Every day, 66 Utahns sustain a traumatic brain injury (TBI) and at least one person dies as a result of a TBI. In recent years, approximately 22,000 people were treated and released from the emergency department due to a TBI; 2,000 individuals were hospitalized; and among those injured; 500 Utahns died annually from a TBI. Additionally, there is an unknown number of people who sustained a TBI who are treated in other settings. Males have significantly higher rates of TBI compared to females in all age groups (Figure 1). TBIs resulted in nearly $118 million in hospitalization charges in 2014; a 24.2% increase from $95 million in 2013. This does not include costs for disability and long-term care, nor lost wages. Falls are the leading cause of TBI hospitalization, followed by motor vehicle crashes (Figure 2).

![Figure 1: Age-Adjusted Rate of TBI Incidents per 100,000 Population, Utah, 2010-2014](chart)

Notes: Data includes TBI hospitalization, death, and ED visit cases. Information provided by the Utah Department of Health, Office of Health Care Statistics and the Office of Vital Records and Statistics. Due to issues incident to the 2015 transition to the ICD-10-CM coding system, 2014 is the most recent data year available for ED visits and hospitalizations.

![Figure 2: Percentage of TBI Hospitalization by Overall Cause of Injury, Utah, 2015 (N=784)](chart)

Janine’s Story

Janine Rai of Ogden, Utah suffered a TBI from a physical assault against her in May 2017. Janine had several goals she wanted to accomplish. She wanted to acquire a walker to help her with her mobility, apply for Supplemental Security Income/Social Security Disability (SSI/SSDI) benefits, obtain housing, and access mental health services. Because of the TBI Fund, Janine successfully utilized the equipment at her local Independent Living Center and obtained a walker. She received assistance in applying for Social Security benefits. She was approved for subsidized housing and is now in her own apartment. Janine was also able to obtain mental health services. She attended all of her sessions and finished her treatment in December 2017. Janine is very happy now that she can take care of her basic needs.

John’s Story

John Nguyen of Sandy, Utah, age 33, fell from a moving vehicle and sustained a moderate TBI in November 2017. Because of the TBI Fund, he was able to obtain a neuro-psychological assessment and identify some barriers he might have. He was connected to classes that taught him how to become more tech savvy and participated in a poetry writing class. He stated that he enjoyed these classes and learned valuable skills about using technology and techniques for writing poetry.

Since 2012, the Utah Department of Health Violence and Injury Prevention Program (VIPP) has measured knowledge of TBIs among the Utah adult population and collected information on households that have one or more individuals who have suffered a TBI. The VIPP conducts a random digit dial survey among Utahns aged 18+ every two years. Knowledge is self-reported on a five-point scale ranging from "not very knowledgable" to "extremely knowledgable". Awareness and knowledge of TBI's among Utahns has increased since 2012 (Figure 3).

Figure 3: Percentage of TBI Survey Respondents with a High TBI Knowledge, Utah, 2012-2017

![Figure 3: Percentage of TBI Survey Respondents with a High TBI Knowledge, Utah, 2012-2017](image-url)


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Michael’s Story
Michael Devlin of Weber County, Utah sustained a TBI in a car crash in 1987. Because of the TBI Fund, Michael received a neuro-psychological assessment that helped him and his resource facilitator identify his barriers and find the resources he needed. He has been able to apply for Social Security, Medicaid, and other assistance. With the help of the resource facilitation services provided by the TBI Fund, he was able to complete certain tasks like obtain his birth certificate and a State ID card.

Seventy percent of respondents were not aware of any services or treatment for a TBI. Of those who were aware of services or treatment for a TBI, medical services were the most frequently reported (Figure 4).

Renee’s Story
Renee Taylor of St. George, Utah, age 61, was involved in a car crash in 2006 and sustained head and neck injuries. In Renee’s words, “You never know what life will throw you. Because of my TBI, I felt stuck and alone. Having a TBI changed my whole life. It was like having the carpet pulled out from underneath me. You remember what you used to be able to do and then, all of a sudden, you are not able to do those things. I felt that I was at a standstill and that I would feel this way my whole life. The TBI Fund gave me hope. If it were not for the TBI Fund, I would not have gotten the help and treatment I desperately needed to heal. I am grateful every day for the TBI Fund and the people who made this greatly needed fund happen.”

Figure 4: Percentage of Respondents Aware of Services or Treatment Available to Persons with a TBI, Aged 18+, Utah, 2017 (N=298)

Notes: Information provided by Utah Department of Health, Violence and Injury Prevention Program, Traumatic Brain Injury Surveillance Program.
* Unable to recategorize the “other” responses.
** Use caution when interpreting the results. The estimate has a relative standard error of 30% or more.
Joe's Story
Joe Russo of Sandy, Utah, age 44, says, "Resource Facilitation has made me realize I am not alone in the TBI world. I have met many people through the Brain Injury Alliance of Utah support groups and developed a great relationship with the staff. Their educational services have helped me understand my challenges, helped me grow through their mindfulness activities, and allowed me to help other people along the way."

Approximately one out of every 14 Utah households has an individual who has sustained a TBI. The majority of households with a member who had a TBI reported that there is a need for assistance in areas of: behavioral issues (17.7%), transportation (17.2%), social situations (9.8%), occupation (7.9%), personal care (7.0%), and safety (6.3%) (Figure 5).

Figure 5: Percentage of Households Reporting Area of Need for Assistance for TBI, Utah Households Reporting a TBI, 2017 (N=71)

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral issues</td>
<td>17.7%</td>
</tr>
<tr>
<td>Transportation</td>
<td>17.2%</td>
</tr>
<tr>
<td>Social situations</td>
<td>9.8%</td>
</tr>
<tr>
<td>Occupational</td>
<td>7.9%</td>
</tr>
<tr>
<td>Personal care</td>
<td>7.0%</td>
</tr>
<tr>
<td>Safety</td>
<td>6.3%</td>
</tr>
<tr>
<td>Don't know/ Not sure</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

* Use caution when interpreting the results. The estimate has a relative standard error of 30% or more.
** "Other" responses cannot be categorized due to data availability.

Overview of the TBI Fund
The TBI Fund was established in 2008 by the Utah Legislature as a restricted special revenue to educate the general public and professionals on the treatment and prevention of TBI; provide access to evaluations and coordinate short-term care to assist an individual in identifying services or support needs, resources, and benefits for which the individual may be eligible; and develop and support an information referral system for persons with a TBI and their families.

Ashley's Story
Ashley Mayberry of Weber County, Utah, age 25, sustained a TBI after a suicide attempt in May 2018. Because of the TBI Fund, Ashley and her family were given hope and connected to the Division of Services for People with Disabilities, in which she was able to obtain emergency services thought the Acquired Brain Injury (ABI) Waiver program.
The fund is administered under the direction of the Utah Department of Health Executive Director, Dr. Joseph Miner, through the Violence and Injury Prevention Program. In SFY 2018, the TBI Fund expended the $200,000 in SFY18 legislative appropriation from the fund (Figure 6). An additional $25,000 of in-kind services were contributed, which are not reflected in the chart.

**Figure 6: Breakdown of SFY 2018 TBI Fund Expenditures**

- 53%: Resource facilitation/Direct assistance
- 17%: Public Education and Outreach
- 8%: Prevention
- 22%: Operating Expenses

**TBI Fund Advisory Committee**

TBI Fund Advisory Committee members must be appointed annually by the UDOH Executive Director and represent individuals who are familiar with TBI, its causes, diagnosis, treatment, rehabilitation, and support services, including individuals who have sustained a TBI and family representatives. The TBI Advisory Committee met six times throughout SFY 2018.

**TBI Fund Accomplishments**

- 243 clients received intake assessments with 129 qualifying for TBI resource facilitation services.
- 124 clients with a TBI received one-to-one resource facilitation services at an average cost to the TBI fund of $497 per person. The contracting agencies provided in-kind funds, so the actual cost of the services was higher.
- 25 people received a neuro-psych evaluation to clarify the needed services that will be most beneficial.
- 60 of the 124 participants who received resource facilitation services are in need of, and have been connected to ongoing services.
- 24 additional people received an intake interview and did not qualify for services because they did not have a “traumatic” brain injury but an “acquired” brain injury (e.g., as a result of West Nile virus, encephalitis, or anoxia, etc.).
- MRI services were provided at a low cost to the fund by US MRI in Salt Lake City. They provided 15 MRIs for participants referred after a neuro-psych exam.

**Resource Facilitation**

Resource facilitation is a process that helps individuals and families by providing short term support with problem solving and linking people who are in need with the available and appropriate resources to assist with a successful return to school, work, or community reintegration.

The 124 people who received resource facilitation were connected to approximately 288 well-needed resources. These resources included employment support, housing, education, legal services, financial services, independent living services, government services, medical services, mental health services, transportation assistance, and recreation resources.
Public Education and Outreach

- KSL Television partnership and Game Night Live produced a spot featuring Ron Zundle that ran more than 168 times from mid-November through the mid-December.
- Studio 5 interview on Feb 23, 2017 had a viewership of 1,991.
- Facebook ads ran the entire year in 2017.
- Paid internet search with search words.

Professional Training

- A total of 119 training events were held during SFY 2018 by the TBI Fund contractors, reaching approximately 10,300 individuals.
- Phoenix Services provided one Certified Brain Injury Specialist (CBIS) training for six professionals.

Prevention

Stepping On
Building Confidence and Reducing Falls

Older adult falls are the leading cause of TBI hospitalizations and deaths in Utah. As a result, the TBI Fund Advisory Committee continued to allocate funding for prevention by contracting with five local agencies to implement the evidence-based Stepping On falls prevention program. Stepping On is a seven-week program that teaches older adults how to reduce their risk of falling through simple exercises designed to increase strength and balance. The program was implemented in Tooele, Salt Lake, Utah, and Wasatch local health districts, as well as in the Five County Area Agency on Aging district serving southern Utah. During SFY 2018, one Stepping On leader training was held. A total of 14 Stepping On workshops reaching 151 older adults were held. Outcomes from the Stepping On program throughout Utah indicated older adults reduced their fear of falling, increased their activity, and became more comfortable talking with their healthcare providers about falls (98%).

Needs and Concerns Documented by Contractors

- Resources for TBI survivors are limited outside of the Wasatch Front.
- Increased funding is needed to cover outreach costs.
- It is difficult to continuously staff resource facilitator positions due to the specialized knowledge required for these positions.
- TBI survivors are overwhelmed with needs and underserved with resources.
- Insurance and Medicaid barriers include limited benefits, high co-pays, lack of insurance, and providers who are not willing to serve individuals with a TBI due to low reimbursement levels from Medicaid.
- Risk of suicide increases among TBI survivors due to isolation and lack of support, combined with impulsivity.
- There is little awareness about TBI’s and the TBI Fund among survivors of domestic violence seeking help.
- There continues to be a great need for similar services for acquired brain injured individuals that cannot be served by the TBI Fund.
- Due to the memory loss caused by the TBI, participants need continued follow-up to ensure they do not “get lost in the system.”
- Some documentation of the TBI is difficult to obtain and can take a long time to acquire, if acquireable at all.
- Services are sometimes not available to individuals due to financial constraints, lack of availability, severity of crisis, or age restrictions.