MEMORANDUM FOR SGVT
ATTN: CAPT ANDREW PAULUS

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

1. Your paper, entitled *Evaluation of Total Daily Dose and Glycemic Control for Patients on U-500 Insulin Admitted to the Hospital* presented at *SURF Conference, San Antonio, TX 20 May 2016* with MDWI 41-108, and has been assigned local file #16114.

2. Pertinent biographic information (name of author(s), title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.

3. Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are 59 MDW staff member, we can forward your request for funds to the designated wing POC.

4. Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

LINDA STEEL-GOODWIN, Col, USAF, BSC
Director, Clinical Investigations & Research Support

Partners in a high-performance health system, dedicated to excellence in global care
PROTOCOL TITLE
Evaluation of Total Daily Dose and Glycemic Control for Patients on U-500 Insulin Admitted to the Hospital

1. TITLE OF MATERIAL TO BE PUBLISHED OR PRESENTED
Evaluation of Total Daily Dose and Glycemic Control for Patients on U-500 Insulin Admitted to the Hospital

2. IS THIS MATERIAL CLASSIFIED?  □ YES  ☑ NO

3. IS THIS MATERIAL SUBJECT TO ANY LEGAL RESTRICTIONS FOR PUBLICATION OR PRESENTATION THROUGH A COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA), MATERIAL TRANSFER AGREEMENT (MTA), INTELLECTUAL PROPERTY RIGHTS AGREEMENT, ETC.?  □ YES  ☑ NO  (NOTE: If the answer is ‘YES’ then attach a copy of the Agreement to the Publications/Presentations Request Form)

4. MATERIAL IS FOR (Check appropriate box or boxes for approval with this request.)  (ATTACH COPY OF MATERIAL TO BE PUBLISHED/PRESENTED)
   □ PUBLICATION/JOURNAL (List intended publication/journal)
   □ PUBLISHED ABSTRACT (List intended journal)
   □ POSTER (To be demonstrated at meeting/Name of Meeting, City, State, and Date of Meeting)
   ☑ SURF Conference, San Antonio, TX, 20 May 2016
   □ PLATFORM PRESENTATION (At civilian institutions/Name of Meeting, State, and Date of Meeting)
   □ OTHER (Describe, Name of Meeting, City, State, and Date of Meeting)

POINT OF CONTACT
5. WHO IS THE PRIMARY WHASC POINT OF CONTACT?  (Last, First, M.I.) (Include email)  DUTY PHONE/PAGER No.
   Andrew.o.paulus.mil@mail.mil  210-916-2770

AUTHORSHIP AND CO-AUTHOR(S) (List in the order they will appear in the manuscript)

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I CERTIFY ANY HUMAN OR ANIMAL RESEARCH RELATED STUDIES WERE APPROVED AND PERFORMED IN STRICT ACCORDANCE WITH 32 CFR 219, AFMAN 40-401_IP AND 59 MDW 41-108. I HAVE READ THE FINAL VERSION OF THE ATTACHED MATERIAL AND CERTIFY THAT IT IS AN ACCURATE MANUSCRIPT FOR PUBLICATION AND/OR PRESENTATION.

AUTHOR'S PRINTED NAME/RANK/GRADE  AUTHOR'S SIGNATURE  DATE
Andrew Paulus/ Capt/O-3  PAULUS.ANDREW.0.1299683520,  21 Jan 2016

COMMANDER'S PRINTED NAME, RANK  COMMANDER'S SIGNATURE  DATE
Mark True/Cpl/O-6  TRUE.MARK.W.1119949757  21 Jan 2016

59 MDW Form 3039, 20131018  (Supersedes WHMC IMT 3039, 20020301, V1)  (Page 1 is Instruction Page)  Page 2 of 3 Pages
THE ARTICLE IS APPROVED.

PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER
Christopher Carwile, TSgt/E-6, NCOIC, PA

SIGNATURE OF REVIEWER
CARWILE.CHISTOPHER.STEWART.1280477229,

DATE
8 Mar 2016

TO: 59 CSPG/SGVU

2. SENIOR AUTHOR NOTIFIED BY PHONE OF APPROVAL OR DISAPPROVAL

☐ YES ☐ NO ☐ COULD NOT BE REACHED ☐ LEFT MESSAGE

3. DATE WRITTEN NOTICE OF APPROVAL AND CLEARANCE MAILED TO AUTHOR:

4. COMMENTS ☐ APPROVED ☐ DISAPPROVED

PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER

SIGNATURE OF REVIEWER

DATE

59 MDW Form 3039, 20131018 (Supersedes WHMC IMT 3039, 20020301, V1) (Page 1 is Instruction Page) Page 3 of 3 Pages
Evaluation of Total Daily Dose and Glycemic Control for Patients on U-500 Insulin Admitted to the Hospital

Andrew O. Paulus M.D., Jeffrey A. Colburn M.D., Jack E. Lewi M.D., Irene Folaron M.D., Sky D. Graybill M.D., Richard P. Davis M.D., Darrick J. Beckman M.D., Mark W. True M.D.

Introduction The number of patients using U-500 regular insulin has significantly increased in recent years. These patients are severely insulin resistant requiring high doses of insulin to achieve glycemic control. However, it has been observed that a patient’s insulin requirements may dramatically decrease upon admission to the hospital. The medical literature is sparse on this issue, with no formal published guidelines. Therefore, we sought to systematically investigate this phenomenon in our institution.

Methods We performed a retrospective chart review of patients with U-500 insulin outpatient regimens who were admitted to the San Antonio Military Medical Center over a five-year period. Each patient’s outpatient total daily dose (TDD) of insulin was compared to the average inpatient TDD. The outpatient estimated average glucose (eAG) was calculated from the HgbA1c and compared to the average inpatient glucose level.

Results We collected data on 27 patients with a total of 62 separate admissions. The average age was 64.4 years with a mean body mass index of 38.9 kg/m² and eAG of 203mg/dl [74 – 109] (HgbA1c of 8.7% [0 – 5.6]). All patients were converted from U-500 to various U-100 insulin regimens upon admission. The average TDD of insulin received in the hospital was lower than their outpatient TDD, 91 units vs. 337 units (p < 0.001) or 27% of their outpatient insulin dose. Overall, 89% of patients received ≤ 50% of their outpatient TDD while in the hospital. The average inpatient glucose was slightly higher than the outpatient eAG, 234 mg/dl vs. 203 mg/dl (p < 0.003).

Discussion Patients using U-500 insulin routinely have their TDD of insulin reduced upon admission in our institution. Possible factors for decreased insulin requirements include controlled hospital diet, NPO status, and strict adherence to insulin injections by nursing staff. U-500 insulin dosing is prone to errors in the hospital setting, so conversion to U-100 insulin with a dose reduction is a preferred option. Despite a significant reduction in insulin TDD, these patients had clinically similar glucose levels. Therefore, we propose that it is reasonable to convert U-500 patients to U-100 insulin on admission with starting doses between 25 to 50% of their home TDD. Patients’ glucose should be closely monitored and insulin titrated as needed to maintain adequate glucose control.
Conclusion Patients taking U-500 insulin as an outpatient should be converted to a U-100 basal-bolus regimen at 25 to 50% of their home TDD upon hospital admission. Further prospective trial data is needed to best evaluate the ideal approach to this situation.

The views expressed are those of the authors and do not reflect the official views or policy of the Department of Defense, or its Components.
MEMORANDUM FOR 59 CSPG/SGVU
ATTN: Capt Andrew Paulus

FROM: 502 ISG/JA (Lt Heather Slawson)

SUBJECT: Ethics Review for Poster Approval Request

1. BLUF: A request for a legal review of a poster presentation titled “Evaluation of Total Daily Dose and Glycemic Control for Patients on U-500 Insulin Admitted to the Hospital” was submitted by Capt Andrew Paulus. Capt Paulus and his co-authors plan to present this research at the SURF Conference in San Antonio, TX on 20 May 2016. The abstract included the required disclaimer. The disclaimer must also be included on the poster that will be displayed for presentation. A Public Affairs review will be required if it has not already been obtained. There are no conflicts of interest issues with the poster presentation at this conference.

2. FACTS: An abstract titled “Evaluation of Total Daily Dose and Glycemic Control for Patients on U-500 Insulin Admitted to the Hospital” was submitted for poster presentation. The authors plan to present this research at the SURF Conference in San Antonio, TX on 20 May 2016.

3. LAWS AND REGULATIONS: DoD 5500.07-R, Joint Ethics Regulation (JER), section 3-307 lays out rules governing “Teaching, Speaking and Writing.” If the presentation will "deal in significant part with any ongoing or announced policy, program or operation" of the Air Force, the presenter is required to include a disclaimer that states the "views presented are those of the speaker or author and do not necessarily represent the views of DoD or its Components."

4. ANALYSIS: Although the presentation does not "deal in significant part with any ongoing or announced policy, program or operation" of the Air Force, the presenters' affiliation and/or ranks will be included in the abstract and poster presentation. Additionally, the research and information to be discussed in the presentation was obtained as part of their military medical practice. The authors included the required disclaimer that the views presented are those of the author and do not necessarily represent the views of DoD or its Components. The disclaimer must also be included on the poster. A Public Affairs review will be needed if it has not already been obtained. There are no apparent conflicts of interest that would prohibit presentation of this research at this conference.
5. CONCLUSION: The abstract presented for review included the disclaimer required by the JER. The disclaimer must also be included on the poster. If you have any questions, please call Lt Heather Slawson at 671-5728.

HEATHER M. SLAWSON, 1Lt, USAF
Assistant Staff Judge Advocate

I concur.

ARLENE R. CHRISTILLES
Chief, Civil Law