Richard J. Redett, MD, FACS, FAAP
Milton T. Edgerton Professor and Director
Department of Plastic and Reconstructive Surgery
Director, Cleft Lip and Palate Center

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JOHNS HOPKINS
MEDICINE
DEPARTMENT OF PLASTIC AND RECONSTRUCTIVE SURGERY

January 6, 2023

Dear Women's Board of the Johns Hopkins Hospital,

I have attached our Department of Plastic and Reconstructive Surgery Grant Application for Fiscal Year 2024. Our request if for a mini C-arm radiographic machine that will **enable our clinicians to obtain dynamic images and perform interventions such as manipulations or injections in the clinic for patients with extremity injuries**. The mini C-arm results in a significantly lower radiation exposure for the patients than a formal X-ray and can be used in a clinic setting.

Thank you for your consideration.

Sincerely,

Rick Redett
The Women's Board of The Johns Hopkins Hospital
Billings Administration Building, Room 221
600 North Wolfe Street · Baltimore, MD 21287-0221
Phone: (410) 955-9341 · Fax: (410) 614-9856 · Email: jhhwb@jhmi.edu

GRANT APPLICATION FOR FISCAL YEAR 2024

DIRECTIONS: Please complete the entire form. If appropriate, indicate "Not Applicable" and justify. The original application plus an electronic version is due in The Women's Board office on or before 4:00 pm on Friday, January 6, 2023. Only one (1) application from each department will be accepted. Late or incomplete applications will not be considered.

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DATE: January 6, 2022

CLINICAL DEPARTMENT: Plastic and Reconstructive Surgery

CONTACT PERSON: Melissa McColligan Borger
Phone: 410-955-6824
Email: mmccola@jhmi.edu

TITLE OF REQUEST: Mini C-Arm mobile fluoroscopic machine

PHYSICAL LOCATION OF PROJECT: JHOC 8

ABSTRACT (Non-technical overview - 150 words or less):

Our request if for a mini C-arm mobile fluoroscopic machine that will **enable our clinicians to obtain dynamic images and perform interventions such as manipulations or injections in the clinic**. The mini C-arm results in a significantly lower radiation exposure for the patients than a formal X-ray and can be used in a clinic setting for patients with hand and leg injuries. Having a mini C-Arm in clinic will improve the delivery of care to our patients and remove administrative burdens from providers.

SIGNATURE OF CLINICAL DEPARTMENT CHAIRPERSON:

January 6, 2023

Chairperson Name: Richard J. Redett, MD, FACS, FAAP
Chairperson Title: Milton T. Edgerton Professor and Director
Department of Plastic and Reconstructive Surgery
Chairperson Email: rjr@jhmi.edu

NOTE: Questions 1-6 must be answered. Please be thorough and concise.

1. Impact on patient care:

Our plastic and reconstructive surgeons share hand call with colleagues from the Department of Orthopaedic Surgery. Providing hand services generates a moderate volume of clinic patients who require x-ray imaging; these include new consults with chief complaints relating to the hand and wrist as well as follow ups from the emergency department (often fractures and dislocations). An ideal workflow, and the flow in most orthopedic clinics, would be to have a technician remove any cast/splint, obtain an x-ray, and then have the patient roomed and ready to see their provider with imaging. Unfortunately, without x-ray in office, we face insurance as well as logistical hurdles that limit our ability to safely, effectively, and efficiently treat patients with bony hand diagnoses. We have to send patients to radiology on a different floor of the building or an entirely different facility, which creates confusion and delays in patient care. Depending on the staffing in radiology, it can take over an hour for a patient to get an x-ray, which is frustrating for patients and creates delays in our clinics. Radiology also does not accept all insurances, and often we have to send an external order to an outside facility for a patient to obtain ahead of time and bring a disc that we need to upload for review. In both of these scenarios, fourth floor radiology or outside imaging, they will not remove casts or splints prior to imaging, meaning the images are obscured by casting/splinting materials (or patients have to come see us first to have it removed). In summary, the lack of an x-ray in clinic means that we often are unable to get an x-ray, add unnecessary hours to patient care to obtain one downstairs or off campus, and have to make clinical decisions based off sometimes obscured x-rays with immobilization materials in place. Many of our patients also do not have transportation and are unable to obtain xrays at other facilities.

2. Number and type of patient who will benefit annually from this award:

Upper Extremity Patients 2022

Elbow and forearm 37
Hand and Wrist 155
Shoulder and Upper Arm 19

Grand Total 211

In addition to patients with upper extremity injury, we recently recruited a new surgeon with a focus on lower extremity. Her patients will also benefit from a clinic based Mini C-Arm. Her volumes are projected to be 200 per year.

3. Significance:

Having this technology located in the clinic will dramatically improve the clinic flow for patients with lower and upper extremity concerns.

4. Implications, if any, that this has to the Covid pandemic:

None

5. Personnel (Please note that we cannot fund grants that incorporate any salaries.)

None

6. Budget: Total Request: $51,200

A. Equipment - price per item and discount if applicable for multiples. Please add compelling justification if multiples are requested. (Itemize and justify):

Refurbished Mini C-Arm (1) 35,000

B. Supplies (Itemize and justify):

None

C. What is the out-of-pocket cost to the patient? (Itemize and justify):

Covered by insurance

D. Other Expenses, Hidden Costs (Please consider whether your grant proposal contains other costs that would require hospital funding, such as structural modifications for equipment installation, operating costs such as additional FTEs, training costs, etc.)* Warranty- three years ($5K/year) 15,000

Lead aprons (4 at $300/each) 1,200

7. Have you requested funds from any other source?

☐ **Yes (What was the result?)**

Click or tap here to enter text.

X No (Explain why)

We recently discovered that mini C-Arms are not managed by Radiology.

* If you have any concerns about additional costs of your grant to the hospital please feel free to contact the CFO Katina Williams @ kwill249@jhmi.edu. She is aware of our grant process. All grants selected for funding will eventually be submitted for final hospital approval by the Women's Board. It is not required for the departments to request approval from the hospital prior to submission on January 6, 2023.