

EXHIBIT 1

HEALTH SYSTEM  
UNIVERSITY OF MICHIGAN

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December 12, 2014

Dear Colleague,

Please find the confidential security data and analysis enclosed for your review. It is only being shared with the following four people: Tony Denton, Margaret Calarco, Shon Dwyer and Paul King. I look forward to our future discussions regarding the enclosed.

As always, I send my best wishes.

Sincerely yours,

  
Carmen R. Green, M.D.

Associate Vice President and Associate Dean for Health Equity and Inclusion  
Professor of Anesthesiology, Medical School  
Professor of Obstetrics and Gynecology, Medical School  
Professor of Health Management & Policy, School of Public Health

## **HIGHLY CONFIDENTIAL**

*Please Deliver To:*

**Mr. Tony Denton**

*Chief Executive Officer and  
Chief Operating Officer*

## **HIGHLY CONFIDENTIAL**

*Please Deliver To:*

**Paul King, Executive Director**

*C.S. Mott Children's Hospital and  
Von Voigtlander Women's Hospital*

## **HIGHLY CONFIDENTIAL**

*Please Deliver To:*

**Shon Dwyer, MBA**

*Senior Associate Director for Operations and  
Clinical Services/Chief Administrative Officer for  
Surgical Services*

## **HIGHLY CONFIDENTIAL**

*Please Deliver To:*

**Margaret Calarco PhD, RN**

*Senior Associate Director of Patient Care and  
Chief of Nursing Services*



## SECURITY PROJECT

### Background

In January/February 2014 a University of Michigan (UM) hospital Chaplain was concerned that Security was called more frequently for Black patients than White patients at the UM and shared these concerns with Dr. Green. The University of Michigan Health System (UMHS) Office for Health Equity and Inclusion (OHEI) met with UM Hospital and Health Center (HHC) leadership from Spiritual Care, Security, and Patient/Family Centered Care departments. Among the topics discussed was the concern that Security standby requests ("Yellow Cards") may be disproportionately called for minority patients and their families within HHC inpatient units.

### Methods

To determine whether the perceptions were accurate, we analyzed the UM HHC Security department's Computer-Aided Dispatch database to obtain additional information about the number and types of standby requests generated between 2006 (inception of the database) to June 30, 2014. The data collected and analyzed were within one Dispatch Category: Standby-Patient/Visitor. The data was cross-matched with patient demographic information [e.g. age, medical records number (MRN), race, and ethnicity (via medical record chart review)], with a detailed analysis for 2013 to June 30, 2014. This data was then compared to the patient census. Other data elements collected included: 1) location of standby request, 2) open ended narrative (for qualitative analysis of themes and possible interventions), 3) number of officers dispatched (proxy measure for perceived level of threat), and 4) number of officers remaining on scene after 15 minutes (proxy measure for level of threat assessed once officers are on scene).

### Results

Of all UM inpatient [University Hospital (UH) and Mott] standby requests, 56% occurred when the hospitalized patient was female (26.3% Black vs. 64.6% White) and 44% were male (25.8% Black vs. 61.8% White) when the hospitalized patient was male. **For all inpatient standby requests for the eight year study period, more request were made for Black patients/visitors than would be expected by their representation in the overall patient census, and fewer requests were made for White patients/visitors than would be expected by their representation in the overall UM patient census (Table 1).** Of all inpatient standby requests, most (50.7%) were made for hospitalized patients <21 years old (Table 2). Appendix 1 provides the annual UM inpatient census by demographics.

**TABLE 1: All Inpatient (UH and Mott) Standby Requests by Race, Compared to Race in Overall Patient Census, 2006 to 6-30-2014**

RACE	Standby Requests		Unweighted Ave Race in UM Patient Census
	N	%	%
Black	275	26.88%	11.96%
White	642	62.76%	79.10%
Unknown/Other*	106	10.36%	8.94%
TOTAL	1023	100.00%	100.00%

\*All non-White, non-Black races, plus Unknown and Refused to Identify Race



**TABLE 2: All Inpatient (UH and Mott) Standby Requests by Age, 2006 to 6-30-2014**

AGE	Standby Requests	
	N	%
<18	480	46.92%
18-20	39	3.81%
21-30	89	8.70%
31-40	58	5.67%
41-50	92	8.99%
51-60	82	8.02%
61-70	61	5.96%
71+	79	7.72%
Missing	43	4.20%
<b>TOTAL</b>	<b>1023</b>	<b>100.00%</b>

### Secondary Analyses on Subset of Data

A pattern of disproportionate Security standby requests for Black patients/visitors was robust throughout the eight years studied. The following analyses were conducted from standby requests made from 1-1-13 to 6-30-14. This timeframe coincides with the consolidation of pediatric and OB/GYN services to the new C.S. Mott Children's Hospital and VonVoightlander Women's Hospital facility (hereinafter referred to as "Mott"). We also examined broad "Patient Care Categories" to determine whether there were any systematic patterns of Security standby requests based upon particular types of patient care situations and/or locations of units and staff. The pattern observed overall was particularly pronounced in the General Care, Emergency Department, and Surgical/Intensive patient care categories (Table 3). Similar and separate analyses with the UH and Mott population in 2013-14 were also conducted (Tables 4 and 5).

As shown in Table 3, the number of Security standby requests at Mott and University Hospital for **Blacks (24%)** was disproportionately higher than expected by the UM patient census of Blacks (**11.4%**) during this time frame. Conversely, the number of Security standby requests for Whites (67%) was disproportionately lower than expected by the patient census of Whites (77%).

In the University Hospital Patient Care Categories of General Care, Emergency Department, and Surgical/Intensive, the percentage of standby requests made for Black patients/visitors were higher than expected by those patients' representation in the overall patient census (29.7% compared to an expected representation of 11.4%). The highest percentage of Black standby requests (34.8%) occurred in General Care and the Emergency Department (28.3%). Conversely, in the HHC Patient Care Categories of General Care, Emergency Department, and Surgical/Intensive, the percentage of standby requests made for White patients/visitors was lower than expected by their representation in the overall patient census, regardless of Patient Care Category (62.6% compared to an expected representation of 77.2%). The highest number of White standby requests was in General Care (39%) and the Emergency Department (30%).



**TABLE 3: All Inpatient (Mott and UH) Standby Requests by Race and Patient Care Category, 1/1/2013-6/30/2014**

	RACE CATEGORY (Expected Percentage)						
	Black (11.4%)		All Others (11.4%)		White (77.2%)		TOTAL
	N	%	N	%	N	%	N
PATIENT CARE CATEGORY							
General Care	32	37.21%	12	37.50%	88	36.97%	132
Emergency Department	21	24.42%	3	9.38%	48	20.17%	72
Surgical/Intensive	22	25.58%	10	31.25%	80	33.61%	112
Not Specified	3	3.49%	1	3.13%	4	1.68%	8
Guest Services	6	6.98%	5	15.63%	12	5.04%	23
Other	2	2.33%	1	3.13%	6	2.52%	9
TOTAL	86	100.00%	32	100.00%	238	97.48%	356
Percent of Total Incidents		24.16%		8.99%		66.85%	

**TABLE 4: UH Standby Requests by Race and Patient Care Category, 2013-2014**

DISTRIBUTION OF INCIDENT REPORTS WITHIN UH (Excluding Mott) PATIENT CARE CATEGORIES BY RACE (1-1-13 to 6-30-14)							
	RACE CATEGORY (Expected Percentage)						
	Black (11.4%)		All Others (11.4%)		White (77.2%)		TOTAL
	N	%	N	%	N	%	N
PATIENT CARE CATEGORY							
General Care	16	34.78%	5	41.67%	38	39.18%	59
Emergency Department	13	28.26%	2	16.67%	29	29.90%	44
Surgical/Intensive	12	26.09%	3	25.00%	26	26.80%	41
Not Specified	3	6.52%	1	8.33%	4	4.12%	8
Guest Services	2	4.35%	1	8.33%	0	0.00%	3
TOTAL	46	100.00%	12	100.00%	97	100.00%	155
Percent of Total Incidents		29.68%		7.74%		62.58%	

In the Mott Patient Care Categories, the percentage of standby requests made for Black patients/visitors were higher than expected by those patients' representation in the overall patient census (19.9% compared to an expected representation of 11.4%) with the highest percentage in the Child Emergency Services (28.6%) and OB/GYN (25%). Conversely, the percentage of standby requests made for White patients/visitors was lower than expected by their representation in the overall patient census, regardless of Patient Care Category (70.2% compared to an expected representation of 77.2%) with the highest number of White standby requests in Surgical/Intensive (76%) and General Care (74%).



TABLE 5: Mott Standby Requests By Race and Patient Care Category, 2013 to 6-30-2014

PATIENT CARE CATEGORY	RACE CATEGORY (Expected Percentage)						
	Black (11.4%)		All Others(11.4%)		White (77.2%)		TOTAL
	N	%	N	%	N	%	N
Surgical/Intensive	10	14.08%	7	9.86%	54	76.06%	71
General Care	11	20.75%	3	5.66%	39	73.58%	53
Child Emergency Services	8	28.57%	1	3.57%	19	67.86%	28
Guest Services	4	20.00%	4	20.00%	12	60.00%	20
OB/GYN	5	25.00%	4	20.00%	11	55.00%	20
Other	2	22.22%	1	11.11%	6	66.67%	9
TOTAL	40	19.90%	20	9.95%	141	70.15%	201

**Limitations:**

It is important to note the demographics of the nursing and security personnel for UMHS has not significantly changed during the study period and is predominantly white. Only 3.3% of nurses are Black and 14% of security personnel are Black. A few limitations must be noted. First, race was assigned based upon the patient's race from the medical chart since this information was not available from the Security data. Limited numbers of other minority populations limit analysis to black white differences. Thus, the race of the family member is an assumption, although some but limited descriptive and demographic information is available from the officer's open narrative. Reviewing the open narrative has been labor intensive. Second, we did not have data regarding the race of the responding officer or the staff member who requested a yellow card. Third, we did not look at patterns based upon insurance status since this information was not available. However, we note this should be done to provide additional insights. Lastly, several other factors were not measured and need to be considered.

- Staff perceptions of threat, conflict, disruption of care, or violence from minority patients/visitors/family members
- Staff cultural awareness or humility regarding the expression of grief, particularly in highly charged situations (severe illness, impending or actual death of family member)
- Staff resilience and tolerance for vocal and bodily manifestations of grief that vary by culture or patient situation
- Staff education regarding the appropriate time to contact Security
- Reconciling the need to maintain a safe environment (i.e., Critical Incident training) while maximizing respect, tolerance, and empathy to patients and visitors
- Role of criminal versus racial profiling must be considered

**Conclusions:**

- *In all years studied, the proportion of Security standby service requests called on Black patients/families in all UH inpatient units was higher than expected, given Black representation in the overall inpatient census.*

- *For 1/1/13 to 6/30/14, the proportion of Security standby service requests called on Black patients/families in University Hospital inpatient units was higher than expected, given Black representation in the overall inpatient census with the highest percentage in in General Care and the Emergency Department.*
- *For 1/1/13 to 6/30/14, the proportion of Security standby service requests called on Black patients/families in Mott inpatient units was higher than expected, given Black representation in the overall inpatient census with the highest percentage in the Child Emergency Services and OB/GYN.*

This analysis presents an opportunity to further analyze the factors which engender a perception of threat and inclusion in the health system while considering the role of discrimination, bias, cultural sensitivity, quality of communication between caregivers/patients/families, and other issues which may influence the decision to contact hospital Security. These results have significant implications on how the UMHS is viewed internally and externally and how inclusive the environment is for patients and family.



## Appendix 1:

## Year-by-year analysis of the UM HHC inpatient census by Race- Fiscal Years 2006-2014

RACE	FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
American Indian and Alaska Native	150	0.3%	145	0.3%	164	0.4%	139	0.3%	165	0.4%	190	0.4%	189	0.4%	197	0.4%	164	0.3%
Black/Afr Amer	5,522	11.6%	5,564	12.1%	5,572	12.3%	5,711	12.4%	5,943	12.5%	5,661	11.8%	5,623	12.1%	5,630	11.5%	5,687	11.3%
Patient Refused	6	0.0%	14	0.0%	16	0.0%	75	0.2%	87	0.2%	54	0.1%	65	0.1%	83	0.2%	106	0.2%
Middle Eastern	170	0.4%	78	0.2%	137	0.3%	166	0.4%	122	0.3%	124	0.3%	46	0.1%	0	0.0%	0	0.0%
Other	436	0.9%	546	1.2%	601	1.3%	685	1.5%	766	1.6%	915	1.9%	1,057	2.2%	1,472	3.0%	1,354	2.7%
Bi/Multi Racial	340	0.7%	161	0.4%	181	0.4%	163	0.4%	115	0.2%	121	0.3%	24	0.0%	0	0.0%	0	0.0%
South Asian	19	0.0%	3	0.0%	6	0.0%	14	0.0%	23	0.0%	16	0.0%	10	0.0%	0	0.0%	0	0.0%
Asian	1,404	3.0%	1,476	3.2%	1,544	3.4%	1,440	3.1%	1,399	2.9%	1,521	3.2%	1,375	2.8%	1,397	2.9%	1,411	2.8%
Native Hawaiian and Other Pacific Islander	8	0.0%	9	0.0%	16	0.0%	21	0.0%	30	0.1%	18	0.0%	48	0.1%	97	0.2%	76	0.2%
Hispanic	859	1.8%	368	0.8%	349	0.8%	308	0.7%	284	0.6%	175	0.4%	53	0.1%	0	0.0%	0	0.0%
Unknown	659	1.6%	844	1.8%	781	1.7%	759	1.7%	681	1.4%	629	1.3%	1,267	2.7%	2,410	4.9%	2,581	5.1%
White or Caucasian	37,816	79.5%	36,664	79.9%	36,097	79.4%	36,498	79.4%	37,952	79.8%	36,599	80.3%	38,276	79.3%	37,569	76.9%	39,035	77.4%
TOTAL	47,589		45,874		45,464		45,988		47,570		46,043		48,253		48,875		50,416	



**Appendix 2:**  
**"Patient Care Category" Breakdown**

<b>Emergency Department</b>	<b>General Care</b>	<b>Guest Services</b>	<b>Surgical/Intensive</b>	<b>Not Specified</b>
<ul style="list-style-type: none"> <li>• Emergency Department</li> <li>• Child Emergency Services</li> <li>• Psychiatric Emergency Services</li> </ul>	<ul style="list-style-type: none"> <li>• Medicine</li> <li>• Pulmonary</li> <li>• Neurology</li> <li>• Orthopedics</li> <li>• Psychiatry</li> <li>• Rehabilitation</li> <li>• Pathology</li> <li>• Hematology</li> <li>• Moderate Care</li> <li>• MRI</li> <li>• OB/GYN</li> <li>• Coronary Medicine</li> <li>• General Care</li> <li>• Mott MBM</li> <li>• Mott MHP</li> <li>• Mott PH</li> <li>• Mott Behavioral Health, Infectious Disease, Genetics, Neurology, Pulmonology</li> <li>• Mott Eating Disorders</li> <li>• Mott Neurology</li> <li>• Mott Radiology</li> </ul>	<ul style="list-style-type: none"> <li>• Reception areas</li> <li>• Social Work</li> <li>• Security</li> <li>• Unit desks</li> <li>• Lobbies</li> <li>• Parking lots</li> </ul>	<ul style="list-style-type: none"> <li>• ICUs</li> <li>• Critical Care Medicine</li> <li>• ENT</li> <li>• Plastics</li> <li>• Neurosurgery</li> <li>• Cardiothoracic Surgery</li> <li>• PACU</li> <li>• General Surgery</li> <li>• Pre-Operative</li> <li>• Mott Pre-Operative</li> <li>• Mott Surgery</li> <li>• Mott PICU</li> <li>• Mott Peds GI</li> <li>• Mott Peds OTO</li> <li>• Mott PCTU</li> <li>• Mott PACU</li> <li>• Mott Congenital Heart Center</li> <li>• Mott Craniofacial or Neurosurgery or Plastics or Dental or Orthopedic</li> </ul>	<ul style="list-style-type: none"> <li>• No information</li> <li>• Only floor indicated with no reference to unit.</li> </ul>

**Team**

Denise Williams  
Patti Andreski  
Francisco Solorio  
Lauren Murphy-Moore