Suicidal ideation in the elderly: Psychosocial risk factors and precipitants

Suicide is a major health problem, ranking as the 10th leading cause of death in the United States and accounting for approximately 47,173 deaths in 2017 [1]. In Michigan, the rate of death by suicide is approximately 13.27 per 100,000 population, which is comparable to the national rate as of 2016 [2]. Older adults are disproportionately impacted by suicide. Nationally, older adults make up approximately 12.5% of the population, however they account for 15.9% of suicides [3]. In Michigan, data from 2007 to 2009 demonstrated that the suicide rate was highest among males aged 65 years and older, and that the overall rate was four times higher for males than females [4]. Many suicide attempts, however, go unreported or untreated. Suicide and self-harm in the elderly generally receive less attention in the medical literature than suicide in young adults. Few investigations have been performed to determine prevalence rates, method of suicide or attempted suicide, and the problems faced by emergency clinicians and paramedics when treating these patients. It has been previously noted that factors such as psychiatric illness, social connectedness between the elderly and their family, friends and community, physical illness, and functional capacity may all have an impact on an individual's risk for suicide or attempts [5]. The purpose of this study was to describe patterns of older adult patient visits to emergency department (ED) for self-harm and suicidal ideation with specific attention to psychosocial risk factors and precipitants.

We conducted a retrospective cohort analysis of consecutive older adult patients (˃64 years of age) presenting to the ED for suicidal ideation or self-harm in order to determine the epidemiology, clinical features, and prognosis of this group. All eligible cases were seen at a university-affiliated hospital over a 36 month study period. Medical records were used to determine psychosocial and medical risk factors, final disposition, hospital course, complications, and morbidity. The main outcome criterion was the frequency of risk factors and precipitants in this population. Standardized abstraction forms were used to guide data collection. Three abstractors were trained by investigator. Descriptive statistics are used to describe the demographic variables and clinical findings.

During the study period, 136 elderly patients met the inclusion criteria and were evaluated by medical social work (MSW). The mean age was 74.6 ± 8.9 years. The typical elderly patient was male (60.0%), Caucasian (92.6%), and lived with a family member or caregiver (40.3%). A total of 25/136 (18.4%) were evaluated after a suicide attempt; 3 patients (2.2%) assessed for self-harm (starvation, refusal to take meds); and 111 (81.6%) were evaluated for suicidal ideation. The majority (62%) of patients evaluated for suicidal ideation presented to the ED with medical complaints. Nine significant risk factors were identified that predisposed older patients to psychosocial emergencies (Table 1). With respect to the type of precipitants, we found caretaking issues to the single biggest contributor (41%), followed by recent bereavement, and alcohol/drug use (Table 2). Overall, 80% of patients experienced a change in their living situation after discharge from the ED (Table 3). Patients discharged to home were given referral to 41 different community resources, including visiting nurse services, community mental health services, counseling services and support groups.

Elderly patients with suicidal ideation and self-harm represent ˃5% of ED patients evaluated by MSWs. For every elderly patient assessed in the ED following a suicide attempt, four were seen for suicidal ideation. A previous study found that on average, an adult aged 65 or older is admitted to an ED every 23 min resulting in an annual cost exceeding $353.9 million [5]. The majority of the patients in our study presented with medical complaints. This has been demonstrated in previous studies which suggested that the greater number of specific conditions by which an elderly patient is afflicted, the greater the risk for suicide [6]. Caretaking issues was the most common precipitant in patients seen in our ED; subsequently 80% of patients experienced a change in their living situation after discharge. Those discharged to home required significant community resources to improve quality of life and health. Suicide among the elderly is certainly a public health issue. Resources should be put toward community-based efforts to educate individuals of all ages about the needs of older adults and the risk factors, both psychological and physical, for suicide. ED physicians should also be aware of these risk factors when evaluating older patients who may present with some predisposing indicators of possible self-harm. Including valuable partners such as MSWs in the care of these patients is vital, as is continuing research into factors associated with repeat ED visits or recurring suicide attempts by elderly individuals.

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Table 1
Risk factors that predisposed older patients to suicidal ideation.

Comorbidity	106 (77.9%)
Chronic pain	83 (61.0%)
Depression	79 (58.1%)
Anxiety/psychosis	60 (44.1%)
Cognitive impairment	49 (36.0%)
Social isolation	42 (30.9%)
Hx previous suicide attempt	34 (25.0%)
Functional disability	31 (22.8%)
Alcohol/drug use	18 (13.2%)

Table 2
Precipitants of self-harm and suicidal ideation.

Caretaking issues	56 (41.1%)
Bereavement	21 (15.4%)
Alcohol/drug use	18 (13.2%)
Physical health problems	17 (12.5%)
Housing problems	14 (10.3%)
Recent functional decline	14 (10.3%)
Premorbid need for help	13 (9.6%)
Financial problems	11 (8.1%)
Relationship problems	9 (6.6%)
Terminal illness	6 (4.4%)

Table 3
Patients experiencing a change in their living situation after discharge (N = 109; percentage reflects percent of total patients in study).

Psychiatric facilities	35 (25.7%)
Hospital admission	34 (25.0%)
Extended care facilities	16 (11.8%)
Hospice programs	11 (30.6%)
Subacute Rehab	4 (2.9%)
Adult foster care	4 (2.9%)
Alcohol detox centers	3 (2.2%)
VA Hospital	2 (1.5%)

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16 January 2019

https://doi.org/10.1016/j.ajem.2019.01.058

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If we build it they will come patient use of health portals

There is evidence that patient engagement improves health outcomes and reduces health care costs [1]. In order to achieve this, healthcare institutions are focusing on patient portals as the primary access point for personal health information and patient-provider communication [2,3]. This means that patient's adoption of portals is increasingly critical for receiving of quality health care, including interactions with health providers outside of clinical visits and quick access to one's personal health information. The next question is however; if we build them will patients come sign up and use them?

The answer is complicated. Results from numerous studies, have shown that numerous factors determine whether or not a patient signs up for and then uses patient portals [4-12]. They include a range of items such as: previous computer experience, adequate health literacy, and numeracy [4,5,7-12].

Recent results show that even if these skills are present there may still be low levels usage of patient portals. A recent study, March 2017, done by the Government Accountability Office (GAO) shows consistently low levels (30% on average) of visiting and or using of health portals when and if patients sign up for them [3]. The reasons given were as follows: hard to navigate, hard to find and understand information, and the whole system and or part of it are down on a regular basis for maintenance [3,4]. Having patient portals and getting patients to sign up and then use their portals has been a difficult proposition even for large integrated health systems like Keiser Permanente [5]. That found they had to follow these directives to be able to meet their federally mandated requirements. These directives included turn physicians into portal advocates, don't undervalue the importance of physicians for driving usage, and consider physician attitude a primary indicator of adoption [5]. It also found that when patients use portals they have a closer relationship with their provider and are more likely to continue seeing that provider [5].

Portals have the potential of making patients true partners in their healthcare. The patient portal could aid in the patient's continuity of care after their ED visit and impact their likelihood of using health care more efficiently and effectively.

The primary purpose of the study was to determine if provider engagement had a significant impact on patient usage of the portal.

This study examines if there is a significant relationship between providers', including the ED, usage of patient portals and patient usage. It examined all providers and patient portal interaction from January of 2017 to June of 2018 at a level one ED and the hospital where the ED is located. This location was compliant with the federal guidelines for transmitting and providing timely access to health information. A paired *t*-test was done using SPSS v25 to determine if there was any significant relationship between provider and patient portal engagement and usage.

During the time period of the study a total of 1680 patients signed up for the portal. Out of 800 healthcare providers a total of 97 providers had engaged with their patients using the portal. There is a significant (0.01) relationship between the number of providers using the portal and the number of patients using the portal. For every provider using the portal, the number of patients using the portal increased by 1.5%. This was significant even if the level of healthcare provider by specialty was small, such as was the case with the ED at 3%. The finding was also found in OBGYN at 10%, Internal Medicine at 7%, and Family Medicine and Cardiology at 5% — all of whom had larger usage by providers. See Table 1. The level of one time usage without being provider driven was less than 5%.

There is a significant relationship between provider and patient usage of health portals. This study found similar results to the study by Keiser in that it was the provider who pushed the patient's usage of the portal [5]. It was not enough for the patient to sign up and in fact that meant that only 5% of those patients would use the portal and the majority 95% only used it once [3,4]. There was a significant difference by specialty but that was correlated to the number of providers in that specialty using the portals. This study indicates that the more engaged the provider is with the patient the more likely the patient is to use the portal. The portal allowed for communication that was on going and went beyond the initial appointment.

Thus, increased ED healthcare provider usage of the portal significantly increased patient usage of the portal. This indicates that in order to increase patient usage of the portal, a focus on providers is needed. If we build it and engage providers, then the patients will come.

Table 1
Breakdown of providers by specialty and patient portal engagement.

Specialty	Doctors	Pt in portal	Doctors engaged in portal
Emergency Department	3	21	3%
Cardiology	5	1	5%
Family Medicine	5	3	5%
OB/GYN	10	14	10%
Internal Medicine	7	4	7%
	97/800	Total: 1680	

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25 February 2019

https://doi.org/10.1016/j.ajem.2019.03.008