Trading Places:

Shifting a Surgical Task from Physicians to Nurses

On November 24, 2022, Stine Bolme defended her thesis "Task-shifting Intravitreal Injections to Nurses: Investigating the Visual Outcome and Safety in a Randomised Controlled Trial, Exploring Nurse Satisfaction and Calculating Costs" at the Dept. of Neuromedicine and Movement Science, Norwegian University of Science and Technology (NTNU). The PhD project was conducted at the Dept. of Ophthalmology, St. Olavs Hospital, Trondheim University Hospital. The supervisor was Professor Dordi Austeng, Dept. of Ophthalmology, St. Olavs Hospital, and Dept. of Neuromedicine and Movement Science, NTNU.

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Key points:

- Nurses trained to administer anti-VEGF injections reported improved self-esteem and respect from colleagues and patients.
- Patients injected by nurses had the same visual outcome and felt as safe and satisfied as patients injected by physicians.
- We found minor savings for the hospital and no societal savings after having task-shifted injections to nurses.
- Task-shifting from physicians to nurses increased the department's flexibility and capacity.

With the aging population, the patient pool eligible for anti-VEGF treatment has rapidly expanded over the last two decades, and physicians in ophthalmology departments aspire to meet the growing demand for intravitreal injections (IVIs, Figure 1). In 2013, the Royal College of Ophthalmologists acknowledged that task-shifting from physicians to nurses is the best way to utilize healthcare resources. Several observational studies have shown that task-shifting IVI administration to nurses is safe and produces satisfied patients. However, no one had tested this until our randomized controlled trial (RCT) was published in 2020 (Paper II), showing that nurses were non-inferior to physicians in administering anti-VEGF injections. The study protocol was published as a part of this thesis (Paper I).

After the RCT, our ophthalmology department established a nurse-driven injection clinic, where nurses administered all anti-VEGF injections regardless of patient preference. Satisfied nurses are important to a successful nurse-driven IVI clinic as health personnel satisfaction is transmittable and leads to patient satisfaction. As no earlier studies explored nurse satisfaction with task-shifting, we conducted a qualitative study, interviewing the trained nurses, to explore their thoughts and opinions on the training program and the new task (Paper III). The 12 nurses interviewed felt proud of being trusted with this new task, which engendered more respect from patients and colleagues and higher self-esteem. They suggested alterations to improve the training program.

The reason for the study was to test whether nurses could perform the activity as safely as physicians to better utilize the resources in the department. We hypothesized that a nurse-led IVI clinic would lower costs compared with a physician-led clinic. Therefore, we conducted a health economic analysis to provide a thorough ground for decision-makers. The costs of the task shift in a hospital and the societal context were calculated, and we found modest hospital cost savings but no societal savings. We also projected the costs of future injections for 2022–2027 and found possible annual savings for the hospital equivalent to two-thirds of an injection nurse's wages (Paper IV). This result would be more prominent in countries with a larger gap between physicians' and nurses' wages. The task-shifting concept is nevertheless here to stay and a way to better utilize available personnel resources.

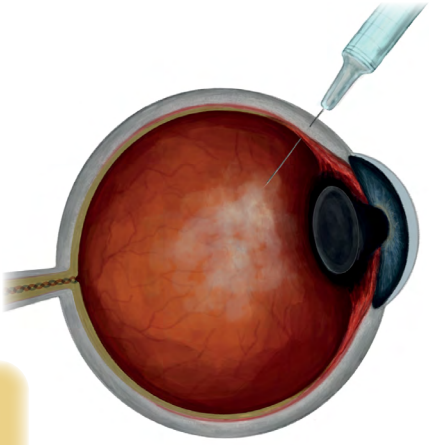

Figure 1. *Illustration of intravitreal injection (IVI)*

Future directions:

- Potential cost savings of task-shifting in countries with larger wage gaps.
- Possibility of task-shifting in new areas in ophthalmology to meet the future demand.

References

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