

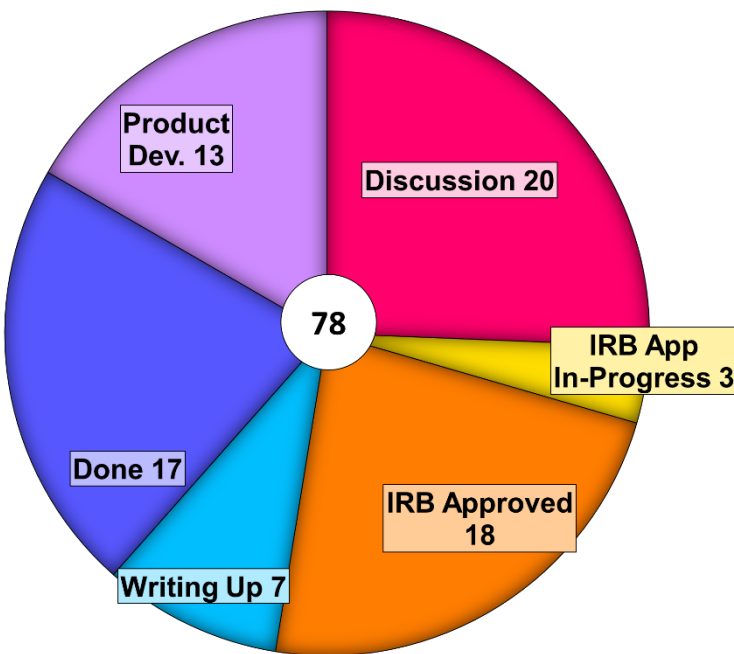
## Milne Institute for Healthcare Innovation: Looking Back at 2022

The Milne Institute for Healthcare Innovation had another successful year in 2022! We set some aggressive goals and superseded almost all. We had multiple publications and represented Gaylord at several national conferences with our posters. We continue to progress with grant funding and our goal to have the research department proportionally funded by outside support. Please see below for some highlights and accomplishments of the past year.

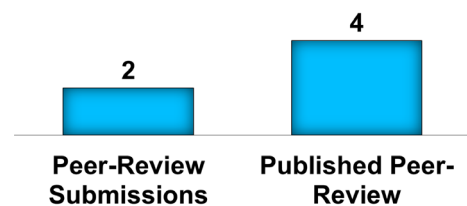
### Goals:

For FY22, we continued to challenge our growth through our goals. We planned on 49 research projects, but were actually involved in **78**! We set the goal of having 28 ongoing IRB studies, and were just short with 26. As a point of comparison, we traditionally had 6-8 on-going IRB approved studies at any given time, so this shows significant growth. To share this knowledge, we planned to have 6 posters accepted for a conference presentation. We finished with **13 posters** presented at major national conferences like ASIA and ACRM, as well as local conferences like the CT APTA! Knowing that getting a manuscript published is very challenging, we set a goal to submit 4 manuscripts to peer-reviewed journals. While we were only able to submit 2, ironically, we had 4 articles published that were submitted back in 2021! Finally, in order to support the research operations through external funding, we sought 1 grant to support research. Excitingly, we were awarded 2 research grants totaling \$125,000!

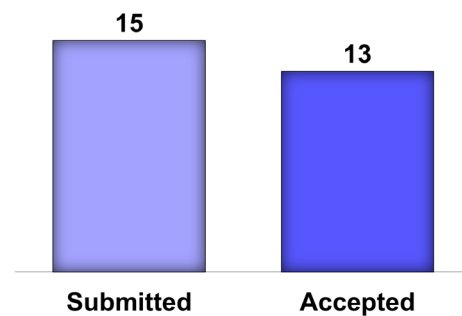
### Stage of Project Development:



### Publications



### Poster Presentations



### Publications and Research Studies:

We are very excited for the number of articles published in the last year. Please see below for the titles and hyperlinks for more details.

**A Novel Body Weight Supported Postural Perturbation Module for Gait and Balance Rehabilitation After Stroke: Preliminary Evaluation Study.** Amanda Meyer, Henry C Hrdlicka, Erica Cutler, Jill Hellstrand, Emily Meise, Kaitlyn Rudolf, Peter Grevelding, and Matthew Nankin. Published March 2022 in JMIR Rehabilitation and Assistive Technologies. doi: [10.2196/31504](https://doi.org/10.2196/31504). PMID: [35080495](https://pubmed.ncbi.nlm.nih.gov/35080495/)

**Occupational and Physical Therapy Strategies for the Rehabilitation of COVID-19-Related Guillain-Barré Syndrome in the Long-term Acute Care Hospital Setting: Case Report.** Catherine Connors, Stephanie McNeill, and Henry C Hrdlicka. Published February 2022 in JMIR Rehabilitation and Assistive Technologies. doi: [10.2196/30794](https://doi.org/10.2196/30794). PMID: [35023838](https://pubmed.ncbi.nlm.nih.gov/35023838/).

**Patient Outcomes and Lessons Learned From Treating Patients With Severe COVID-19 at a Long-term Acute Care Hospital: Single-Center Retrospective Study.** Pete Grevelding, Henry C Hrdlicka, Steve Holland, Lorraine Cullen, Amanda Meyer, Catherine Connors, Darielle Cooper, and Allison Greco. Published February 2022 in JMIR Rehabilitation and Assistive Technologies. doi: [10.2196/31502](https://doi.org/10.2196/31502) PMID: [35023835](https://pubmed.ncbi.nlm.nih.gov/35023835/).

**Which Road to Recovery? Factors Influencing Postacute Stroke Discharge Destinations: A Delphi Study.** Joel Stein, Barry M. Rodstein, Steven R. Levine, Ken Cheung, Alyse Sicklick, Brian Silver, Robin Hedeman, Abigail Egan, Pamela Borg-Jensen, and Zainab Magdon-Ismail. Published October 2021 in Stroke. doi: [10.1161/STROKEAHA.121.034815](https://doi.org/10.1161/STROKEAHA.121.034815). PMID: [34706561](https://pubmed.ncbi.nlm.nih.gov/34706561/).

We also have several interesting studies going on right now. They include the: National ZeroG multisite clinical trial collaboration; PMV endurance clinical Trial; BITS clinical trial; Evaluation of Telesitting on inpatient falls; Assessment of the sound level meter as a decannulation metric; Blood flow restriction for knee pain; Influence of creatinine levels on rehabilitation outcomes; Evaluation of the novel Gaylord Occupational Therapy Cognitive Screen (GOT-Cog); and Examination of feeding tube timing in ACHs. Other major collaborations include our role in Yale's StrokeNet studies, and our continued role as one of the SCI Model Systems. For more information on these studies and more, please visit, <https://www.gaylord.org/Patients-Families/About/Research/Current-Research>

Further, several studies are in development including an exciting collaboration with Southern Connecticut State University to look at visual impairment and balance post stroke; an evaluation of the Barrett Upper-extremity Robotic Trainer (BURT) with Sunnyview Rehabilitation hospital in New York; development of a novel caregiver preparedness tool; and new research into the effects of post-acute COVID-19 syndrome (aka long-COVID). Stay tuned in the coming months for more information.

**Beta testing and product development:**

The Milne Institute has increased its focus on beta testing this past year. Beta testing is giving feedback to up-and-coming companies on their product or process. We developed 8 different studies and feedback sessions for the companies. In addition we were in discussion with 5 others who sought our expertise. One session had our nursing staff test a bed sheet used for measuring. Another collaboration includes both administrative feedback on the marketing and value of a European product and developing a feedback method on patient use in the United States. Others included clinician feedback on a unique toilet transfer aide and mobility bed surface. Upcoming are collaborations on several

electric stim devices and a communication method using eye control. Finally, we developed an informational sheet for other companies interested in our services. Please see that [here](#).

### **Growth:**

The Milne Institute continues to invest in research at Gaylord. We have been able to support over 10 clinicians through funding of per diem coverage so they could have time to pursue their research agendas and tasks. We are also excited to announce the promotion of the Milne Institute's first hire, Dr. Hank Hrdlicka, to the position of Director of Research for Gaylord Hospital. Hank will take on a greater lead in the day to day operations of the Research Department and continue to grow our research footprint within Gaylord and nationally.

### **Education:**

This year the Milne Institute has continued to promote research education amongst our staff. First, the Research Education Development (REDD) series has continued to bring bite-sized informational sessions on research education topics ranging from [How to Perform Literature Searches](#), [What is the IRB](#), and [How to Avoid Common Data Mistakes](#). Recordings and PowerPoints for these and the entire catalog of 8 REDD sessions can be viewed [here](#). Stay tuned for future announcements about upcoming sessions!

Further, last May 20th, many staff joined us for our Second Annual Celebration of International Clinical Trial Research Day! This was an exciting opportunity for our staff to come together and share their updates and outcomes of their recent research studies. It was incredible to see the extent of your support and we hope to see you all again next year.



In summation, this has been a great year! Tremendous growth continues to happen as we expand our national footprint and highlight our clinical expertise. We have grown in leadership and plan to add a new staff member in the coming year. Staff involvement from multiple departments only continues to

expand. The challenge of getting research started and finished is becoming more manageable as we are conducting research on various topics ranging from spinal cord injury, to cognitive screening, to knee pain, and beyond. We are leading national studies and progressing clinical care. We are testing new patient care technology before it is widely available.

If you want to get involved in these projects or to start your own, the research committee, led by **Amanda Meyer and Hank Hrdlicka**, meets both in person and online via Zoom monthly. Please join us to discuss your ideas or hear others grow theirs.

Finally, the Milne Institute for Healthcare Innovation wishes to thank all of Gaylord and it's donors for all of their support and participation as we continue to push clinical excellence forward!