in the research study will not adversely affect the health of the patients who serve as research subjects.
15. Appropriate compensation and treatment for subjects who are harmed as a result of participating in research must be ensured.

RISKS, BURDENS AND BENEFITS

16. In medical practice and in medical research, most interventions involve risks and burdens.

    Medical research involving human subjects may only be conducted if the importance of the objective outweighs the risks and burdens to the research subjects.

17. All medical research involving human subjects must be preceded by careful assessment of predictable risks and burdens to the individuals and groups involved in the research in comparison with foreseeable benefits to them and to other individuals or groups affected by the condition under investigation.

    Measures to minimise the risks must be implemented. The risks must be continuously monitored, assessed and documented by the researcher.

18. Physicians may not be involved in a research study involving human subjects unless they are confident that the risks have been adequately assessed and can be satisfactorily managed.

    When the risks are found to outweigh the potential benefits or when there is conclusive proof of definitive outcomes, physicians must assess whether to continue, modify or immediately stop the study.

VULNERABLE GROUPS AND INDIVIDUALS

19. Some groups and individuals are particularly vulnerable and may have an increased likelihood of being wronged or of incurring additional harm.

All vulnerable groups and individuals should receive specifically considered protection.

20. Medical research with a vulnerable group is only justified if the research is responsive to the health needs or priorities of this group and the research cannot be carried out in a non-vulnerable group. In addition, this group should stand to benefit from the knowledge, practices or interventions that result from the research

SCIENTIFIC REQUIREMENTS AND RESEARCH PROTOCOLS

21. Medical research involving human subjects must conform to generally accepted scientific principles, be based on a thorough knowledge of the scientific literature, other relevant sources of information, and adequate laboratory and, as appropriate, animal experimentation. The welfare of animals used for research must be respected.

22. The design and performance of each research study involving human subjects must be clearly described and justified in a research protocol.

    The protocol should contain a statement of the ethical considerations involved and should indicate how the principles in this Declaration have been addressed. The protocol should include information regarding funding, sponsors, institutional affiliations, potential conflicts of interest, incentives for subjects and information regarding provisions for treating and/or compensating subjects who are harmed as a consequence of participation in the research study.

    In clinical trials, the protocol must also describe appropriate arrangements for post-trial provisions

RESEARCH ETHICS COMMITTEES

23. The research protocol must be submitted for consideration, comment, guidance and approval to the concerned research ethics committee before the study begins. This committee must be transparent in its functioning, must be independent of the researcher, the sponsor and any other undue influence and must be duly qualified. It must take into consideration the laws and regulations of the country or countries in which the research is to be performed as well as applicable international norms and standards but these must not be allowed to reduce or eliminate any of the protections for research subjects set forth in this Declaration.

    The committee must have the right to monitor ongoing studies. The researcher must provide monitoring information to the committee, especially information about any serious adverse events. No amendment to the protocol may be made without consideration and approval by the committee. After the end of the study, the researchers must submit a final report to the committee containing a summary of the study's findings and conclusions.

PRIVACY AND CONFIDENTIALITY

24. Every precaution must be taken to protect the privacy of research subjects and the confidentiality of their personal information.

INFORMED CONSENT

25. Participation by individuals capable of giving informed consent as subjects in medical research

must be voluntary. Although it may be appropriate to consult family members or community leaders, no individual capable of giving informed consent may be enrolled in a research study unless he or she freely agrees.

26. In medical research involving human subjects capable of giving informed consent, each potential subject must be adequately informed of the aims, methods, sources of funding, any possible conflicts of interest, institutional affiliations of the researcher, the anticipated benefits and potential risks of the study and the discomfort it may entail, post-study provisions and any other relevant aspects of the study. The potential subject must be informed of the right to refuse to participate in the study or to withdraw consent to participate at any time without reprisal. Special attention should be given to the specific information needs of individual potential subjects as well as to the methods used to deliver the information.

    After ensuring that the potential subject has understood the information, the physician or another appropriately qualified individual must then seek the potential subject's freely-given informed consent, preferably in writing. If the consent cannot be expressed in writing, the non-written consent must be formally documented and witnessed.

    All medical research subjects should be given the option of being informed about the general outcome and results of the study.

27. When seeking informed consent for participation in a research study the physician must be particularly cautious if the potential subject is in a dependent relationship with the physician or may consent under duress. In such situations the informed consent must be sought by an appropriately qualified individual who is completely independent of this relationship.
28. For a potential research subject who is incapable of giving informed consent, the physician must seek informed consent from the legally authorised representative. These individuals must not be included in a research study that has no likelihood of benefit for them unless it is intended to promote the health of the group represented by the potential subject, the research cannot instead be performed with persons capable of providing informed consent, and the research entails only minimal risk and minimal burden.
29. When a potential research subject who is deemed incapable of giving informed consent is able to give assent to decisions about participation in research, the physician must seek that assent in addition to the consent of the legally authorised representative. The potential subject's dissent should be respected.
30. Research involving subjects who are physically or mentally incapable of giving consent, for example, unconscious patients, may be done only if the physical or mental condition that prevents giving informed consent is a necessary characteristic of the research group. In such circumstances the physician must seek informed consent from the legally authorised representative. If no such representative is available and if the research cannot be delayed, the study may proceed without informed consent provided that the specific reasons for involving subjects with a condition that renders them unable to give informed consent have been stated in the research protocol and the study has been approved by a research ethics committee. Consent to remain in the research must be obtained as soon as possible from the subject or a legally authorised representative.
31. The physician must fully inform the patient which aspects of their care are related to the research. The refusal of a patient to participate in a study or the patient's decision to withdraw from the study must never adversely affect the patient-physician relationship.
32. For medical research using identifiable human material or data, such as research on material or data contained in biobanks or similar repositories, physicians must seek informed consent for its collection, storage and/or reuse. There may be exceptional situations where consent would be

impossible or impracticable to obtain for such research. In such situations the research may be done only after consideration and approval of a research ethics committee.

USE OF PLACEBO

33. The benefits, risks, burdens and effectiveness of a new intervention must be tested against those of the best proven intervention(s), except in the following circumstances:

    Where no proven intervention exists, the use of placebo, or no intervention, is acceptable; or

    Where for compelling and scientifically sound methodological reasons the use of any intervention less effective than the best proven one, the use of placebo, or no intervention is necessary to determine the efficacy or safety of an intervention

    and the patients who receive any intervention less effective than the best proven one, placebo, or no intervention will not be subject to additional risks of serious or irreversible harm as a result of not receiving the best proven intervention.

    Extreme care must be taken to avoid abuse of this option

POST-TRIAL PROVISIONS

34. In advance of a clinical trial, sponsors, researchers and host country governments should make provisions for post-trial access for all participants who still need an intervention identified as beneficial in the trial. This information must also be disclosed to participants during the informed consent process.

RESEARCH REGISTRATION AND PUBLICATIONS AND DISSEMINATION OF RESULTS

35. Every research study involving human subjects must be registered in a publicly accessible database before recruitment of the first subject.
36. Researchers, authors, sponsors, editors and publishers all have ethical obligations with regard to the publication and dissemination of the results of research. Researchers have a duty to make publicly available the results of their research on human subjects and are accountable for the completeness and accuracy of their reports. All parties should adhere to accepted guidelines for ethical reporting. Negative and inconclusive as well as positive results must be published or otherwise made publicly available. Sources of funding, institutional affiliations and conflicts of interest must be declared in the publication. Reports of research not in accordance with the principles of this Declaration should not be accepted for publication.

UNPROVEN INTERVENTIONS IN CLINICAL PRACTICE

37. In the treatment of an individual patient, where proven interventions do not exist or other known interventions have been ineffective, the physician, after seeking expert advice, with informed consent from the patient or a legally authorised representative, may use an unproven intervention if in the physician's judgement it offers hope of saving life, re-establishing health or alleviating suffering. This intervention should subsequently be made the object of research, designed to evaluate its safety and efficacy. In all cases, new information must be recorded and, where appropriate, made publicly available.